Spirent Communications plc Annual Report 2020

The connected future. Assured.

“

Spirent has demonstrated a resilient business model at a time when remote connectivity is critical.”

– Eric Updyke, Chief Executive Officer

Contents

Strategic report

Corporate governance

Financial statements

Other information

2020 highlights

Revenue
$522.4m ↑ 3.7%

Adjusted operating profit[1]
$103.5m ↑ 11.4%

Adjusted operating margin[2]
19.8% ↑ 1.4pp

Reported profit before tax
$95.8m ↑ 6.9%

Adjusted basic earnings per share[3]
14.68¢ ↑ 9.6%

Free cash flow[4]
$102.6m ↑ 2.5%

Dividend per share
6.04¢ ↑ 12%

Special dividend per share
7.50¢ $45m

Financial highlights

Strong delivery despite a challenging environment

- Book to bill across the year was 103, with the orderbook building as we entered the new financial year.
- Revenue up 4 per cent, with strong demand for both lab and live assurance solutions and our new 5G device testing solutions and services.
- Continued R&D investment across the portfolio totalling $103 million, 20 per cent of revenue.
- Adjusted operating profit increased by 11 per cent to $103.5 million, with adjusted operating margin improving to 19.8 per cent, up from 18.4 per cent in 2019.
- Cash closed at $241 million following another year of effective working capital management.
- 12 per cent increase in full year dividend. Final dividend of 3.87 cents per share to be paid in April 2021.
- Special dividend declared of 7.50 cents per share, representing a total cash payment of $45 million to be made in April 2021 with $4.5 million extra funding to the pension scheme (subject to exchange rate movements).

Operational highlights

Continuing progress across segments

- Secured over 600 5G-related wins across all geographies and continue to be well positioned for sustainable 5G-driven growth across our solutions and services portfolio.
- Strategic initiatives implemented:
  - Creation of a Services team to drive new pipeline of prospects which has gathered momentum during the year.
  - Organisation strengthened including new CTO office and Corporate M&A team.
  - Go-to-market evolution with further sales and marketing initiatives.
  - Following early success, key customer account management programme expanded.
  - Merger of Connected Devices into Lifecycle Service Assurance to leverage and accelerate 5G offering.

Notes

1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).
2. Adjusted operating profit as a percentage of revenue in the period.
3. Adjusted basic earnings per share is based on adjusted earnings as set out in note 11 of Notes to the full year consolidated financial statements.
4. Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payment of lease liabilities and finance lease payments received.

Items with notes 1 to 4 above are non-GAAP alternative performance measures; see pages 192 and 193 for more detail.

Global leader, innovator and trusted partner in test and assurance

Spirent helps our customers manage the complexity of their devices, networks and services, enabling them to keep the promises they make to their customers while reducing cost and accelerating time to revenue. Our innovative test and assurance solutions, trusted expertise and services allow our customers to bring better quality products and services to market faster, automate the turn-up of new services and proactively identify and resolve production network problems.

With our focus on sustainable, profitable growth, we are solving bigger business challenges on behalf of our ever-widening customer base as the testing and evaluation of devices, network functions and applications migrates from development labs to operational networks. We will continue to innovate our services and solutions towards fully automated testing and autonomous service assurance.

With more than 1,400 employees serving in excess of 1,100 customers across 49 countries each year, Spirent is organised into three operating segments.

1,400+
employees

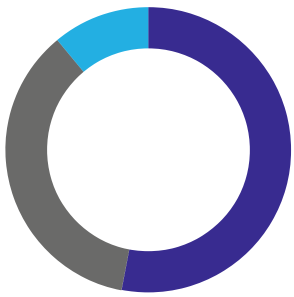
1,100+
customers each year

49
countries

Revenue by segment

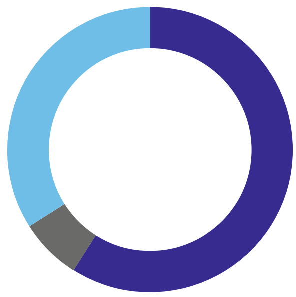
Networks & Security	60%
Lifecycle Service Assurance	25%
Connected Devices	15%

Revenue by geography



Americas	53%
Asia Pacific	36%
EMEA	11%

Revenue by customer



Customers outside top ten	59%
Largest customer	7%
Other top ten customers	34%

plc awards 2019

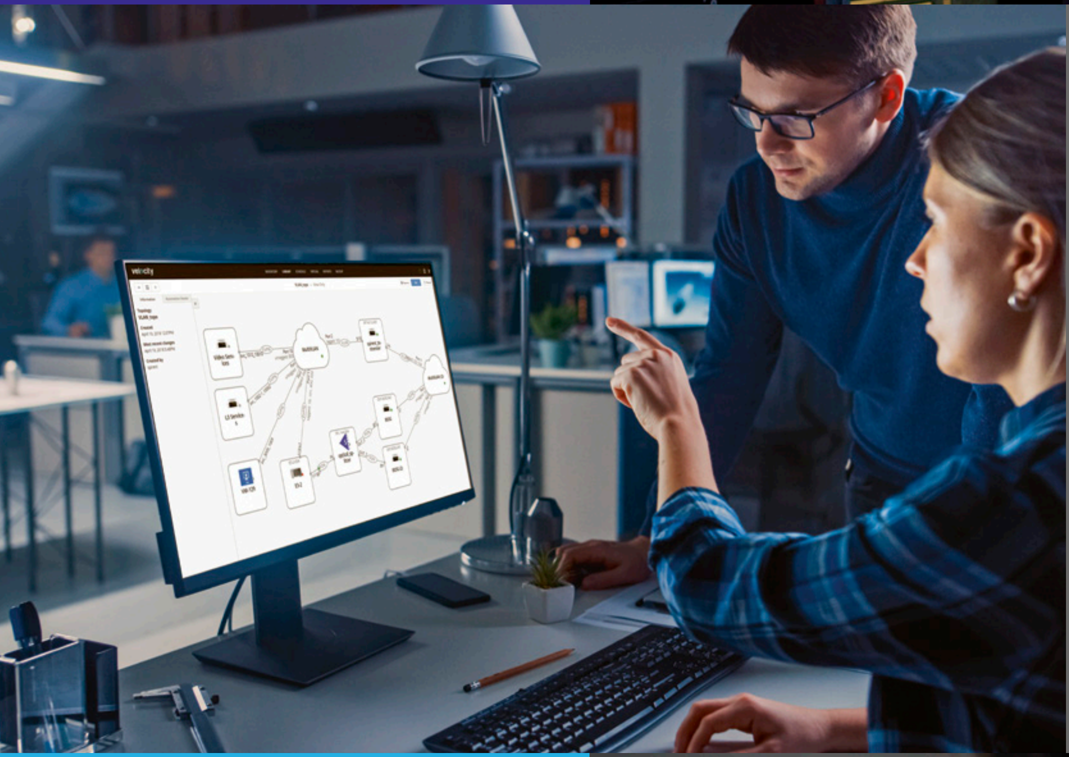
Spirent won the Innovation in Technology category of the UK's prestigious plc awards, which cited our technology leadership in testing and assurance solutions. The 2019 award was announced in September 2020.

Networks & Security

Performance and security testing solutions to accelerate the development and validation of new equipment, networks, and applications for Cloud and mobile.

$314.7m

revenue in 2020



Lifecycle Service Assurance

Driving our deep expertise in cutting-edge technologies gained in the lab into active test and assurance solutions that automate service turn-up, monitoring and troubleshooting of live 5G, LTE, Ethernet, SD-WAN and Cloud networks.

$127.7m

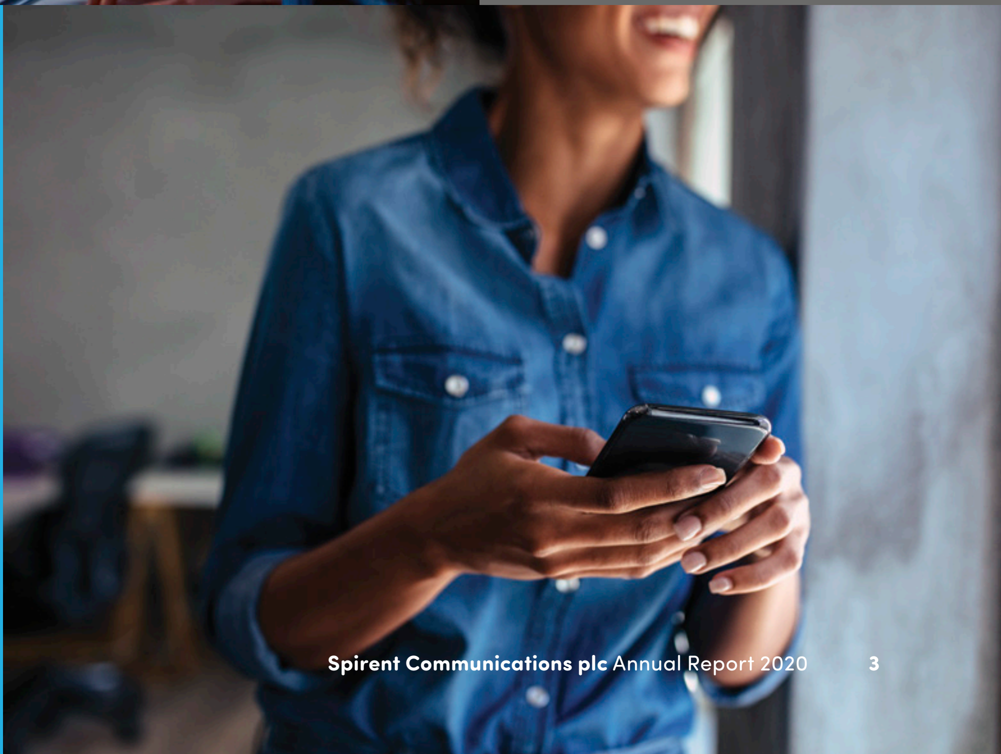
revenue in 2020

Connected Devices

Automated test solutions and service offerings for mobile devices and supported voice, video and location services in the lab or on operational networks. Innovative test solutions for 5G air interface technologies.

$80.0m

revenue in 2020



Delivered further growth in 2020 in spite of the COVID pandemic

Adjusted basic earnings per share[1]	14.68¢	↑10%
Dividend per share	6.04¢	↑12%
Special dividend	7.50¢	$45m

Note
1. Adjusted basic earnings per share is based on adjusted earnings as set out in note 11 of Notes to the full year consolidated financial statements.

I am pleased to present our Annual Report for the year to 31 December 2020.

Performance in a COVID-19 year

It is impossible to reflect on 2020 without starting with the huge challenges that the whole world felt as it sought to respond to the rapid spread of the COVID-19 pandemic. Alongside the tragic human cost which has been felt by so many, the pandemic has posed huge challenges to how businesses such as ours operate as things that we have taken for granted for many years were suddenly taken away.

Our first priority was the safety of our colleagues, as we moved quickly to implement remote working for a huge proportion of our employees. This transition was achieved virtually overnight which is a great credit to our IT teams around the globe. However, we also needed to recognise the vital role that we play in ensuring that the networks of our customers continue to operate effectively and we needed to continue to support the rollout of new technologies that have helped our customers to support the new global way of working. Our supply chain was incredibly resilient and our staff have adapted quickly to the new way of working which has enabled us to offer our customers great continuity of service and support during the year. I am very proud of the way in which our employees adapted to the changing reality and despite the huge changes in a short period of time, I believe we continued to interact effectively with our customers. To aid in this endeavour, we have optimised our structure effective 1 January 2021 by combining our Connected Devices segment into our Lifecycle Service Assurance segment as we seek to better enable solution selling across the Spirent Group and to build further on the momentum in the Lifecycle Service Assurance segment that we saw in 2020.

> "We have continued to build on our capabilities as a business as we continue to seek to exploit the future growth opportunities we see in our core business."

Despite the challenges faced, I am proud that during the course of the year Spirent was still able to deliver growth in 2020. This represents a further year of year-on-year growth in revenue, profitability and order intake.

Revenue increased by 3.7 per cent to $522.4 million and we achieved a 11.4 per cent increase in adjusted operating profit, and a 9.6 per cent increase in adjusted earnings per share. In line with our progressive dividend policy, I am delighted we are proposing a 12 per cent increase to the full year dividend.

The Board continues to look closely at ways in which we can invest the cash generated from our business to accelerate our future growth in both organic and inorganic initiatives. We were therefore delighted to acquire octoScope in March 2021 as we sought to build on our existing strengths in the expanding Wi-Fi space. Notwithstanding that investment, in view of the amount of cash held on our balance sheet we are also proposing a special dividend of 7.50 cents per share.

Despite the difficulties presented by the pandemic in 2020 we have continued to build on our capabilities as a business as we continue to seek to exploit the future growth opportunities we see in our core business.

Culture & purpose

Spirent has undertaken a significant amount of work this year to refresh and better articulate its purpose, its core values, and the ways in which it expects all of its employees to act. The Board has been deeply involved in that process as it seeks to ensure that we are leveraging all of our resources and skills across the Group to drive the best possible performance.

We involve three of our Non-executive Directors in obtaining direct feedback from employee focus groups. We aim to assess the progress that we are making in ensuring that our purpose and values are properly understood, and the extent to which they are embedded in the way in which all of the workforce operate. We also seek specific feedback on how well key initiatives are understood and received.

Although those sessions were by necessity conducted remotely this year, the opportunity was taken to ensure that we heard from more of our remote workers who would not typically be able to attend the sessions in our main facilities. I am pleased to say that despite the challenges COVID-19 presented, our employees are embracing the challenges we have set them and are clearly appreciating the increased quantity and quality of communication from our senior leadership team.

To supplement the workforce engagement focus groups, the Board also discussed employee wide engagement survey results. The participation rates are exceedingly high and show that we have an engaged workforce. The Board looks forward to being able to visit more of our offices in the coming year to engage with our employees face to face.

Sustainability

This year the Board reflected on the scale of its ambition in the area of carbon reduction, as we considered whether Spirent is doing enough to address the climate emergency. Spirent has achieved significant reductions in carbon emissions in the last five years through its FuturePositive programme, but through the work undertaken this year now aims to ensure that sustainability considerations are deeply embedded in all parts of our business and to ensure that we are setting ourselves clear long-term targets in this area. This year we added Sustainability as a key responsibility of the Audit Committee to ensure that we have clearer oversight in this area. We aim to achieve Net Carbon Neutral Certification by the end of 2022 and a longer-term goal to achieve Carbon Net Zero by 2035.

Outlook

The Board is confident that the Group will continue to see steady profitable growth in 2021.

Sir Bill Thomas
Chairman
11 March 2021

Focused on our strategic evolution

Throughout 2020, I have been immensely proud of Spirent. None of us could have anticipated how disruptive 2020 would be to our lives. The way Spirent has responded is beyond inspiring. We never lost focus on our unwavering support to our customers.

The foundation we have built was tested by COVID-19. Spirent proved resilient and the response by all segments of the Group by all accounts was exemplary. Our employees continued innovating and our supply chain remained strong. We remain focused on sustainable, profitable growth and are well positioned to achieve our ambition.

Market overview

Our customers have promised a new generation of technologies that will change the world. Spirent is the trusted partner that makes technology work from the lab to the real-world so our customers can keep those promises. By leveraging Spirent's expertise, our customers can accelerate time to market, reduce complexity and cost, optimise user experience and harden cybersecurity defences.

Our key market drivers remain strong, including complex networks, Cloud migration, location assurance, cybersecurity threats, and, most prominently, 5G. In 2020, Spirent maintained our 5G leadership, working across the lifecycle to test, assure and automate networks.

Strategy

In order to realise our ambition to be the global leader and trusted partner for innovative technology test and assurance solutions, we are focused on three strategic priorities: Customer Centricity, Innovation for Growth and Operational Excellence.

The CEO programme to evolve our strategy and drive improvement initiatives concluded in 2020. The initiative resulted in development of market growth plans including acceleration of assurance to support our customers in the lab and live environment and a new focus on services opportunities. This was complemented by a marketing reorganisation and the evolution of the senior management team to support our plans. Exceptional costs in the year were $3.1 million.

In March of 2021, we acquired octoScope, a US-based technology company that provides market-leading Wi-Fi test solutions to the wireless industry. The need for reliable and secure Wi-Fi is greater than ever and our teams look forward to working together to address an increasing range of complex Wi-Fi challenges for our customers. This acquisition supports our strategy of sustainable, profitable growth by establishing Spirent as the firm market leader in the expanding Wi-Fi space, adding to our 5G solution portfolio. octoScope brings to us an impressive and well-known customer base, providing us with the opportunity to further leverage our established global routes to market and trusted relationships with our key accounts.

Revenue

$522.4m ↑ 3.7%

Adjusted operating margin[1]

19.8% ↑ 1.4pp

Note
1. Adjusted operating profit as a percentage of revenue in the period.

Customer Centricity

We strive to create a more agile collaborative organisation, capable of solving bigger problems for our customers. It is our deep relationships and trusted partnerships with our customers that have propelled us forward. During the year, we have made progress to increase share with existing customers, drive solutions-based selling, and expand our footprint into new segments and geographies.

In a "Connected Everything" world, we supported over 1,100 customers across 49 countries in 2020. Spirent has a diversified customer base, with no single customer accounting for more than 7 per cent of total revenue in 2020. We continue to win new logos across all segments.

Spirent adapted well to remote working and 2020 forced us to be innovative in the ways we stayed connected with customers. In response, our marketing team accelerated its digital-first strategy, with a new corporate website and blog as well as a new social media programme. Digital outreach is vital in this environment and with these efforts, our website traffic and social engagement has continually increased. Our sales team has adapted well, pivoting to more virtual connections, hosting many webinars and remote demos for customers.

Our key account programme continues to deliver great success. These accounts enable us to move from transactional buying centres into ones with broader business impact. We continued to strategically invest in and expand this programme, adding key European accounts to the model.

As we continue to expand our geographic outreach, we have enhanced our sales organisation in the South Asia Pacific region and added new leaders for our US government and hyperscaler business. We also appointed a leader to focus on leveraging strategic partnerships to drive growth.

With our solutions-based selling and continued push into increased software and services, Spirent is successfully increasing visibility while decreasing cyclicality. New services initiatives are gaining traction with customers. Our services portfolio, including Test-as-a-Service and Lab-as-a-Service, enables us to strategically partner with customers to automate, validate and optimise their networks.

At Spirent, we stand behind our customers' promise to deliver a new generation of technologies, from the lab to the real world.

Innovation for Growth

As a global leader in test and assurance, it is vital that we invest to stay ahead on key emerging technologies. To maintain our leadership in key areas, we invested 20 per cent of revenue on research and development in 2020.

We continue to invest for the future, extending our thought leadership in key growth areas, including assurance for 5G, location, services and Cloud. With 5G accelerating, Spirent successfully secured over 600 5G-related wins across all geographies and continues to be well positioned for sustainable 5G-driven growth across our solutions and services portfolio. Throughout 2020, we launched new solutions and services while adding feature functionality to our existing solutions to address evolving customer needs.

In addition to solutions and services, we are innovating our business models. To achieve sustainable, profitable growth, Spirent is developing and growing recurring revenue streams to decrease cyclicality. With our talented team and refreshed, solutions-selling mindset, we are expanding our software and service offerings. New strategic initiatives are gaining traction with growth in demand for our lab-based 5G network test solutions and a growing funnel of new Test-as-a-Service and Lab-as-a-Service opportunities. Continuing to win multi-year deals is providing the Group with enhanced visibility.

In recognition of our continued leadership, we were awarded the plc award for "Innovation in Technology" during the year.

Operational Excellence

Our dedication to operational excellence was a key differentiator during this pandemic. Due to our strong financial management, world-class supply chain and innovative team, we continued to deliver to our customers throughout 2020 and did not layoff or furlough any employees due to COVID-19.

We continue to maintain a strong balance sheet with $241.2 million of cash and no bank debt. In addition to investing in innovation, we remain invested in our people. In 2020, we onboarded new senior leaders to energise and continue pushing our organisation forward.

As we focus on sustainable, profitable growth, we are improving and organising our business to support our positive momentum. In early 2021, we made some organisational changes to build an even stronger foundation for scale – breaking down barriers, better enabling solution selling and focusing on leading edge technology. To accelerate the momentum built in 2020, we are combining our Connected Devices business unit into our Lifecycle Service Assurance business unit effective 1 January 2021. This change will enable a more integrated set of user experience assurance solutions and solve bigger problems for our customers.

In addition, the appointment of a CTO (Chief Technology Officer) will ensure we drive effective investment across our technical portfolio and are optimally placed to develop business solutions for our customers in existing and new markets as they emerge.

The geopolitical landscape remained turbulent in 2020 with US/China trade challenges. We navigated regulatory changes throughout the year and continue to work closely with our customers. As we move into 2021, we are closely monitoring the effect of a new administration in the US as it relates to international trade.

Sustainability and corporate responsibility are essential to the success of our business. At Spirent, we are committed to embedding sustainability into our products, people and procurement via our FuturePositive programme. We are proud of the work we do to contribute to our communities and you can read more about this on page 52.

We will continue evaluating and rationalising our portfolio to meet the needs of our customers. We will look to grow our portfolio both organically and inorganically to keep pace with those objectives and the markets that we serve.

Capital allocation

Our continued strong financial management has delivered another year of strong free cash flow and despite COVID-19 our balance sheet remains strong and working capital remains very efficient. Our ability to deliver robust cash conversion allows us to implement our capital allocation policy as we have previously stated, which is to continue to invest into R&D to maintain our leading market positions and also to support our growth agenda with inorganic investments where we see opportunities that support our strategic growth plans whilst still maintaining a sensible level of cash.

Eric Updyke
Chief Executive Officer
11 March 2021

Continuing to innovate and adapt during COVID

"The COVID-19 pandemic continues to present challenges for us all, but we are all in this together. We remain focused on supporting our customers and committed to our people, partners and communities."

– Eric Updyke, Chief Executive Officer

We are managing through this crisis well – fulfilling customer demand, delivering progress across the portfolio, keeping our employees engaged and materially improving our profitability.

With the onset of COVID-19, our first priority was the health and safety of our employees. We moved seamlessly to remote working for approximately 95 per cent of our employees and implemented a series of COVID-19 secure measures for employees that remained working at our facilities. For those at home, we encouraged continued collaboration with colleagues, customers, and partners whilst seeking to ensure our employees' wellbeing.

We remained financially disciplined and therefore we avoided furloughs and layoffs due to the pandemic and have not sought or received any government money.

Our supply chain operated very effectively despite the restrictions in many parts of the world.

Customers

Our customers have experienced dramatic operational changes during 2020. Their networks are being put to the test as large numbers of employees are now working from home. From service providers experiencing an increased demand for bandwidth, to enterprises managing increased cybersecurity risks, Spirent has been there to help them navigate. We play a vital role in ensuring the networks of our customers operate effectively.

With our remote testing options, we have enabled customers to continue monitoring and assuring their networks with decreased physical contact. Our sales team pivoted from physical interactions to remote webinars and virtual demonstrations. We have stayed closely connected to our customers, acting as a trusted partner and adviser through trying times.

Partners

In a challenging environment, Spirent's channel partners have responded well. This year we have held more partner meetings than ever before – all virtually. This increased collaboration has enabled us to develop and implement solutions to help address the needs of our customers more quickly and we grew our business through our channels despite the challenges we faced.

Supply chain

Because of the business continuity policies and risk mitigation measures we put into place at the start of the pandemic, we have experienced minimal disruption to our global supply chain. Our Customer Service centres and global offices have remained operational. Our robust supply chain has been a key differentiator as we continued to deliver products and services to our customers and partners when many others could not.

Shareholders

Due to our strong financial platform and diligent cash management, we were able to maintain a strong balance sheet while continuing to pay dividends.

Adapting to the environment, we held our Capital Markets Day virtually in October. This was a key engagement event with investors to prove our mid to long-term investment case and was very well attended and received. We also held our 2020 Half Year results presentation virtually during the pandemic with a live Q&A session.

Employees

Safeguarding the health and wellbeing of our employees is our top priority. From the onset of COVID-19, we quickly pivoted to a majority full time remote workforce, with only essential operations continuing on site. At our facilities, we have established health screening procedures, increased cleaning protocols, and enforced social distancing and other best practices.

To keep our employees engaged and informed, we have enhanced our internal communications with regular leadership updates, an intranet advisory portal and creative virtual events. Our employees continue to build community, collaborate remotely and deliver innovative solutions to our customers. With an eye to the future, we have learned a lot from this operational shift and will be supporting more permanent, flexible work options for our staff.

What makes us different?

"Spirent's ambition is to be the global leader and trusted partner for innovative technology test and assurance solutions, focusing on our strategic priorities of Customer Centricity, Innovation for Growth and Operational Excellence."

– Eric Updyke, Chief Executive Officer

2.8bn

5G subscriptions by end of 2025[1]

$448bn

Cloud migration market in 2025[2]

Strategy aligned to sustainable, profitable growth

Our strategy is built on three pillars and is aligned to help us achieve our ambition: to be the global leader and trusted partner for innovative technology test and assurance solutions.

Customer Centricity: Increasing share with our existing customers, driving solution selling across the customer lifecycle, and expanding our footprint into new segments and geographies.

Innovation for Growth: Extending thought leadership in key growth areas, growing recurring revenue streams and disciplined corporate development.

Operational Excellence: Strengthening our foundation for profitable growth, maintaining our strong balance sheet, developing and retaining key talent, and executing on our sustainability programme, FuturePositive.

We see clear opportunity to further develop our offerings into live networks, increasing our recurring revenue streams, and driving services and solutions across our portfolio.

» See pages 18 to 23 for more detail

Leveraging growth markets

We are strongly aligned with key market drivers:

5G – the game changer
Our extensive 5G portfolio accelerates time to revenue for 5G networks, devices and services.

Complex networks and Cloud migration
Our Cloud and service assurance solutions enable customers to develop, deploy and optimise networks.

Connected everything
Our leading high-speed Ethernet and device test solutions support rapidly-growing demands.

Intelligent location
Our innovative positioning and location solutions help assure accuracy, integrity and reliability.

Pervasive security threats
Our advanced security testing platforms help fulfil the promise of secure communication.

Sources
1. Ericsson Mobility Report, June 2020.
2. Cloud Migration Market – Growth, Trends, Forecasts (2020 – 2025), Mordor Intelligence, February 2020.

Robust operating model

In pursuit of operational excellence, we are constantly optimising our operating model to provide resilience through challenging business environments by:

- Continuing investments in R&D to maintain and expand our technology leadership.
- Optimising go-to-market for solutions and services.
- Developing our connected and engaged workforce.
- Improving processes to support growth.
- Maintaining our supply chain excellence.
- Maintaining our robust balance sheet.

Delivering market-leading solutions and services

Spirent has forged strong relationships with its customers over many decades. We have a deep understanding of our customers' business and technical challenges, and work with them as trusted partners in the development of their products and infrastructure. Our solutions and services address new technologies as they constantly evolve to meet the rapidly-changing demands for data and communication.

We have strong customer, segment and geographic revenue diversity. Each year, our three operating segments serve more than 1,100 customers across 49 countries:

Networks & Security

Performance and security testing solutions to accelerate the development and validation of new equipment, networks, and applications for Cloud and mobile. World leaders in high-speed Ethernet and Global Navigation Satellite System (GNSS) test.

Lifecycle Service Assurance

Driving our deep expertise in cutting-edge technologies gained in the lab into active test and assurance solutions that automate service turn-up, monitoring and troubleshooting of live 5G, LTE, Ethernet, SD-WAN and Cloud networks. World leaders in pre-deployment testing of mobile core networks.

Connected Devices

Automated test solutions and service offerings for mobile devices and supported voice, video and location services in the lab or on operational networks. Innovative test solutions for 5G air interface technologies.

» See page 26 to 37 for more detail

Our business model offers unique value creation

Spirent provides expert guidance and award-winning test and assurance methodologies that help our customers overcome the challenges of a fast-approaching future.

DEVELOP – We reduce time and cost to develop, secure and launch new products, services and networks.

DEPLOY – We assure all the components work together before new products and services go live, in the face of increasing complexity.

OPERATE – We improve network performance and customer experience while radically reducing operating costs.

» See pages 12 and 13 for more detail

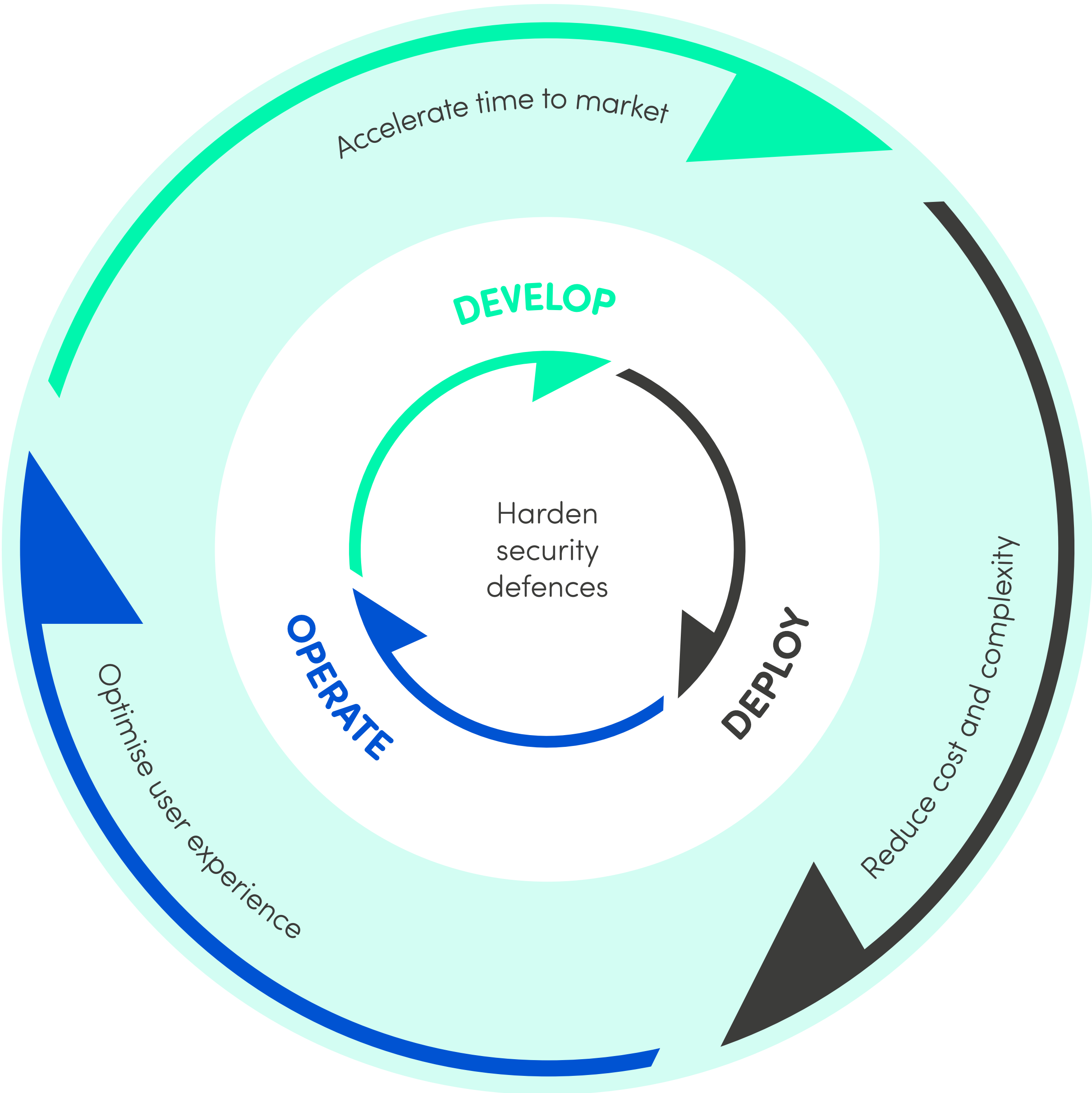
FuturePositive

We are committed to embedding the highest standards of environmental management, social practices and governance into our operations, products and across our supply chain, focused on:

- Sustainability governance.
- Energy and climate change.
- Circular economy.
- Customer sustainability solutions.
- Great place to work.
- Community investment.

» See pages 54 to 57 for more detail

Delivering value across the technology lifecycle



We stand behind our customers' promise to successfully deliver a new generation of technologies to their customers, from the lab to the real-world. As our customers develop, deploy and operate innovative new products and services, we are with them every step of the way.

Lifecycle needs

DEVELOP

As a new generation of network and positioning technologies arrive, the complexity of developing and securing new products and services continues to surge. Traditional approaches to innovation have required months or even years to bring major new offerings to market. In today's competitive market, our customers seek to transition to a more agile approach with a constant stream of releases every 4 to 6 weeks.

DEPLOY

Technology is a critical driver of complexity during the development phase, but vendor combinations are a key challenge during deployment. As service providers embrace new Cloud-based technologies such as 5G and SD-WAN, their network ecosystem becomes much more fragmented with Cloud software, servers and network functions from different vendors on different release cycles. Service providers and vendors need unified testing programmes to assure all these components work together before new products and services go live.

OPERATE

New networks are not just more complex, they are also designed to rapidly reconfigure to meet constantly changing customer needs. Manual troubleshooting techniques simply cannot keep up with the pace of change, necessitating a shift to proactive, automated detection and resolution of performance and security issues.

Spirent value

Our unique value creation

Bring new technology releases to market in weeks, not months

Accelerate time to market
Spirent's new and innovative approach to testing eliminates redundant testing, automates execution and integrates with development systems. Our solutions enable service providers to collaborate more effectively with their vendors to bring new releases to market in weeks, not months.

Manage vendors to keep costs and rising deployment complexity in check

Reduce cost and complexity
Spirent's independent test certification and validation solutions recreate real-world conditions such as heavy traffic loads to help the industry ensure new multi-vendor networks, devices and services perform flawlessly together. Reducing post-deployment issues lowers costs and improves quality.

Rapidly find, pinpoint and fix issues before end-users are impacted

Optimise user experience
To optimise experience, we measure the factors that most impact user experience across the end-to-end network and devices. Our automated assurance solutions help providers rapidly pinpoint and resolve issues to deliver the best possible end-user experience.

Proactively find security weaknesses and prepare for attacks before they happen

Harden security defences
New Cloud-based network technologies bring new security risks as network elements become Cloud software and devices and endpoints increase exponentially. Spirent security solutions recreate real-world cyberattacks so customers can proactively identify and address potential vulnerabilities.

Capturing market opportunities in the digital age

Spirent continues to prioritise investments that maintain and develop its leadership in such key market areas as 5G, Cloud and automation, deepening and expanding our partnership with our customers as we help them address their larger business problems with innovative solutions and services. We are building on our leadership in lab-based testing while expanding further into our customers' operational networks and addressing their security challenges, as well as applying our industry-leading expertise to key emerging areas, such as connected and autonomous vehicles. New markets provide us with new opportunities to grow and to build more recurring revenue streams that support sustainable, profitable growth.

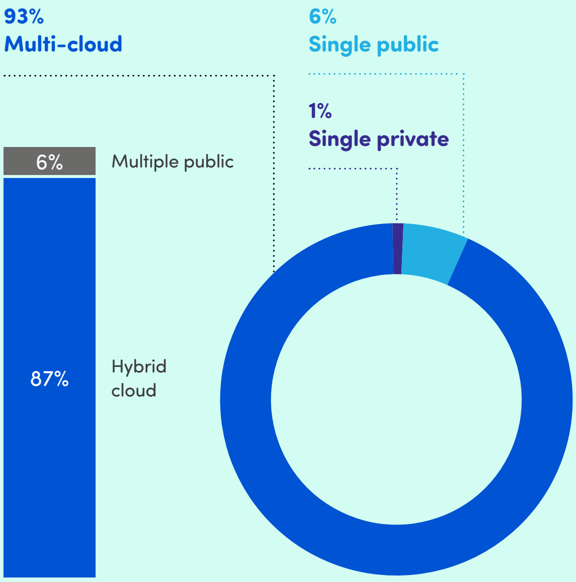
Enterprises migrating to the Cloud

Market driver: Cloud adoption by enterprises continues apace, with the worldwide public Cloud services market projected to grow from $262.5 billion in 2020 to $520.9 billion in 2024[1]. More interestingly, 93 per cent of enterprises are committed to a multi-Cloud strategy with 87 per cent pursuing hybrid Cloud[2], combining privately operated data centers with public Cloud capacity.

Opportunities for Spirent: Address business' need to test and assess various Cloud approaches and competing offerings. Contribute to mitigating the key risks involved in moving to multi-Cloud platforms by helping to assure Cloud infrastructure performance, resiliency, security and workload migration, ensuring customers' deployed Cloud environment meets application and business needs and can be continually measured against expected total cost to operate.

Our response: Spirent has extended its leadership in the testing and validation of virtualised and Cloud ecosystems with solutions that can be deployed in any Cloud environment to enable precise and repeatable test, measurement and assurance of all Cloud infrastructures, whether public, private or hybrid Cloud. We support applications models that are either virtualised or containerised, and are delivering the industry's first standards-based test platform for validating network functions virtualisation ecosystems.

Enterprise Cloud strategy
% of enterprise respondents



Source: Flexera | 2020 State of the Cloud Report.
Notes
1. Gartner | Forecast: Public Cloud Services, Worldwide, 2018-2024, December 2020.
2. Flexera | 2020 State of the Cloud Report.

> **"As Cloud adoption by enterprises continues apace, Spirent is helping to mitigate key risks involved in moving to multi-Cloud platforms."**

5G accelerating

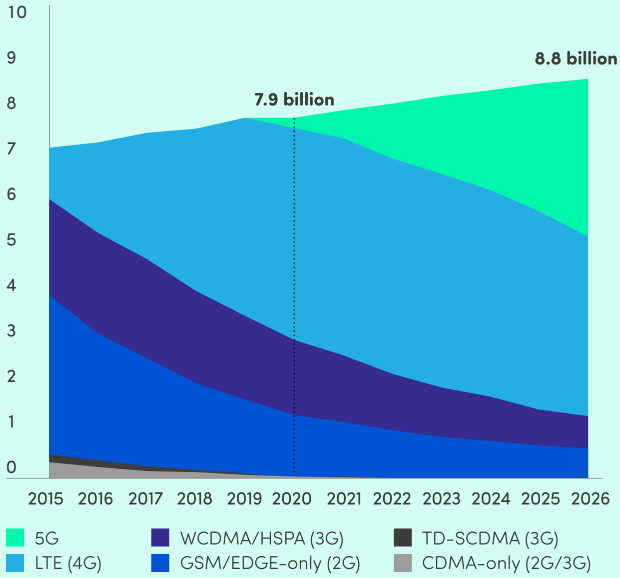
Market driver: Rising competition among service providers coupled with Governments' economic interests are causing the pace of 5G adoption to accelerate, with 5G subscriptions now forecast to reach 3.5 billion by 2026[3]. New "Open" initiatives in the core and radio access networks are driving an increasingly diverse supply chain, providing agile 5G products to service 5G's future expansion beyond the consumer.

Opportunities for Spirent: Complex and continuously evolving 5G networks, accelerated commercial deployments, new vendors and a heightened focus on customer experience and market differentiation create a wide range of new testing, automation, security and service assurance opportunities.

Our response: Spirent provides one of the industry's broadest and most innovative solution portfolios for 5G testing and automated assurance, from the mobile core to the radio access network to the end-user device. We enable our customers to achieve faster time to market and superior quality, safely accelerating technology development in the lab, while ensuring their new products and services continuously perform out in the real-world.

Note
3. Source: 2020 Ericsson Mobility Report.

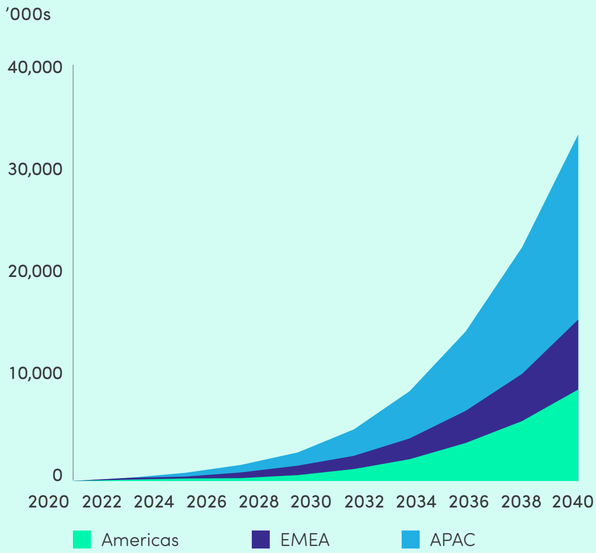
Mobile subscriber growth 2015–2026



IoT connections are not included in this graph.
Fixed wireless access (FWA) connections are included.

Investment in connected and autonomous vehicles

Autonomous vehicle sales by region, 2020–2040



Source: IHS Markit.

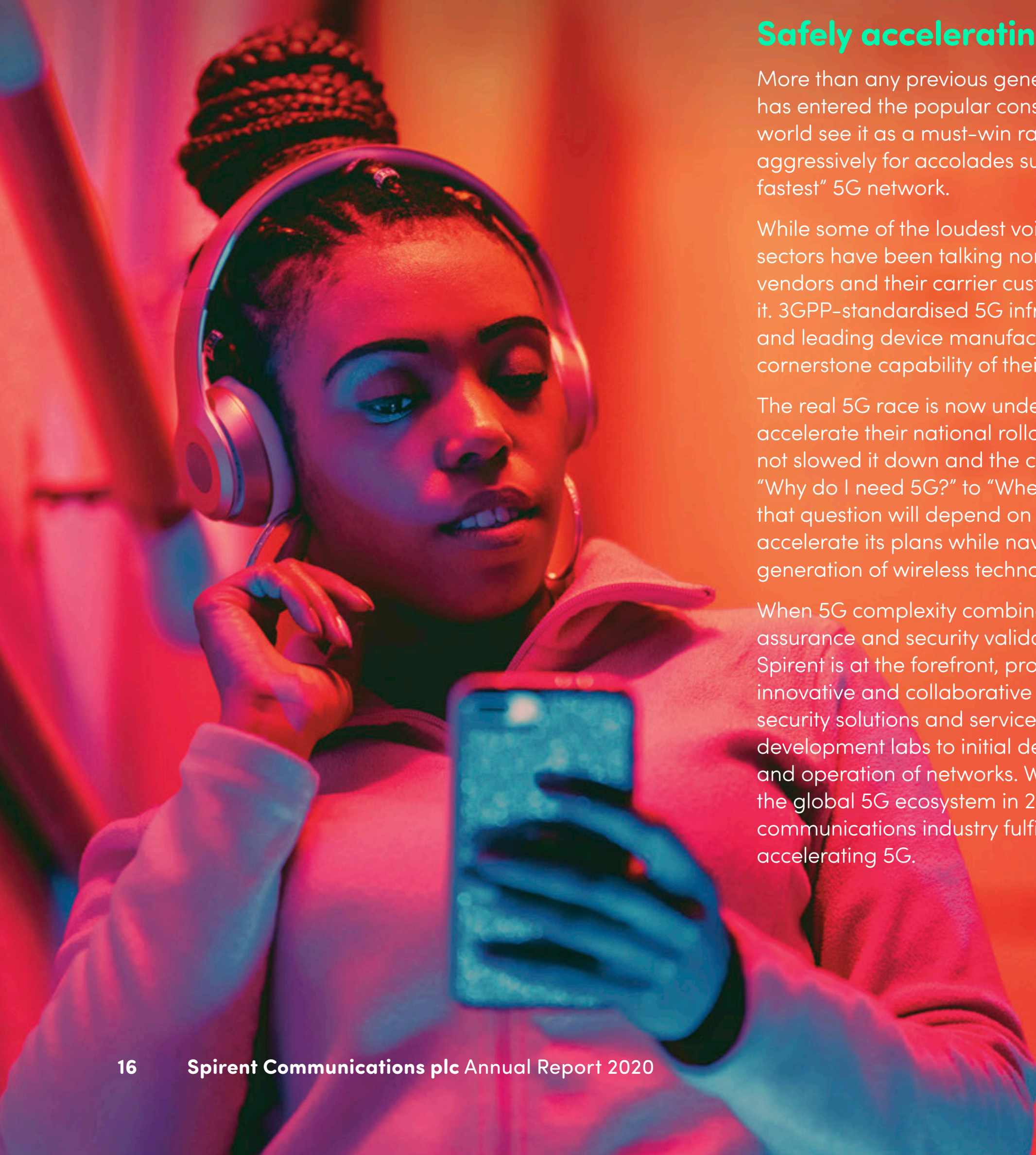
Market driver: Few technologies have the opportunities and disruption potential that connected and autonomous vehicles will have over the next decades, with market opportunities worth trillions of Dollars forecast to emerge. Tens of billions of Dollars have already been invested by technology companies, start-ups, auto manufacturers, their supply chains, unmanned aerial system developers and many others, with much more to come.

Opportunities for Spirent: In-vehicle networks and vehicle connectivity have become increasingly complex. The performance, reliability and security of vehicle communications are more important than ever. Assisted and automated navigation of ground and air vehicles has increased the need for high-precision and high-integrity positioning solutions in the lab and in operational environments.

Our response: Spirent's automated communication test solutions help the industry meet challenging requirements for the conformance, performance, security and reliability of in-vehicle Ethernet networks, including time-sensitive networking (TSN) for safety-critical systems, as well as vehicle-to-everything (V2X) conformance. Spirent also leads in providing solutions and services to ensure vehicle positioning and navigation meet the high performance, integrity, and robust security standards required for assisted and autonomous navigation, both in the lab and in real-world scenarios.

Spotlight on 5G

5G



Safely accelerating 5G

More than any previous generation of cellular technology, 5G has entered the popular consciousness. Countries around the world see it as a must-win race, with top carriers competing aggressively for accolades such as "world's first" or "world's fastest" 5G network.

While some of the loudest voices in the public and private sectors have been talking non-stop about 5G, network vendors and their carrier customers have been busy building it. 3GPP-standardised 5G infrastructure is hitting the market and leading device manufacturers are making it the cornerstone capability of their new smart phones.

The real 5G race is now underway as carriers look to accelerate their national rollouts. Even a global pandemic has not slowed it down and the conversation has changed from "Why do I need 5G?" to "When can I get 5G?". The answer to that question will depend on how well the industry can safely accelerate its plans while navigating the most complex new generation of wireless technology to date.

When 5G complexity combines with urgency, testing, service assurance and security validation become even more critical. Spirent is at the forefront, providing the industry's leading innovative and collaborative set of 5G test, assurance and security solutions and services, helping to accelerate 5G from development labs to initial deployments to ongoing rollouts and operation of networks. With over 600 deals won across the global 5G ecosystem in 2020, Spirent is helping the communications industry fulfil its promise of safely accelerating 5G.

$27 billion

Forecasted 5G network infrastructure spend by 2023[1]

140

Commercial 5G launches across 59 countries (December 2020)[2]

Sources
1. Gartner | July 2020.
2. Global Mobile Suppliers Association (GSA) | December 2020.

5G's journey to maturity

We are still very much at the beginning of the 5G journey that will gradually lead us to 6G by around 2030. Over the next 12 to 18 months, leading carriers will aggressively expand footprints in pursuit of national 5G coverage. New features will be incrementally added as further releases of industry standards bring new capabilities required to service the demanding use cases of industry and the military.

The role of Cloud hyperscalers will continue to grow as carriers require thousands of edge locations. Early initiatives around Open Radio Access Network (Open RAN) and network automation will continue to gain momentum as the industry strives for greater vendor diversification, agility and efficiencies.

Spirent's 5G strategy is well aligned to support this journey. Recognised as an industry leader in 5G core and transport network testing, with innovative solutions such as automated assurance and the 5G network Digital Twin and flexible, customer-centric business models such as Test-as-a-Service, Spirent helps our customers accelerate their innovation and optimise the economics of realising 5G.

Networks & Security
–
Safely accelerating time to market

Discussions on 5G often focus on what's happening over the air, but it's the underpinning transport networks that will bear the heaviest burden in enabling 5G to deliver new services. With the ongoing buildout of 5G cell sites, the gradual move to the Cloud, new open radio initiatives and the continued increase in traffic growth, demand for secure multi-speed network equipment for continuous upgrade and expansion of transport networks is increasing.

As an industry leader in transport network test solutions, Spirent has been helping the industry safely accelerate time to market while enabling our customers to benefit from the new work-from-anywhere normal by automating complex lab testing processes while future-proofing network scalability (to 400G) and the evolution to edge Clouds and Open RAN. As a trusted partner to our customers, we help them deliver the robust transport networks needed to access lucrative new 5G-enabled industrial and enterprise market opportunities.

Lifecycle Service Assurance
–
Assuring 5G performance and reliability

As more and more 5G networks go live, carrier focus naturally shifts towards guaranteeing performance. Coupled with the new unpredictability introduced by 5G's many dynamic components, software releases and diverse vendor ecosystem, there is growing demand for network automation and continuous test and assurance across the 5G ecosystem and lifecycle.

Spirent's 5G Automated Assurance solutions proactively test the network in the background to rapidly identify and isolate issues before customers are impacted, while continuously testing to deal with ongoing software releases from multiple vendors helping carriers realise agility, cost efficiencies and performance efficacy.

Spirent's global leadership in 5G core network testing was showcased in an engagement with Japan's Rakuten Mobile during 2020. Spirent Landslide, with advanced automation processes to expedite testing, is helping Rakuten assure the performance of new services over its world-first, fully-virtualised, Cloud-native LTE and 5G networks.

Connected Devices
–
Simplifying 5G complexity

5G's mission to support a diverse range of application requirements has led to a new level of complexity in the 5G air interface, a wide variety of new device types and services, new frequency bands and the need to conform with new regulatory requirements.

This requires novel approaches to testing which are simple, automated and predictable, reducing the complexity and economics of validating 5G and delivering even more value to customers.

Spirent's 5G Device testing, radio frequency channel emulation and user experience solutions are at the heart of this new wave of testing, simplifying and accelerating testing and benchmarking of infrastructure and devices under real-world conditions in both the lab and field.

This translates into greater flexibility and savings, faster time to market and greater customer satisfaction and is another reason why 5G industry leaders choose to work with Spirent as their trusted test partner.

Our strategic priorities

Customer Centricity

"Our solutions help our customers assure they can fulfil their promises, helping them gain clarity in the face of complexities. And that is our brand: Promise. Assured."

– Eric Updyke, Chief Executive Officer

What we achieved

2020 was not a year any of us could have predicted. Despite being physically separate for most of the year, our talented team remained connected and hyper-focused on our customers.

In 2020, our key account programme continued to deliver results and we expanded the programme to include a key European customer in the fourth quarter. We expanded our share of wallet with existing customers while adding new logos and expanding our geographic footprint. We enhanced our digital marketing presence with a new corporate website and blog as well as a social media programme.

Our sales team quickly innovated and adjusted in the new environment, hosting virtual webinars and demonstrations to continue selling our solutions.

Priorities for 2021

- Grow share of wallet with our existing customers through further expansion of our key accounts.
- Continue our pivot to digital marketing as part of our overall go-to-market transformation.
- Broaden our reach and relevance in new segments such as Cloud service providers, enterprises, hyperscalers, and governments and into new geographies.
- Deliver even more value to customers through the continued evolution of our organisation and by offering more solutions and services.
- Continue to develop live network solutions to meet our customers increasing demand.

49

countries served in 2020

Innovation for Growth

"As a global leader in technology test and assurance, it is vital that we invest to stay ahead on key emerging technologies. To maintain our leadership in key areas such as 5G, high-speed Ethernet and location assurance, we invested 20 per cent of revenue on research and development in 2020."

– Eric Updyke, Chief Executive Officer

What we achieved

We continued to invest in our future growth, including R&D, key talent and business model innovation.

With the help of experts, we refreshed our go-to-market strategy and framework. With a solutions-based selling mindset, we continued innovating to address changing customer needs. Our services portfolio delivered landmark deals and we continued to grow our offerings in a remote environment.

Priorities for 2021

- Invest in growing recurring revenue through our services delivery capability and increased software content in our solutions.
- Invest to make our products even easier for customers to use, improving their efficiency and reducing their time to revenue.
- Key areas for investment: Cloud, PNT assurance, 6G, operational assurance, Wi-Fi 6 and 6E, 800G, SD-WAN and managed solutions.
- Business model innovation: software, recurring revenue, services and solutions.

$103.1m
on research and development in 2020

20%
of revenue

Our strategic priorities continued

Operational Excellence

"We are focused on cash generation and maintaining a strong balance sheet. Our results, including our improved adjusted operating margin, demonstrate strong operational discipline and dedication to our competitive cost structure."

– Eric Updyke, Chief Executive Officer

What we achieved

2020 saw continued focus on cash generation and a strong balance sheet, with $241.2 million of cash. We improved our adjusted operating margin by 1.4 percentage points to 19.8 per cent. We continued to invest in our people, onboarding skilled leaders, launching a new mentoring programme and improving our new hire experience in a remote environment.

Our supply chain was tested by the global stress on logistics and proved resilient. This was a key differentiator for us as we were able to continue delivering solutions when many others could not.

A new Corporate Development framework was implemented and is helping evaluate potential inorganic investments for growth.

Priorities for 2021

- Continue to review our portfolio, with a view to growing it both organically and inorganically to align with our strategic objectives and our markets.
- Drive towards our sustainability and ESG objectives to continue being a responsible corporate citizen.
- Implement a refreshed diversity and inclusion strategy.
- Continue to invest in our IT infrastructure to support our growth.
- Continue to maintain a strong balance sheet to ensure strategic flexibility and long-term viability.

$102.6m

free cash flow[1]

19.8%

adjusted operating margin[2]

Notes

1. Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payments of lease liabilities and finance lease payments received.
2. Adjusted operating profit as a percentage of revenue in the period.

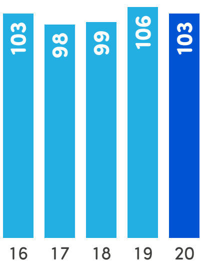
Key performance indicators

Ensuring we deliver continued growth

Spirent's strategy focuses on medium to long-term growth and therefore its achievement cannot be measured by just looking at performance in 2020 compared to the prior year; trends over a number of years must also be considered. Executive Director remuneration is linked to certain financial, strategic and operational key performance indicators (KPIs) with further information available in the Remuneration Report on pages 85 to 89.

Book to bill[1]
Ratio

103



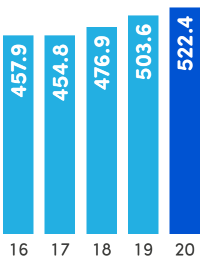
Reason for measurement
The ratio of orders booked to revenue billed is a measure of the visibility of future revenues at current levels of activity and provides an indication of the underlying trend in Spirent's future revenue stream.

Performance
Order intake was greater than revenue in the year resulting in a book to bill ratio of 103. Demonstrating a good foundation for growth despite a challenging COVID-19 pandemic environment.

Relevance to strategy
The book to bill ratio is an indicator of the underpin to future revenue and whether activity levels are rising or slowing, and therefore how effective we have been in the execution of our strategy.

Revenue
$ million

$522.4m



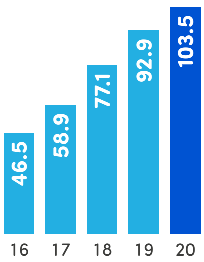
Reason for measurement
Spirent monitors growth in revenue as this shows how successful Spirent has been in expanding its markets and growing its customer base.

Performance
3.7 per cent revenue increase in 2020, following a 5.6 per cent increase in 2019, driven by demand for our 5G assurance solutions in both the lab and live environments, 5G device test and our field test Fit4Launch product.

Relevance to strategy
Revenue demonstrates the effectiveness of our strategy: our success in expanding our markets both organically and through acquisition; maintaining technology leadership; and our strong relationships with our customers, all of which ensure that we continue to win and maintain business.

Adjusted operating profit[2]
$ million

$103.5m



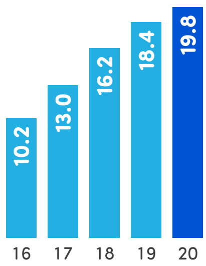
Reason for measurement
Adjusted operating profit is the measure used to evaluate the overall performance of the Group as well as each of the operating segments.

Performance
Adjusted operating profit increased by 11.4 per cent to $103.5 million, from $92.9 million in 2019, as a result of revenue growth and effective cost management.

Relevance to strategy
Adjusted operating profit indicates our financial strength and our ability to invest in the business for future growth.

Adjusted operating margin[3]
%

19.8%



Reason for measurement
Adjusted operating margin is a measure of the Group's overall profitability. Spirent operates in markets which have high operating returns and strives to achieve best-in-class operating margin compared with its peers.

Performance
Increase in adjusted operating margin to 19.8 per cent, from 18.4 per cent in 2019, reflects a combination of revenue growth and continued cost management.

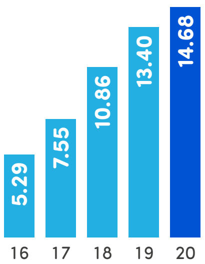
Relevance to strategy
Adjusted operating margin is a measure of how successful we are in our overall strategy and demonstrates our ability to improve profitability through efficient operations whilst being mindful of the need to invest for the future.

Notes
1. Ratio of orders booked to revenue in the period.
2. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).
3. Adjusted operating profit as a percentage of revenue in the period.
4. Adjusted basic earnings per share is based on adjusted earnings as set out in note 11 of Notes to the full year consolidated financial statements.
5. Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payment of lease liabilities and finance lease payments received.

Items with notes 1 to 5 above are non-GAAP alternative performance measures; see pages 192 and 193 for more detail.

Adjusted basic earning per share[4] (EPS) Cents

14.68¢



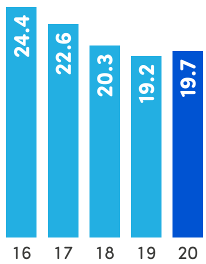
Reason for measurement
Long-term growth in adjusted basic EPS is a fundamental driver to increasing shareholder value.

Performance
Spirent aims to achieve growth in adjusted basic EPS. Part of the Executive Directors' remuneration is dependent on achieving EPS targets. In 2020, adjusted basic EPS grew 9.6 per cent as a result of the increase in adjusted earnings.

Relevance to strategy
Adjusted basic earnings per share is a measure of how successful we are in our strategy and ultimately how Spirent increases value for its shareholders.

Product development spend as a percentage of revenue %

19.7%



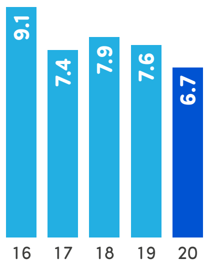
Reason for measurement
To maintain its competitive position, Spirent must invest at suitable levels to support further organic growth initiatives in line with the strategic objectives, whilst driving improved productivity and effectiveness.

Performance
In 2020, product development spend of 19.7 per cent of revenue was broadly flat in comparison to 2019 (19.2 per cent). The spend grew in absolute terms to $103.1 million (2019 $96.5 million).

Relevance to strategy
It is critical that Spirent's product development investment keeps pace with the speed of change in technology, and that it is directed at the right key technology areas; this enables us to expand our markets and to maintain our technology leadership position.

Voluntary employee turnover %

6.7%



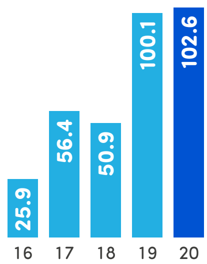
Reason for measurement
Spirent's success is dependent on its talented employees and retaining them is extremely important. Voluntary employee turnover compared to the industry average is the measure used to assess how well the Group has performed.

Performance
Our 2020 voluntary turnover rate of 6.7 per cent remains well below the global industry average of 12.2 per cent.

Relevance to strategy
We cannot avoid the fact that some of our employees will move on but we can avoid a skills shortage by appropriately managing, recognising and rewarding our people. Voluntary employee turnover is a measure of how successful Spirent is in its strategy of retaining and investing in its people.

Free cash flow[5] $ million

$102.6m



Reason for measurement
Free cash flow is a measure of the quality of Spirent's earnings. The aim is to achieve a high conversion of earnings into cash.

Performance
Free cash flow in 2020 was strong at $102.6 million driven by growth in earnings and effective working capital management. Free cash flow conversion for 2020 was 115 per cent of adjusted earnings (2019 123 per cent).

Relevance to strategy
Having strong free cash flow reflects Spirent's ability to generate funds for future investment. It provides financial strength and flexibility and the ability to pay sustainable dividends to our shareholders.

Networks & Security

2020 performance highlights

- We expect a longer 400G Ethernet test market duration, as some customers delayed spend from the last quarter of 2020 into 2021. We retain good momentum with all of our key customers to support their infrastructure developments whilst they manage their budgets carefully at this time.
- Our Wi-Fi test solution and service offerings delivered strong growth as Wi-Fi gained increasing importance during the pandemic and new standards (Wi-Fi 6/6E) rolled out.
- Significant 5G security services wins with a Tier-1 service provider, extending Spirent's involvement with them as they deploy their 5G environments.
- Despite some mid-year softening due to lab closure impacts from COVID-19, our Positioning business delivered another robust performance year, benefiting from good momentum in all market segments, particularly commercial customers in the Americas and across APAC.

Revenue

$314.7m (2019 $319.9m)

Operating profit[1]

$65.3m (2019 $73.9m)

Operating margin[2]

20.7% (2019 23.1%)

Notes
1. Before exceptional items of $0.8 million charged in 2020 (2019 $1.1 million).
2. Operating profit before exceptional items as a percentage of revenue.

Networks & Security is a world leader in high-speed Ethernet/IP performance testing, in Wi-Fi and automotive Ethernet, and develops test methodologies, tools and services for virtualised networks and Cloud. We provide consulting services, test tools, methodologies and proactive security validation solutions. Our world leadership in global navigation satellite system (GNSS) simulation solutions and services is expanding into the positioning, navigation and timing (PNT) market.

Strategy

- We will extend our leadership position in high-speed Ethernet/IP performance testing for next-generation network and Cloud infrastructure design. We will work to drive industry standards to enable rapid adoption of technologies such as 5G, Cloud, software-defined wide area network (SD-WAN), secure access service edge (SASE), Wi-Fi, and automotive Ethernet, expanding our test domain expertise and delivering more managed services.
- We will expand our footprint, partnering with network equipment manufacturers and service providers on performance and security validation essential for their development and deployment, with solutions and services addressing Cloud-native, 5G/edge and SD-WAN environments.
- Building on our global PNT test leadership, we will further extend our reach and influence as the trusted partner of researchers, developers and integrators in the field of PNT technology. Our broad portfolio of solutions and managed services is multi-sensor oriented, assuring our customers achieve their PNT ambitions.

What we test

High-speed Ethernet/IP, Cloud and virtualisation

Our high-speed Ethernet/IP, Cloud and virtualisation test solutions enable network vendors, carriers, and Cloud service providers to test the performance and security of next-generation networks and applications by simulating real-world conditions in the lab and on the network. Our portfolio addresses physical data centers and virtualised networks, applications and services.

Our solutions enable architects, developers and test engineers to create and transmit complex and high-capacity traffic and safely assess the performance, scalability and resilience of their products. Our customers benefit from our wide network of industry partnerships and active contributor role in standards development, enabling them to leverage the latest technology and best practices.

Applications performance and cybersecurity

Spirent is a single source for security assurance of all network infrastructure elements. We provide comprehensive security and performance validation capabilities covering all elements of any production environment: physical and virtual security domains, distributed edge, 5G and Internet of Things use cases, both legacy and virtualised. Our flexible solution and services offerings provide hyper-realistic assessment based on real-world application, service and high-fidelity attack emulation.

Partnering with the MEF Global Industry Forum to introduce the world's first recognised SD-WAN certification

Challenge:
As applications and data migrate to the Cloud, SD-WAN emerged as the interconnection technology of choice to enable seamless and secure Cloud connectivity. Rapid growth in the market resulted in a proliferation of solutions, which motivated global industry forum MEF to develop and establish the industry's first SD-WAN standard.

Solution:
Working in close partnership with Spirent, MEF developed and introduced the MEF 3.0 SD-WAN Certification Program to enable companies to validate that their SD-WAN services and products conform to the industry's first SD-WAN services standard. Certification is a critical enabler for SD-WAN standard adoption and essential to achieve multi-vendor SD-WAN.

Impact:
Spirent has certified SD-WAN services for many of the world's most important managed service providers including AT&T, Comcast, PCCW Global, Telia, Verizon, and Vodacom. In addition, Spirent has certified market-leading SD-WAN products from companies including: VMware, Fortinet, Nuage Network and Versa Networks.

Networks & Security continued

Positioning, navigation and timing

Spirent has a market-leading portfolio of test systems and services to support the development of PNT systems. We address the research and development, verification and integration testing needs of customers from national militaries, military and space contractors, to commercial PNT chipset and device developers, automotive, precision agriculture and surveying players.

We offer a practical and robust PNT framework to audit receiver, system or application resilience in the face of increasing threats to GNSS-based PNT. We affirmed our leadership in the testing of hybrid positioning and sensor fusion under real-world conditions for connected and autonomous vehicle development.

Performance

Mid-year 2020 saw lab and office closures at our contractors supplying the US government, which resulted in some order softness. However, by the end of the year momentum had once again picked up.

Networks & Security revenue decreased by 1.6 per cent to $314.7 million (2019 $319.9 million) and operating profit before exceptional items decreased by $8.6 million to $65.3 million (2019 $73.9 million).

Operating margin before exceptional items decreased to 20.7 per cent, from 23.1 per cent in 2019, reflecting the decrease in revenue and additional investment in product development to increase our potential for addressing market growth opportunities.

> "We retain good momentum with our key 400G customers to support infrastructure developments, while our Positioning business benefited from wins at new commercial customers in the Americas and APAC."

Accomplishments

High-speed Ethernet/IP, Cloud and virtualisation

- We saw robust 400G Ethernet test growth, with key wins that affirmed our product and market leadership. The Ethernet Alliance used Spirent 400G and Flexible Ethernet (FlexE) solutions to conduct ground-breaking interoperability testing across technologies from 10G to 400G at the Optical Networking and Communication Conference & Exhibition (OFC) 2020.
- Our Wi-Fi business grew in 2020, driven by our leadership in testing Wi-Fi 6 technology. Our industry-first Spirent TestCenter Wi-Fi 6 test solution continued to accelerate development and deployment of the technology, access points, gateways and for end-to-end testing, and also won a 2020 Best of Interop Tokyo award.
- Our Automotive Ethernet business secured wins at leading automotive original equipment manufacturers in APAC and Americas, as we met the growing need for compliance to industry standards.
- As the exclusive SD-WAN Authorised Certification and Test Partner for the MEF global industry forum, Spirent continued to enable the world's leading service and technology providers to validate that their SD-WAN services and products conform to the MEF 70 global standard.

Applications performance and cybersecurity

- As security validation for product development and network rollouts assumed new importance in a work-from-home world, we leveraged our extensive end-to-end automated security test capability across all network layers and segments to achieve growth in our core markets.
- We broadened our strategic engagement with global industry forum MEF and its 3.0 standards evolution, actively contributing to the security aspects of multiple SD-WAN and SASE working groups.
- We continued our involvement with the NetSecOPEN initiative, as its open and transparent security performance testing standards and community-driven initiatives grew in acceptance and importance with the demise of a leading proprietary test lab.

Assuring critical communications for travellers and airlines at the world's newest mega airport

Challenge:
Beijing Daxing International Airport is home to the world's largest single-structure airport terminal with an unprecedented mix of new network and communications technologies. Assuring its information systems and networks would be able to operate at optimal performance at what is expected to be one of the world's busiest airports, required significant test design, seamless execution and analysis, along with an acute understanding of complex network and information environments.

Solution:
Spirent's Professional Services team executed on an extensive four-month plan as the new airport prepared to welcome its first passengers. This included field testing the airport's networks and data center, traveller Wi-Fi, network security and the other key supporting systems, utilising the market-leading capabilities of multiple solutions that included Spirent TestCenter, CyberFlood, Avalanche and CloudStress.

Impact:
Having been able to comprehensively test and assure security, reliability and high-availability of information systems deployed across the 700,000 square metre airport premises, Daxing International Airport welcomed its first passengers and airport personnel with an unrivalled technology experience.

Positioning, navigation and timing

- We continued to lead in supply of advanced large scale test systems to US Military contractors and to modernisation of the global positioning system (GPS). In collaboration with our Spirent Federal Systems partner, we provided test tools and support to the development and deployment of the Modernised Navstar Security Algorithm, a key element in GPS modernisation.
- We leveraged the system level expertise gained in military applications into increasingly-complex test architectures in the commercial segment. These ranged from large scale over-the-air applications in anechoic chambers, to multi-sensor/multi-signal field record and playback systems for automotive testing in demanding urban environments.
- We broadened our simulation capability beyond core GNSS technology, with increased focus in complementary PNT signals and sensors. This is allowing Spirent to support system level integrators where several PNT signals are 'fused' to provide an overall PNT output with increased availability, accuracy and integrity.
- We launched new high-density hardware for our flagship GSS9000 GNSS simulation platform which doubled capacity in the same footprint. Also new in 2020 were SimHIL, which allows autonomous vehicle developers to integrate our low-latency platform into third party automotive-specific simulation environments, and SimIQ, our first software-based simulation solution, enabling us to engage earlier in our customers' design cycle.

Impact of market dynamics on Spirent's business

- As telecommunications Cloud and service providers undertake massive network transformation, they and their vendors leverage our portfolio of 400G, 100G, network functions virtualisation infrastructure assurance and Wi-Fi 6 solutions/services to accelerate and assure their customer offerings. Customers increasingly leverage Spirent to gain access to industry expertise that can transform their business objectives into revenue, using our broad set of solutions and services.
- The abrupt transition to work from home drove Spirent involvement in the urgent imperative to evolve, deploy and validate security solutions that address the growing threat landscape due to a distributed workforce's vulnerabilities. The demise of a leading proprietary test lab gave added importance to the community-led NetSecOPEN initiative, with which Spirent has had a strategic relationship since inception, that empowers enterprises to meaningfully compare vendors' security capabilities with open and transparent real-world scenarios.
- The market that makes use of PNT is placing increasing reliance on other technologies in conjunction with GNSS. Our business benefits from the needs of developers and integrators of PNT devices and of applications such as connected and autonomous vehicles, for the most realistic environment models for lab-based testing, and for the integration of additional positioning sensors such as LiDAR (Light Detection and Ranging).

Lifecycle Service Assurance

2020 performance highlights

- Robust orders growth throughout the year, with a healthy backlog entering 2021.
- Good growth achieved for both our lab assurance (Landslide) and live assurance (VisionWorks) solutions.
- Strong revenue growth as we closed out the first wave of outcome-driven services, in conjunction with traditional product and licensing revenues has driven operating margin up.
- Growth in demand for our lab-based 5G network test solutions, with a growing funnel of new Test (TaaS) and Lab (LaaS) as-a-Service opportunities.
- Strong demand for our operational network active service assurance solutions, with expansion of our US customer base as we added key new customers.

Revenue

$127.7m (2019 $111.2m)

Operating profit[1]

$32.9m (2019 $18.1m)

Operating margin[2]

25.8% (2019 16.3%)

Notes
1. Before exceptional items of $0.7 million charged in 2020 (2019 $0.4 million).
2. Operating profit before exceptional items as a percentage of revenue.

Our Lifecycle Service Assurance solutions and outcome-driven services support customers as they develop, deploy and optimise new technologies and service delivery models. From lab environments to live production networks we radically reduce the time, costs and risks associated with bringing new technologies to market. Utilising our breadth of coverage, coupled with our automation and analytics, we bridge the gap between development and operations teams to drive operational excellence across any product or service lifecycle.

Strategy

Our Lifecycle Service Assurance strategy is: 1) deliver a leading active assurance platform for 5G and next-generation enterprise service assurance; 2) help service providers automate critical test activities, as well as their triage and troubleshooting processes; 3) leverage our product offerings, together with our deep test and assurance expertise, to deliver a new portfolio of outcome-driven service offerings. Three key attributes set Spirent apart in the Lifecycle Service Assurance market:

- **Automation:** We not only help our customers automate the testing of new infrastructure and network functions in the lab, but also provide them with the ability to automate their triage and troubleshooting processes in live networks. Automating both lab and live operations enables our customers to dramatically reduce time and cost when rolling out new technologies, while simultaneously increasing accuracy and scale.
- **Coverage:** Spirent is the only vendor to offer both lab and live solutions as both a contiguous and continuous test offering. With coverage from the mobile core to the radio access network to the end-user device, our solutions provide the broadest end-to-end visibility. We enable our customers to eliminate false positives by clearly identifying the precise network, segment, or device contributing to any service degradation.
- **Analytics:** Leveraging machine learning and signature-based analysis allows our customers to detect, isolate and eliminate potential service interruptions or degradations before subscribers are impacted. This in turn allows rapid reduction in mean-time-to-repair by alleviating the unnecessary escalations typically found in traditional operational support models.

From 1 January 2021 the Connected Devices business segment will be merged and managed by the Lifecycle Service Assurance team to exploit technical leverage and accelerate our 5G success by optimising our solutions and services portfolio across both labs and operational networks.

Ensuring a major North American mobile network's new 5G markets were ready for service

Challenge:
A major North American mobile operator was preparing to launch network-wide 5G and needed to ensure rollouts would be ready for consumer uptake. Being able to seamlessly upgrade to new 5G releases and provide service differentiation in a crowded marketplace was critical to the success of the launch.

Solution:
The operator deployed Spirent's automated assurance solution, VisionWorks, to support pre-launch validation across new 5G cell paths, continuous post-launch performance monitoring, rapid fault isolation and ongoing troubleshooting.

Impact:
Spirent's automated assurance solution enabled this mobile operator to address the challenges of compressed 5G network rollout timelines, coupled with heightened subscriber focus on differentiated experiences and performance. By proactively assuring live network performance and user experiences, Spirent is helping the operator to set the bar for 5G delivery.

Lifecycle Service Assurance continued

What we test and assure

Our Lifecycle Service Assurance offerings support the full lifecycle for any new technology rollout. From pre-production emulation and certification, to post-production troubleshooting, to automating a continuous test environment, we help our customers maximise the monetisation of any new technology. The following key areas were growth drivers in 2020 and offer continued expansion opportunities into 2021:

- **5G:** For both the stand-alone and non-stand-alone flavours of 5G, Spirent provides continuous testing capability across the entire lifecycle for any initiative. Beginning with the network equipment manufacturer, through service provider deployments and enterprise service consumption, our 5G offering bridges the gaps traditionally found between the develop, deploy and operate phases for a new technology rollout. Specific areas of focus for innovation and visibility are 3GPP network function/virtualised network function testing, Voice over LTE, Voice over 5G New Radio, video, and network slice assurance.
- **SD-WAN:** Just as SD-WAN is changing the face of service delivery models, Spirent's Virtual Test Agents, centrally orchestrated to provide visibility across all infrastructure, transport and application service layers, are changing the way those services are managed and optimised. Spirent's Cloud-native approach to centralised SD-WAN monitoring and troubleshooting has helped to pave the way for MEF's new SD-WAN 3.0 standard.
- **Cloud (Multi-Cloud):** With the introduction of 5G and Cloud-native infrastructure, such as Open Radio Access Network (Open RAN), it is critical that service providers implement an automated, always-on approach to testing, troubleshooting and remediation of issues in real time as they occur. While introducing tremendous flexibility and extensibility, these Cloud-native infrastructures also present unprecedented levels of complexity. With its Cloud-native, fully-virtualised implementation of automated test and troubleshooting capabilities, Spirent is well positioned to help our customers migrate their infrastructure and services to the Cloud.

We continue to expand our available market as we leverage IoT, mobile edge computing (MEC), and 4G/5G benchmarking opportunities. Our incumbency remains a core strength in developing pipeline, while our 5G and automation innovations are driving net-new growth opportunities.

Performance

Lifecycle Service Assurance revenue increased to $127.7 million (2019 $111.2 million), driven by strong demand for next-generation automated test and assurance, in combination with new outcome-driven service offerings. We continued to expand an existing Test-as-a-Service offering with a major North American Tier-1 service provider, while adding a net-new Tier-1 multiple-system operator (MSO) customer with our Lab-as-a-Service offering.

Lifecycle Service Assurance operating profit before exceptional items increased to $32.9 million (2019 $18.1 million) as a result of the increased revenue, favourable product mix and rigorous cost management.

Operating margin before exceptional items improved to 25.8 per cent, from 16.3 per cent in 2019.

Accomplishments

Customer growth and market expansion

- In 2020 we experienced strong growth in both our lab (Landslide) and live (VisionWorks) assurance portfolios. This growth was global as we added five net-new Landslide customers in EMEA and APAC.
- We added three net-new customers in North America and APAC for VisionWorks, one of which is a major Tier-1 provider.
- Our Automation (Velocity) product paved the way for broader penetration of the enterprise market as we added two net-new enterprise customers in 2020.
- We made public announcements of Spirent Landslide 5G core network test engagements with China Telecom, Japan's Rakuten Mobile and Sri Lanka's Dialog Axiata during 2020.

Positive key business indicators

- In conjunction with customer growth and market expansion, key business indicators that support our long-term sustainable growth objective were also positive, including:
  - Significant year-on-year increase in pipeline creation and funnel coverage.
  - Strong increase in multi-year subscriptions and support contracts.
  - Funnel growth in newly established outcome-driven service offerings.

Recognition

- We won a 2020 Fierce Innovation Award from Fierce Telecom in the Artificial Intelligence/Analytics/Automation category for the unique ability of our industry-leading Velocity automation solution to scale customer development environments while dramatically reducing costs.
- For the fourth successive year, Spirent was a finalist for Light Reading's Leading Lights Outstanding Test & Measurement Vendor award. Nomination highlights included Spirent's continued leadership in 5G testing and assurance solutions, while expanding its market footprint through new and innovative Test-as-a-Service offerings.
- Spirent was also recognised by Leading Lights as a finalist in the Most Innovative SD-WAN Product Strategy category. Highlights included Spirent being at the forefront, in collaboration with MEF, of delivering the new MEF 3.0 SD-WAN standard.
- Spirent won a 2019 plc award in the UK for Innovation in Technology during the year, citing our leadership in the delivery of 5G by reducing the complexity and economics of testing, verification and delivery.

Impact of market dynamics on Spirent's business

- From a technology perspective, 5G continues to be at the forefront of new opportunity creation, with 2020 being the year when market expansion resulting from 5G technology really took hold. Network operations teams are learning and adapting to the fact that legacy visibility models are simply inadequate in Cloud-native, highly disaggregated and fully-virtualised 5G environments. The way in which new services are being developed, deployed and optimised for market consumption is fundamentally changing, with SD-WAN, MEC, and Open RAN leading the charge.
- Automation is finding broad adoption across the board – for network equipment vendors, service providers, MSOs and enterprises – with the objective of improving agility and operational efficiency. Legacy testing and service assurance activities have been mostly manual, reactive and time-consuming. As continuous integration and continuous delivery (CI/CD) development principles become more mainstream with 5G, automated assurance and active test are becoming essential building blocks for supporting the CI/CD model across all layers. Automation is enabling workflows such as turn-up, continuous monitoring, and troubleshooting to be seamlessly integrated with network management systems with a goal of establishing fully autonomous operations.

"Robust orders growth throughout the year for our 5G lab and live network service assurance solutions, as well as our outcome-driven services."

Transforming a global operator's test lab with Spirent's ground-breaking Test-as-a-Service

Challenge:
To rapidly deploy a new Cloud-native 5G core and ongoing releases, this global top-five operator needed help to tackle the complex challenges of collaborating efficiently with multiple network vendors. The operator lacked the time, resources and tools to move as fast as needed to realise its own ambitious goals.

Solution:
A Test-as-a-Service managed solution for 5G Core has been deployed to power the operator's collaboration with vendors via Spirent's automated and continuous test environment. The test environment includes the market-leading capabilities of Spirent Landslide for core network validation and Spirent TestCenter for virtual infrastructure validation.

Impact:
The operator is now able to release multi-vendor 5G core features three times faster than it could for its 4G network. This has all been achieved without significant upfront operator investments in test infrastructure, marking the start of a new trend in delivering Test-as-a-Service.

Connected Devices

2020 performance highlights

- Strong revenue growth and good margins driven by the scaling of 5G network deployments and growth in the number of 5G smartphone models that require location testing.
- Double-digit growth in our services offerings as service providers are keen to evaluate the readiness of rapidly-evolving 5G technology and benchmark their user experience versus competitors.
- Innovative 5G lab solutions delivered to the market for millimetre-Wave (mmWave) antenna evaluation and for research into new 5G-enabled applications beyond traditional consumer use cases.
- Expansion of our served markets into the government space with wins into multiple tactical use cases.

Revenue

$80.0m (2019 $72.5m)

Operating profit[1]

$14.5m (2019 $9.5m)

Operating margin[2]

18.1% (2019 13.1%)

Notes
1. Before exceptional items of $0.2 million charged in 2020 (2019 $0.3 million).
2. Operating profit before exceptional items as a percentage of revenue.

Ubiquitous wireless connectivity drives our modern lifestyle. Our mission is to help those who build wireless devices and networks to meet their promise of delivering the very best end-user experience. Our live network testing and digital twins for network and radio systems let technology providers, manufacturers and service providers get to market faster with peak performance.

Strategy

Our strategy is to pursue sustainable, profitable growth by aligning with market drivers in our core telecoms market, as well as those in emerging verticals that look to take advantage of 5G's game-changing capabilities.

We are focused on expanding into new market segments including: defence, private enterprise networks, university and government-funded research, and the vehicle-to-everything transportation market. We are addressing the evolved testing needs of a new generation of location-based services that utilise both GNSS and terrestrial signals and sensors to yield more accurate positioning in more places, maintaining our leadership in this segment. We are innovating in new radiated ('over-the-air') test solutions that enable design and evaluation of the complex antenna systems on 5G network equipment and devices.

Our Fit4Launch test service offerings are evolving to evaluate the performance of next-generation 5G devices and the new services that they enable. We are expanding the served market for our differentiated user experience measurement services and tools for voice, data and video into adjacent markets such as 5G service readiness and competitive benchmarking.

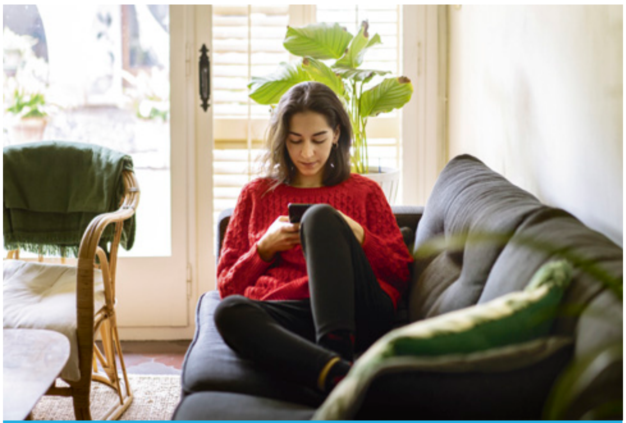
From 1 January 2021 this business segment will be managed and combined with Lifecycle Service Assurance to exploit technical leverage and accelerate our 5G success by optimising our solutions and services portfolio across both labs and operational networks.

What we test

Radio systems

Due to the multiple complex effects that are introduced by the medium between a radio system's transmitting antenna and a receiving antenna, it has always been challenging to test radio systems in the field in a way that is repeatable and accounts for the many corner cases that can stress a design.

Spirent's Vertex Radio Frequency (RF) Channel Emulation solutions provide a "digital twin" in the lab for the real-world's complex effects. It enables developers of endpoints, chipsets, base stations and access points to test their radio systems in a controlled lab environment. With 5G come many additional complexities, including mmWave frequencies, base stations with hundreds of antenna elements, and three-dimensional beamforming. With its innovation around new RF test methodologies and the world's most flexible channel emulation solution, Spirent is accelerating successful 5G deployments around the world.



Validating complex RF performance helps keep smartphone worldwide launch on track

Challenge:
One of the world's leading makers of smartphones was preparing to launch a high-profile line-up of 5G devices. But first, it had to validate complex multi-band RF performance to support the market's broadest range of 5G bands across Frequency Ranges 1 (sub-6GHz) and 2 (mmWave).

Solution:
The Spirent Vertex Channel Emulator and Spirent 8100 5G Mobile Device Test System were put to work to test 5G RF applications spanning massive multiple-input multiple-output (M-MIMO) and beamforming for multiple frequency ranges. By accurately emulating the effects of complex 5G wireless air interface, the smartphone leader was able to ensure that their new line-up would perform as customers expect and was ready for launch.

Impact:
With the world watching, this smartphone maker was able to launch the world's most advanced 5G handset to date, safe in the knowledge that its complex multi-band RF capabilities would perform as promised.

Connected Devices continued

What we test continued

Cellular device location and protocol test

Spirent's 8100 5G Mobile Device Test system specialises in rigorous testing of the mobile services we depend on for emergency calls, location accuracy, voice connectivity and data. Our 8100 platform has evolved to support new 5G capabilities, emulating 5G base stations and the network behind them, so a device behaves in the lab as it would on almost any carrier's network. 8100 provides fully automated test suites and ad-hoc testing. It creates network stress and error scenarios to prove in the functionality and robustness of devices.

Spirent 8100 has been recognised over multiple cellular technology generations as the industry's de-facto standard for worldwide location conformance and acceptance test of mobile devices and chipsets employing cellular and indoor positioning technologies that make use of signals from satellites, cellular base stations, Wi-Fi and other sources. The 8100 evaluates devices and chipsets for location characteristics such as accuracy, time-to-fix, RF interference and antenna performance.

Mobile user experience evaluation

To assess the experience that users achieve from wireless devices and mobile networks, Spirent's Umetrix User Experience solution listens to audio, watches video, and uses data-hungry applications like real users do, in an automated manner that is repeatable and efficient. Umetrix's state-of-the-art 5G chipset logging and automated Cloud data collection and reporting facilitate testing in the field and the lab, making it easy to reproduce and resolve issues.

Prior to deploying a new device or service, top-tier operators around the globe use Spirent's Fit4Launch Test Service to ensure their readiness and competitive viability. Fit4Launch leverages Umetrix to weed out data, voice and calling, streaming video, emergency location and calling issues. Spirent has drive-tested thousands of devices to catch "in-the-wild" live infrastructure interaction troubles before users do. For 5G, as for previous technology generations, Fit4Launch is playing a key role in protecting the operators' brands, lowering support and returned device costs, reducing churn, and helping the operator keep its promise of an excellent user experience.

Wargaming to protect a nation's 5G network security

Challenge:
In the face of ever-increasing threats, a European government national security organisation needed help in developing a flexible capacity for security research and wargaming of the 5G network to help protect future national communications network security.

Solution:
The organisation adopted Spirent's 5G Network Digital Twin to provide a new approach to testing potential security threats and scenarios to the nation's rapidly-growing 5G network. Spirent's 5G Network Digital Twin provides an emulated, software replica of the 5G physical network that allows for continuous testing, assuring and optimising of almost limitless scenarios of a living 5G network.

Impact:
The Spirent supplied digital replica of a national 5G network provides a cutting-edge sandbox that enables this government organisation to wargame future potential risks to the network while researching innovative new mitigation techniques.

Performance

In 2020, Connected Devices revenue increased by 10.3 per cent to $80.0 million (2019 $72.5 million) as we successfully launched our 5G lab test solutions and grew our field test services.

Operating profit before exceptional items grew to $14.5 million, from $9.5 million in 2019.

A higher percentage of revenue from services reduced gross margin levels slightly over 2019.

Accomplishments

During 2020, the Connected Devices business unit advanced its strategic priorities with significant accomplishments.

Capitalising on new 5G technologies and deployment growth

- Our 8100 5G test solution, used to evaluate the location performance of 5G smartphones, achieved good growth as it was adopted across the ecosystem by the world's leading chipset developers, smartphone manufacturers, test labs and Tier-1 mobile operators.
- Our innovative Vertex radio channel emulation solutions continued to be chosen by mobile infrastructure vendors and smartphone manufacturers to evaluate the over-the-air antenna performance of 5G mmWave and M-MIMO radio technology, as well as the network elements being developed for disaggregated Open RAN architecture.
- Our Umetrix Data solution became the go-to tool for market-pioneering 5G chipset vendors, field test organisations, and service providers as they evaluated the dramatically-higher mobile data rates enabled by 5G.

"Acceleration in 5G network deployments and in the number of 5G smartphone models coming to market drove revenue growth."

Growing our service offerings

- As the 5G technologies required to achieve US nationwide coverage were implemented, leading mobile network operators turned to Spirent, with our expertise gained from involvement in 5G research and development, to evaluate the service readiness of these new deployments. These consultative services represent a new business direction, beyond device certification testing.
- During 2020, we navigated challenging field test conditions brought on by the COVID-19 pandemic and grew our Fit4Launch device acceptance test service business on the back of demand to test 5G services in new operating bands on a rapidly-growing number of 5G-enabled devices.
- The battle for cellular subscriber market share remains highly competitive and the industry places a high value on benchmarking the consumer's user experience versus alternate suppliers. As a trusted adviser to the industry, this has generated additional opportunities for Spirent's field test services.

Impact of market dynamics on Spirent's business

- Despite some device development programme delays in 2020 in the wake of the COVID-19 pandemic, the scaling of 5G deployments continued apace, bringing new challenges within the traditional cellular ecosystem and new opportunities beyond it.
- Customer investments are now almost exclusively focused on 5G technology as they race to be first to market with ubiquitous higher data rates and evaluate how this higher throughput can enable new applications. This creates new services opportunities for Spirent and additional lab test opportunities as the industry addresses radio technology performance challenges in the new mmWave bands.
- Mobile networks are being disaggregated in the push towards an Open RAN environment. This empowers new market entrants but also creates new technical challenges as mobile service performance must be optimised across elements from a much more diverse vendor ecosystem. Spirent, with its broad range of solutions and services, is well positioned to address testing needs ranging from individual network elements to end-to-end service performance.

Continued strong earnings growth

Adjusted operating profit[1]

$103.5m ↑ 11.4%

Adjusted operating margin[2]

19.8% ↑1.4pp

Notes
1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).
2. Adjusted operating profit as a percentage of revenue in the period.

Group overview

We delivered another year of robust revenue and profit growth despite the macro-economic backdrop which gives us further confidence that our strategy is working. Our customers continue to invest in 5G related infrastructure and solutions, a trend we expect to continue. Our operational execution model remains robust and we continue to invest in our leading technology portfolio and our people.

Order intake at $539.4 million, compared to $532.0 million in 2019, resulted in a book to bill ratio of 103. In particular, Lifecycle Service Assurance delivered strong growth and we continue to win multi-year contracts, increasing order backlog as we enter 2021.

Revenue grew by 3.7 per cent to $522.4 million and was driven by strong demand for our assurance solutions in both the lab and live environments as the 5G networks continue to roll out. Connected Devices also delivered strong revenue growth driven by demand for our new 5G device testing, field testing and channel emulator sales. We experienced a small year-on-year decline in our Networks & Security operating segment primarily as a result of order intake delays within our high-speed Ethernet business as COVID-19 impacted customer spending patterns and lab closures for our Positioning products in the second half of the year.

Whilst continuing to manage the cost base effectively, we increased investment in product development across the portfolio targeting high-growth, high-margin areas. We also made further investment to expand our key account management programme and continued investment in our cross portfolio services offerings to underpin future growth plans.

> "Our extremely strong financial and operational focus has underpinned a resilient performance."

Paula Bell
Chief Financial & Operations Officer

Gross margin remains strong at 73 per cent and adjusted operating profit grew 11.4 per cent to $103.5 million, from $92.9 million in 2019. Adjusted operating margin has increased by 1.4 percentage points to 19.8 per cent, from 18.4 per cent last year.

The CEO strategic review was concluded in the year with costs amounting to $3.1 million charged to exceptional items (2019 $1.8 million).

The Group's effective tax rate of 13.6 per cent is broadly consistent with 2019 (13.0 per cent). Adjusted basic earnings per share has increased by 9.6 per cent, up from 13.40 cents last year to 14.68 cents for 2020.

We retain a strong balance sheet and cash at bank closed at $241.2 million, up $58.0 million on the position at the end of last year, with free cash flow of $102.6 million.

As a result of the strong financial performance, we propose a 12 per cent increase to the full year dividend per share, from 5.39 cents to 6.04 cents, and looking forward we maintain our progressive dividend policy ensuring that we sustain dividend cover of 2 to 2.5 times adjusted earnings. In addition, in line with our capital allocation policy, the Board has considered the Company's cash position and as a result is recommending a special dividend of 7.50 cents (5.40 pence) per share.

The following table shows summary financial performance for the Group:

$ million	**2020**	2019	Change (%)
Order intake[1]	**539.4**	532.0	1.4
Revenue	**522.4**	503.6	3.7
Gross profit	**383.4**	368.6	4.0
Gross margin (%)	**73.4**	73.2	0.2pp
Adjusted operating costs[2]	**279.9**	275.7	1.5
Adjusted operating profit[2]	**103.5**	92.9	11.4
Adjusted operating margin[3] (%)	**19.8**	18.4	1.4pp
Reported operating profit	**95.7**	88.6	8.0
Effective tax rate[4] (%)	**13.6**	13.0	0.6pp
Reported profit before tax	**95.8**	89.6	6.9
Adjusted basic earnings per share[5] (cents)	**14.68**	13.40	9.6
Basic earnings per share (cents)	**13.84**	12.79	8.2
Free cash flow[6]	**102.6**	100.1	2.5
Closing cash	**241.2**	183.2	31.7
Final dividend per share[7] (cents)	**3.87**	3.45	12.2
Special dividend per share[7] (cents)	**7.50**	–	–

Notes
1. Order intake represents commitments from customers to purchase goods and/or services that will ultimately result in recognised revenue.
2. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).
3. Adjusted operating profit as a percentage of revenue in the period.
4. Effective tax rate is the adjusted tax charge, before tax on adjusting items, expressed as a percentage of adjusted profit before tax.
5. Adjusted basic earnings per share is based on adjusted earnings as set out in note 11 of Notes to the full year consolidated financial statements.
6. Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payments of lease liabilities and finance lease payments received.
7. Dividends are determined in US Dollars and paid in Sterling at the exchange rate prevailing when the dividend is proposed.
   The final dividend proposed for 2020 of 3.87 cents per Ordinary Share is equivalent to 2.78 pence per Ordinary Share.
   The special dividend proposed for 2020 of 7.50 cents per Ordinary Share is equivalent to 5.40 pence per Ordinary Share.

Note on Alternative Performance Measures (APM)

The performance of the Group is assessed using a variety of performance measures, including APMs which are presented to provide users with additional financial information that is regularly reviewed by management. These APMs are not defined under IFRS and therefore may not be directly comparable with similarly identified measures used by other companies.

The APMs adopted by the Group are defined on pages 192 and 193. The APMs which relate to adjusted income statement lines are presented and reconciled to GAAP measures using a columnar approach on the face of the income statement and can be identified by the prefix 'adjusted' in the commentary. All APMs are clearly identified as such, with explanatory footnotes to the tables of financial information provided, and reconciled to reported GAAP measures in the Financial review or Notes to the full year consolidated financial statements.

Financial review continued

Revenue

$ million	2020	% of total	2019	% of total
Revenue by segment				
Networks & Security	**314.7**	**60.3**	319.9	63.5
Lifecycle Service Assurance	**127.7**	**24.4**	111.2	22.1
Connected Devices	**80.0**	**15.3**	72.5	14.4
	522.4	**100.0**	503.6	100.0
Revenue by geography				
Americas	**276.2**	**52.9**	266.1	52.8
Asia Pacific	**189.2**	**36.2**	187.8	37.3
Europe, Middle East and Africa	**57.0**	**10.9**	49.7	9.9
	522.4	**100.0**	503.6	100.0

Total Group revenue grew by $18.8 million to $522.4 million in 2020, an increase of 3.7 per cent over the prior year.

The Networks & Security operating segment saw a slight decline in revenue of 1.6 per cent. We experienced some delay in high-speed Ethernet testing by service providers as COVID-19 impacted customer spending patterns and following lab and office closures for US government defence contractors, we experienced reduced demand mid-year for our Positioning products.

Revenue at Lifecycle Service Assurance increased 14.8 per cent year-on-year driven by demand for both our Landslide lab solution and VisionWorks live network solution, as customers invested to verify and assure 5G. We also experienced robust growth in order intake year-on-year, growing the orderbook as the value of multi-year deals increased over 2019.

Connected Devices delivered a strong performance with growth in revenue of 10.3 per cent, driven by increased demand for our 5G device test and strong demand for our field test Fit4Launch product.

Geographically, we saw growth in revenue in all regions and closed the year with a solid orderbook. The Asia Pacific region still makes up 36 per cent of our portfolio, where we had success during the year in securing new business outside of China.

Gross margin

$ million	2020	%	2019	%
Networks & Security	**229.6**	**73.0**	232.3	72.6
Lifecycle Service Assurance	**102.1**	**80.0**	88.6	79.7
Connected Devices	**51.7**	**64.6**	47.7	65.8
	383.4	**73.4**	368.6	73.2

Gross margin for 2020 remains strong at 73.4 per cent (2019 73.2 per cent). The Networks & Security and Lifecycle Service Assurance operating segments achieved an improvement in gross margin, benefiting from a higher proportion of software revenue. Connected Devices gross margin had a slight decline driven by increased services content.

Adjusted operating costs

$ million	2020	2019
Product development	**103.1**	96.5
Selling and marketing	**123.4**	129.2
Administration[1]	**53.4**	50.0
Adjusted operating costs[1]	**279.9**	275.7
Networks & Security	**164.3**	158.4
Lifecycle Service Assurance	**69.2**	70.5
Connected Devices	**37.2**	38.2
Corporate	**9.2**	8.6
Adjusted operating costs[1]	**279.9**	275.7

Note

1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).

Total Group adjusted operating costs were up $4.2 million or 1.5 per cent in 2020 compared to last year. The emphasis remained on effective resource allocation and careful cost management.

The overall investment in product development increased year-on-year from $96.5 million to $103.1 million, maintaining our targeted 20 per cent of revenue, to maximise our mid-term growth potential. Investment in the sales and marketing organisation was targeted on expanding our key account management programme to drive incremental business with our most valuable customers and developing routes to market for our new technologies to a broadening customer base. Selling and marketing costs reduced by $5.8 million, from $129.2 million to $123.4 million, mainly as a result of reduced travel which allowed investment opportunities into other areas as we continue to evolve the business structure to support growth.

In addition, the appointment of a CTO (Chief Technology Officer) will ensure we drive effective investment across our technical portfolio and are optimally placed to develop business solutions for our customers in existing and new markets as they emerge.

Corporate costs include improvement initiatives including a review of our go-to-market strategy and pricing approach to maximise our technical intellectual property.

Operating profit

$ million	2020	Adjusted operating margin[1,2] %	2019	Adjusted operating margin[1,2] %
Networks & Security	65.3	20.7	73.9	23.1
Lifecycle Service Assurance	32.9	25.8	18.1	16.3
Connected Devices	14.5	18.1	9.5	13.1
Corporate	(9.2)		(8.6)	
Adjusted operating profit[1]	103.5	19.8	92.9	18.4
Other items (charged)/credited in arriving at operating profit:				
Exceptional items	(3.1)		0.5	
Acquisition related costs	–		(0.1)	
Acquired intangible asset amortisation	(0.5)		(1.2)	
Share-based payment	(4.2)		(3.5)	
Reported operating profit	95.7		88.6	

Notes
1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million).
2. Adjusted operating profit as a percentage of revenue in the period.

Adjusted operating profit increased by $10.6 million or 11.4 per cent to $103.5 million in 2020, compared with $92.9 million in 2019. Adjusted operating margin increased by 1.4 percentage points to 19.8 per cent, from 18.4 per cent in 2019.

Reported operating profit was up by $7.1 million or 8.0 per cent to $95.7 million (2019 $88.6 million). Total adjusting items were higher in 2020 at $7.8 million, compared to $4.3 million in 2019, mainly due income of $2.3 million credited to exceptional items last year, see below.

Exceptional items

Costs of $3.1 million have been charged to exceptional items in 2020, relating to the conclusion of a strategic review instigated by Spirent's CEO, appointed 1 May 2019, involving a number of initiatives designed to evolve the strategic direction of Spirent to maximise market opportunities by creating a more agile, customer-focused organisation. These include a strategic focus on recurring revenue streams over time, a strengthened leadership team and development of our sales and marketing structure to drive improved effectiveness to exploit our leading technologies.

In 2019, the Group recognised $0.5 million of exceptional income in relation to:

1) a refund of $2.3 million following a successful claim for reimbursement of VAT paid on imports with respect to a compliance dispute with French Customs concerning the valuation and classification of imports into France which commenced in 2011; and

2) $1.8 million of costs associated with a strategic review instigated by Spirent's CEO, as described above, which continued and concluded in 2020.

Financial review continued

Acquired intangible asset amortisation and share-based payment

As a result of some acquired intangible assets reaching the end of their useful economic lives and no longer being amortised, acquired intangible asset amortisation has continued to reduce, decreasing to $0.5 million in 2020 from $1.2 million in 2019.

Share-based payment has increased to $4.7 million in 2020 (2019 $3.9 million), of which $4.2 million (2019 $3.5 million) has been treated as an adjusting item. This increase reflects the incremental cost associated with new awards. See note 31 of Notes to the full year consolidated financial statements for more information.

Currency impact

The Group's revenue and costs are primarily denominated in US Dollars or US Dollar-linked currencies. Currency exposures arise from trading transactions undertaken by the Group in foreign currencies and on the retranslation of the operating results and net assets of overseas subsidiaries.

The Group's income statement includes a foreign exchange loss, included in administration costs, of $0.6 million (2019 $0.6 million) arising from transacting in foreign currencies, primarily US Dollars in the United Kingdom, and the translation of foreign currency cash balances.

Forward foreign currency exchange contracts are entered into to manage the exposure arising from transacting in US Dollars in the United Kingdom.

Although the most significant currency exposure arises in relation to movements in Pound Sterling against the US Dollar, there are other less significant currency exposures, notably the Euro and Chinese Yuan.

Finance income and costs

Interest income of $1.4 million was earned from cash on deposit (2019 $2.7 million) and $0.2 million (2019 $0.1 million) of interest income was recognised in relation to the UK defined benefit pension plans. The decrease in bank interest received year-on-year reflected lower global interest rates. Surplus funds are held principally in the United Kingdom and United States on short-term or overnight deposit and earn market rates of interest.

Finance costs in 2020 were $1.5 million (2019 $1.8 million), $1.4 million (2019 $1.7 million) of which related to interest on lease liabilities.

Free cash flow[1]

$102.6m ↑ 2.5%

Note

1. Cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received, payments of lease liabilities and finance lease payments received.

Tax

The adjusted effective tax rate, being the adjusted tax charge expressed as a percentage of adjusted profit before tax, shown on the face of the consolidated income statement, was 13.6 per cent in 2020, slightly up from 13.0 per cent in 2019.

Spirent's effective tax rate continues to benefit from the United Kingdom Patent Box Scheme, the United States R&D Tax Credit, foreign tax credits and a current year recognition of deferred tax assets in the United States.

Going forward it is anticipated that Spirent's effective tax rate will be maintained at around 14-15 per cent if statutory tax rates do not materially change. As a large proportion of the Group's profit is generated in the United States, the effective tax rate is exposed to changes in US tax legislation. The new administration has indicated their desire to increase corporate tax rates and other countries may also be considering raising their corporate tax rates. The UK budget announcements on 3 March 2021 included an increase to the UK corporation tax rate to 25 per cent, which is due to be effective from 1 April 2023. As a result, we will be closely monitoring all proposed corporate tax rates and other tax legislative changes for their impact on the Group's effective tax rate.

Earnings per share

Adjusted basic earnings per share was up 9.6 per cent to 14.68 cents (2019 13.40 cents). Basic earnings per share was 13.84 cents (2019 12.79 cents). There were 609.7 million (2019 609.9 million) weighted average Ordinary Shares in issue. See note 11 of Notes to the full year consolidated financial statements on page 148 for the calculation of earnings per share.

Treasury management

The key objective of the Group's treasury function is to manage the financial risks of the business and to ensure that sufficient liquidity is available for the Group. All treasury activity operates within a formal control framework. The Board has approved treasury policies and guidelines and periodically reviews treasury activities. Additionally, it is the Group's policy that speculative treasury transactions are expressly forbidden.

Spirent's financial risk management objectives and policies and its exposure to risks are discussed in note 28 of Notes to the full year consolidated financial statements.

Financing and cash flow

The Group delivered very strong cash generation in 2020, driven by higher operating profit and effective working capital management. Changes in working capital, reflected within cash flow from operations, benefited from our continued focus on improving trade receivables collection.

Free cash flow for 2020 increased year-on-year coming in at $102.6 million, compared to $100.1 million in 2019, resulting in a free cash flow conversion which represented 115 per cent of adjusted earnings (2019 123 per cent).

Free cash flow is set out below:

$ million	2020	2019
Cash flow from operations	**132.0**	124.9
Tax paid	**(10.8)**	(5.6)
Net cash inflow from operating activities	**121.2**	119.3
Interest received	**1.5**	2.6
Net capital expenditure	**(9.0)**	(11.9)
Payment of lease liabilities, principal and interest	**(11.6)**	(10.3)
Lease payments received from finance leases	**0.5**	0.4
Free cash flow	**102.6**	100.1

Free cash flow includes a net cash outflow in respect of exceptional items charged in 2019 and 2020 of $3.1 million (2019 $5.5 million in respect of exceptional items charged in 2018 and 2019).

Tax payments made in the year increased year-on-year to $10.8 million (2019 $5.6 million). In addition to the increase in profits that resulted in higher tax payments in 2020, the timing of when tax payments are due also impacts the amount of tax cash paid in 2020. $3.8 million of tax paid in 2020 related to the prior year (2019 $1.3 million). Net capital expenditure of $9.0 million was slightly down on the prior year (2019 $11.9 million). Capital expenditure in the period was predominantly incurred on demonstration and test equipment.

In 2020, the final dividend for 2019 and an interim dividend for 2020, totalling $33.6 million, were paid. This compared to total dividends of $28.6 million paid in 2019. In addition, 4.1 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of $11.9 million (2019 4.0 million shares at a cost of $8.6 million).

Following these payments, cash and cash equivalents closed at $241.2 million at 31 December 2020, compared with $183.2 million at 31 December 2019. There continues to be no bank debt.

Defined benefit pension plans

The Group operates two funded defined benefit pension plans in the United Kingdom, both of which are closed to new entrants.

The accounting valuation of the funded defined benefit pension plans at 31 December 2020 gave rise to a net surplus of $13.0 million, compared with a net surplus of $11.6 million at 31 December 2019. The 31 December 2020 position has benefited from contributions paid to the plans in the year of $6.7 million (2019 $6.6 million) partially offset by a net actuarial loss of $5.3 million (2019 gain of $2.7 million), arising due to a reduction in the discount rate.

The latest triennial actuarial valuation dated 31 March 2018 indicated a deficit of £22.5 million, calculated on a technical provisions basis using more prudent assumptions than the accounting valuation, particularly in relation to discount rate, inflation and demographic. A deficit reduction plan has been agreed with the trustees which requires the Company to pay an annual contribution of £5.0 million, increasing in line with CPI, through to June 2023 (or earlier if self-sufficiency is reached). In addition, the Company will fund the plan by an amount equal to 10 per cent of any special dividend paid during that period amounting to $30 million or over.

Additionally, there is a liability for an unfunded plan of $0.7 million (31 December 2019 $0.7 million).

The Group also operates a deferred compensation plan for employees in the United States. As at 31 December 2020, the deferred compensation plan deficit amounted to $5.7 million (2019 $4.8 million). The key financial assumptions include a discount rate used to discount plan liabilities of 2.1 per cent (2019 2.9 per cent) and an expected investment yield of 6.4 per cent (2019 6.4 per cent).

Balance sheet

The consolidated balance sheet is set out on page 125.

Overall, net assets have increased by $40.5 million to $442.8 million at 31 December 2020, from $402.3 million at 31 December 2019. Much of the increase arises from the change in cash and cash equivalents, which have grown by $58.0 million to $241.2 million (2019 $183.2 million).

In terms of non-current assets, these have decreased by $4.2 million. The UK defined benefit pension plan surplus has increased by $1.4 million to $13.0 million and property, plant and equipment reduced by $3.7 million.

Current assets have increased by $49.3 million, primarily reflecting the increase in cash. Strong cash collection has decreased receivables by $10.6 million year-on-year on increased revenue, with closing days sales outstanding at 57 having declined from 61 days at 31 December 2019; an outstanding achievement in a difficult pandemic environment.

Financial review continued

Liquidity and dividend policy
The Board's intention continues to be maintaining a cash positive balance sheet over the medium to long term. This should allow the Company to maintain a strong capital position in the face of business risks, trading fluctuations and working capital demands.

The strong cash generation of the Group allows continued investment into R&D to maintain our market-leading positions and inorganic investments where opportunities support growth plans. If and when it is deemed appropriate, the Company may take on modest gearing to fund inorganic investments.

The Board will regularly review the Company's balance sheet in light of current and expected trading performance and cash generation, working capital requirements and expected organic and inorganic investments. To the extent the Company has excess cash, it will consider returning such cash to shareholders. The Board will consider from time to time the appropriate mechanism for returning surplus cash to shareholders.

The Board has implemented a progressive dividend policy maintaining cover in the range of 2 to 2.5 times adjusted earnings.

Dividend
The Board is recommending the payment of a final dividend for 2020 of 3.87 cents (2.78 pence) per share which, together with the interim dividend of 2.17 cents (1.67 pence) per share paid in September 2020, brings the full year dividend to 6.04 cents (4.45 pence) per share, a dividend cover of 2.4 times adjusted earnings. This is a 12 per cent increase compared to the full year dividend for 2019. In Sterling terms this represents an increase of 4 per cent.

Special dividend
The Board has also considered the Company's cash position in line with the policies outlined above. As a result, it has decided to recommend a special dividend of 7.50 cents (5.40 pence) per share which equates to a cash distribution of circa $45 million and an additional pension funding contribution of $4.5 million (subject to exchange rate movements).

Subject to approval by shareholders at the Annual General Meeting on 28 April 2021, the final and special dividends will be paid on 30 April 2021 to shareholders on the register at 19 March 2021. Payment to ADR holders will be made on 7 May 2021. In total, the payment of the final and special dividends for 2020 will consume approximately $69 million of cash (subject to exchange rate movements).

Operating segments
Following a review of how our organisational structure supports our growth plans, effective 1 January 2021, the Connected Devices business will be merged into our Lifecycle Service Assurance segment to provide comprehensive end-to-end lab and live solutions to customers. Going forward the combined business will be reported as a single Lifecycle Service Assurance segment.

Events after the balance sheet date
On 4 March 2021, Spirent acquired octoScope, Inc (octoScope), a company based in the United States for an initial cash consideration of $55 million, subject to customary purchase price adjustments. Contingent consideration of up to $18 million is payable based on annual revenue growth targets for 2021 and 2022 and retention of key staff. The transaction was funded by surplus cash in the Group.

octoScope provides market-leading accurate, repeatable and automated wireless test solutions and methodologies to the wireless industry. Its test solutions leverage patented technology to provide automated Wi-Fi and 5G testing in emulated real-world environments, including the Wi-Fi 6 and 6E technologies.

octoScope will be incorporated into our Lifecycle Service Assurance operating segment along with our emerging Wi-Fi revenue stream currently residing in our high-speed Ethernet business within the Networks & Security operating segment.

Paula Bell
Chief Financial & Operations Officer
11 March 2021

Managing our risks and uncertainties

Like all businesses, Spirent is exposed to a number of risks and uncertainties. These risks may arise from internal factors, but some will be a result of external factors over which the Group has little or no direct control. It is the effective management of these risks that supports Spirent in delivering on its strategic objectives, safeguards the Group's assets and, over time, will enhance shareholder value.

The process to identify and manage the principal risks and uncertainties of the Group is an integral component of the internal control system.

The risk assessment process starts in the businesses, where up-to-date risk registers are maintained and updated as part of the normal operating and control procedures, and is facilitated by the Head of Risk & Internal Audit. Each business identifies its key risks and mitigating factors and nominates a risk owner. The impact and the likelihood of occurrence of each risk is ranked, which assists the Group Executive Committee in assessing the likely impact in aggregate of each risk to the Group as a whole. The individual businesses are required to update their risk registers regularly to reflect new or emerging risks as they are identified.

The approach has been enhanced during the year with a focus on process improvements to identify, clarify and communicate emerging risks for Board discussion and assessment, along with agreed mitigating action plans.

It is not possible to identify every risk that could affect the business and the actions described below to mitigate those risks cannot provide absolute assurance that the risk will not occur or adversely affect the operating or financial performance of the Group.

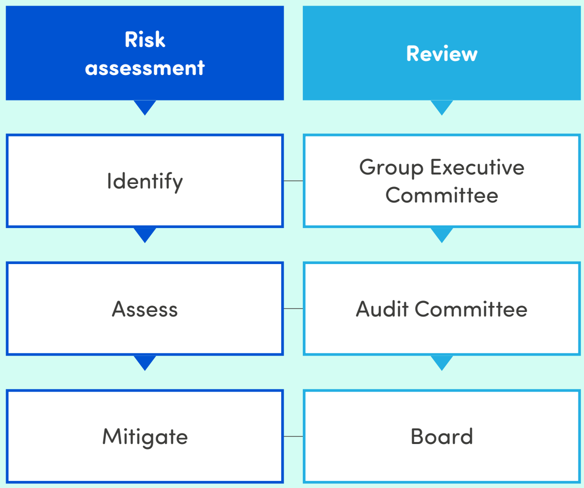
The Board has classified the principal risks by the impact the risk would be expected to have on the Group should it occur, and the anticipated likelihood that that risk may occur using the following classifications:

Risk	Impact
Impact	High
	Medium
	Low
Likelihood of occurrence	Likely
	Possible
	Unlikely

The Board takes the view that a high impact risk could lead to a 10 per cent or more reduction in revenue, a medium impact risk a 5 to 10 per cent reduction in revenue and a low impact risk a reduction of up to 5 per cent in revenue.

The Audit Committee reviews and monitors the Group's risk processes and reports to the Board on their effectiveness. Risk is considered by the Audit Committee at least twice each year, at which time risk registers for both the Group and the material business units within the Group are reviewed. The Audit Committee challenges and debates the risks with reference to risk tolerance and appetite, as set by the Board. Progress made and any further actions to be taken regarding mitigation plans, as well as any changes to the risk profile, are discussed in detail.

Identifying and assessing risk



The Board has identified the following principal risks, each of which is discussed on pages 47 to 49:

Risk	Impact	Likelihood	Change
Macro-economic change	High	Likely	No change
Technology change	High	Likely	No change
Business continuity	High	Likely	No change
Customer dependence/ customer investment plans	High	Likely	No change
Competition	Medium	Possible	No change
Acquisitions	Medium	Likely	Change
Employee skill base	Medium	Possible	No change

Principal risks and uncertainties continued

Current topical risks, uncertainties and emerging risks

Topical risks and uncertainties along with emerging risks are covered in detail in the table of principal risks and uncertainties, but some of the more pertinent ones are described below.

COVID-19 pandemic

COVID-19 has necessitated continuous Risk Management activities through the year; the business has shown resilience through nimble supply chain management, while customer demand remains subject to ongoing challenges. The Risk Committee has met regularly, on a weekly basis at the peak, to oversee issues regarding staff health and safety and facilities, as well as production and sales.

Each facility invoked its site Business Continuity Plan. Key employees remained working on site while the majority moved to flexible or home working. All facilities have now been surveyed and equipped with PPE, and are ready to accommodate people on a socially distanced or rota basis, whenever restrictions are lifted.

US/China trade and sanctions

Trade tensions between the US and China have ebbed and flowed in 2020. We make sales across a broad range of customers in China. Changes to existing US regulations to embargoed customers may impact our ability to supply affected customers in both the short and medium term. We maintain a watching brief as legislation requirements continue to evolve.

Brexit

The United Kingdom's exit from the European Union is still anticipated to have a low impact on the Group by virtue of the relatively small proportion of sales into Europe, the nature of our operations in Europe and the mitigating actions we have taken. In addition, the Group's main functional currency and presentational currency are both US Dollars which largely mitigates our exposure to adverse foreign currency impacts arising on Brexit.

Risk appetite and developing the long-term Viability Statement

Provision C.2.2 of the 2016 UK Corporate Governance Code requires the Board to assess the viability of the Group over a period significantly longer than 12 months and confirm whether it has a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over that period. The Board has determined that a three-year period should be used when assessing viability, as explained on page 110 of this Annual Report.

The Board has sought to frame its risk appetite in terms of the markets and technologies in which it is prepared to make significant investments, and those in which it would expect its scale of investment to be more modest. Except where very attractive opportunities were to present themselves to achieve greater scale in well understood markets, which would be inherently cash generative, the Board would expect to maintain a net cash position.

Management, together with members of the Board, considered which of the principal risks, either alone or in combination, might threaten the Group's viability. The expected aggregate impact of macro-economic change, technology change, business continuity, customer dependence and competition were modelled based on historical trends experienced across the Group. A severe but plausible combination of those risks was considered for the purposes of determining the revenue and free cash flow scenarios that should be stress tested via financial modelling.

The impacts were modelled over the three-year period, using the Group's strategic three-year plan as a basis, with two different assumptions in relation to timing:

1) with emphasis on a stressed scenario in years two and three, given management's view that such risks were unlikely to materialise in year one, as the Group had just completed a detailed full year budget for 2021; and
2) an even more severe, yet less plausible, scenario where those same impacts are immediate with significant revenue decline in 2021 and years two and three acutely impacted.

The analysis included assumptions in relation to the ability of the Group to take successful mitigating actions, including the ability to make significant reductions in its non-fixed operating costs. In doing so appropriate adjustment was made for the cost of taking those actions.

In performing the Viability Statement modelling the Board took into consideration the Company's healthy cash balance of $241.2 million at 31 December 2020 and the ability of the Company to continue to generate positive free cash flow even in stressed scenarios, as has historically been the case.

The Board reviewed and discussed with management:

- the process undertaken by management to decide which scenarios to stress test;
- the results of the stress testing performed, including an illustration of the reduction in revenue and cash generation and consequently the availability of cash to fund operations; and
- the ability of management to successfully take the mitigating actions identified.

The resulting Viability Statement is set out in the Directors' report on page 110.

Macro-economic change

Spirent is a global business exposed to current world economic conditions and political and trade embargo uncertainties over which it has no control. The business is also exposed to government spending priorities, principally in the United States.

The COVID-19 crisis has created uncertainty to current world economic conditions and government spending priorities. The Group continues to monitor the impact to the global economy.

Potential impact

Deterioration in economic conditions and a change to the terms of conventional international trade and embargoing of specific customers may lead to a reduction in the level of demand for Spirent's products and services and cause customers to delay their purchasing decisions.

Mitigating actions

The Group closely monitors both market and geographic trends in order to respond to changes in demand and be in a position to take timely actions to protect profitability where possible.

In addition, Spirent has a large number of geographically diverse customers, which may mitigate the impact of issues in any one area.

Technology change

Spirent sells complex solutions in industries that can be subject to rapid technological changes. Testing new technologies drives our business, but the opportunity also brings high risk since keeping at the forefront of these key future technologies is critical to our success and to ensuring that we remain competitive in our markets.

It is critical that our product development investment is directed at the right areas in order to deliver the solutions that our customers need, when they need them.

Spirent's success is dependent in part on proprietary technology which may be infringed by others.

Open-source tools become more prevalent providing some of the functionality of our products.

Due to COVID-19, there is an increased risk that technology changes may take longer to occur.

Potential impact

If product development investment does not keep pace with the speed of change in technologies, or if it is not directed at the right key areas, our competitive position and financial performance will suffer.

If Spirent's solutions take longer to develop than anticipated or longer to develop than our competitors, then our competitive position and financial performance will also suffer.

Changes in technologies may lead to a short-term pause by our customers investing in our solutions.

Intellectual property claims can result in significant defence costs and may affect Spirent's ability to market its products.

Customers may choose to use open-source tools instead of some Spirent products to meet part of their testing needs.

Mitigating actions

All Spirent's businesses work very closely with customers and remain focused on their requirements.

Each business makes investment decisions specifically related to its solutions portfolio based on market needs.

Spirent continues to focus its investment into areas that offer the most potential for sustainable earnings growth. In 2020 the product development investment was $103.1 million (2019 $96.5 million).

Spirent has active intellectual property protection programmes in place to obtain appropriate protection in a cost-effective manner.

Principal risks and uncertainties continued

Business continuity

Operational risks are present in the Group's businesses, including the risk of failed internal and external processes and systems, human error and external events, such as a natural disaster, a global pandemic or cybersecurity attacks. For example, a significant portion of our communications operations are located in California which has in the past experienced natural disasters, including earthquakes and wildfires.

Contract manufacturers are used for the manufacture of a substantial amount of Spirent's products. Spirent's major contract manufacturer is located in Thailand.

The incidence of cybercrime continues to rise. Spirent is dependent on its information technology systems for both internal and external communications as well as for its day-to-day operations.

The Group has taken steps to manage the increase to business continuity risk as a result of the COVID-19 pandemic, including invoking business continuity plans in each location, closely monitoring the impact to the supply chain with additional inventory procured on key components and by adding secondary suppliers, and by boosting the global Spirent information technology systems to enable the workforce to work remotely.

Potential impact

A significant natural disaster or global pandemic could disrupt the Group's ability to conduct business and adversely impact revenue and operating results.

Failed internal and external processes, systems or human error could lead to compliance issues.

Trade compliance issues continue to remain a focus, particularly with China.

Disruption, financial problems of contract manufacturers or limitations in their manufacturing capacity could limit supply and/or increase cost.

If a cyber-attack were to be successful it could result in loss of data, and confidential information and damage to Spirent's intellectual property, causing major disruption to the business. There would also be a potential impact on Spirent's credibility in the security market.

Mitigating actions

An important component of Spirent's corporate governance is its risk management strategy. IT disaster recovery plans are in place for all core business systems and ensure that the wider operations are all fully covered. In 2020, we performed the annual refresh and test of the Group Business Continuity and Disaster Recovery Policy and Procedure.

Regular meetings are held with contract manufacturers and a regular on-site presence is maintained. In addition, the Group's largest manufacturing subcontractor has multiple worldwide sites and comprehensive business continuity plans.

During 2020, we continued with a programme of work to develop processes and procedures in the area of cybersecurity.

Customer dependence/customer investment plan

The Group sells its products and services to a wide range of companies and continually seeks to expand its customer base. In 2020, no one customer accounted for more than 7 per cent of Group revenue, although the top ten customers represented 41 per cent of Group revenue (2019 42 per cent).

In some of our markets certain customers have a dominant market share, which makes doing business with these customers and their suppliers critical to the success of our business.

In addition, many of the companies with which we do business are some of the largest global telecommunications corporations. Therefore meeting our development obligations, producing high quality products and being on time are vital to Spirent's reputation and success.

Changes in our major customers' priorities in technology investments can also have a significant impact on their spending on Spirent products and on those in the customers' supply chain.

The industry continues to experience consolidation which does disrupt the spending patterns of affected customers.

As a result of COVID-19, customer spending patterns remain uncertain, particularly for lab and government markets. The Group has taken steps to evolve the sales team in order to strengthen relationships with customers.

Potential impact

Loss of one or more of Spirent's major customers could have a significant impact on Spirent's financial results.

Spend on Spirent's products is often capital in nature and so customer spend can fluctuate significantly from year-to-year.

Significant failings in either quality or being able to deliver in the appropriate timescale could cause long-lasting damage to Spirent's reputation and relationships.

Over recent years there has been significant consolidation in our customer base amongst service providers and network equipment manufacturers. This trend continues and often results in delays in spending, thereby reducing demand for Spirent's solutions and services. It also reduces the potential number of customers to which those solutions and services could be sold.

Changes in our customers' technology investments can result in reduced spending on our existing solutions before customers and those in the customers' supply chains increase spending on new technologies.

Mitigating actions

Strong customer relationships are critical to Spirent. We aim to provide innovative solutions which meet customers' needs and we place great emphasis on providing professional service and support.

One of the Group's strategic objectives is to invest in deepening our customer relationships. We place engineers on site with our customers and undertake site surveys of intended plans for the use of test solutions in their business.

We seek to establish thought leadership in our industry through participation in standards bodies and industry forums, which in turn creates additional links with customers. Our approach is to play a key part in the wider supply chain to our key service provider customers by aligning with early adopters of technology.

Competition

Spirent operates in a range of highly competitive niche markets which experience rapid technological change. In order to compete effectively, it is necessary to establish and maintain technological differentiation in our solutions.

The Group faces competition from new market start-ups as well as more established and well-resourced companies.

Industry consolidation amongst our direct competitors may bring about a shift in competitive advantage.

Potential impact

Actions by competitors and increased competition can bring about pressure on Spirent's gross margin. These factors could also affect Spirent's competitive position, thereby reducing revenue and consequently affecting financial results.

Consolidation continues within our sector. The consolidation of competitors may bring opportunities for Spirent but can also change the competitive landscape as competitors are able to leverage product capabilities or sales channels.

Mitigating actions

The Group's broad solution portfolio, market-leading capabilities and customer focus continue to address this risk.

Spirent aims to maintain market-leading positions through significant investment in the development of differentiated products.

Competitor activity is closely monitored with a view to maintaining clear differentiation based on Spirent's products, services and global reach.

Acquisitions

A key emerging element of Spirent's strategy is to develop new capabilities and technologies, sometimes through acquisition.

Integration of acquisitions can be a complex process and the results expected from acquisitions may not be achieved due to problems encountered in integration, changes in market conditions, the rate of adoption of new technologies, or sometimes deficiencies arising in the due diligence processes.

Potential impact

Underperformance by acquisitions will impact the Group's results and may lead to impairment of goodwill and/or intangible assets.

Mitigating actions

Rigorous strategic and financial evaluations of all acquisition opportunities are carried out. Detailed financial and commercial due diligence is performed. The Board will only authorise transactions after all due diligence has been successfully completed and where the financial hurdles are within the agreed guidelines.

Integration plans and processes are carefully considered prior to acquisition.

The Board reviews post-acquisition performance.

Employee skill base

Employees are crucial to the success of our business. Attracting and retaining highly qualified and skilled employees is essential to enable the Group to deliver on its strategy and to the success of the business.

Potential impact

Intense competition for personnel is faced from other companies and organisations and the loss of key employees, the failure to attract and retain other highly skilled employees, or the failure to adequately plan for succession may impair Spirent's ability to run and expand the business effectively.

Mitigating actions

Investing in people is at the core of the Group's strategy. The aim is to find, keep and engage the highest calibre of employees and encourage their contribution and development. An environment that fosters innovation and collaboration is critical to Spirent's success, as is ensuring incentive plans are competitive.

Succession planning for senior posts in the Company is reviewed periodically by the Board.

Appropriate career paths and internal recognition programmes are developed for both technical and non-technical staff.

Regular reviews are performed to ensure that all elements of compensation across the Group are competitive with the market.

Promoting the success of the Company

The Board acknowledges that there is a legal requirement for the Company to report on how the Board and its Committees have considered the requirements of s172 of the Companies Act 2006 in their decision making.

Supported by the Company Secretary & General Counsel, the Board, management or anyone tasked with preparation of Board materials give consideration to relevant stakeholders in matters requiring decision making, including strategic decisions.

Workforce

We define workforce as full-time and part-time permanent employees.

Key metrics:
- Total benefits and payments to employees
- Employee turnover rate

Why is it important to engage?
The Company's long-term success is fundamentally linked to the commitment of our workforce to our purpose and their demonstration of our values on a daily basis.

How we engage
We engage with our workforce to ensure that we are fostering an environment that they are happy to work in and that best supports their wellbeing.

The Board have decided that the global reach of the Group's employees is best served by Non-executive Directors meeting with members of the workforce in their home geographical area.

The Board also discussed feedback arising from town-hall meetings and employee surveys conducted through the year and reviewed our refreshed behaviours and values.

Engagement in 2020
As detailed on page 8, safeguarding the health and wellbeing of our employees has been one of the Company's top priorities during the global COVID-19 pandemic. However, engagement has continued, with executive management continuing to hold virtual town-hall meetings and surveys. Virtual focus group meetings with Non-executive Directors continuing in spite of the restrictions in place around the world. Further details of workforce engagement are set out on page 72.

The Board and executive management are keen to learn from our experiences through the pandemic and will work to support more permanent flexible work options for employees.

The Board and Nomination Committee has continued to receive updates on talent and succession plans, further details of which are set out on pages 73 and 74.

Investors

Key metrics:
- Earnings per share
- Total dividends paid
- Total Shareholder Return (TSR)

Why is it important to engage?
Continued access to capital is of vital importance to the long-term success of our business.

How we engage
Through our engagement activities, we seek to obtain investor support for our strategic objectives and our approach to executing them.

The key mechanisms of engagement include:

- Annual General Meetings;
- investor presentations; and
- one-on-one meetings with relevant information being distributed to all investors through:
  - regulatory news releases;
  - corporate website at https://corporate.spirent.com; and
  - annual reports.

Feedback on formal engagement with investors is reported to the Board and used to inform the planning of future events and consultations.

Engagement in 2020
In order to continue to engage with investors during the pandemic, executive management altered its standard information delivery methods:

Annual General Meeting
Due to COVID-19 restrictions, the Company's Annual General Meeting had to take place as a closed meeting. The Board was available to engage with shareholders and proxy advisers in advance of the meeting and offer a question and answer facility to all stakeholders through the Company website. The Board was pleased that 85.24 per cent of the Company's total voting rights were represented in votes cast either electronically or by mail for the resolutions seeking approval.

Half-Year Results
The Company's Half-Year 2020 results presentation was made available to all investors online, with a pre-recorded presentation and a live question and answer session being accessible via the Company's website at https://corporate.spirent.com.

Capital Markets Day
In response to investor requests, and in addition to our standard investor engagement calendar, executive management held an online Capital Markets Day on 8 October 2020 with presentations given by senior executives on Spirent's strategic objectives. A recording of the sessions is available to all stakeholders on the Company's website.

Customers

Key metrics:
- Order intake
- Performance feedback

Why is it important to engage?
Understanding our customers' needs and behaviours allows us to deliver relevant products and services, retain existing customers and attract new ones. It also identifies opportunities for growth.

How we engage
The need to stay engaged with our existing and prospective customers during the global COVID-19 pandemic has forced us to be innovative in our approaches to digital marketing, increase our social media presence and enhance the provision of virtual demos through our updated website at https://corporate.spirent.com

Engagement in 2020
Spirent has expanded its key account programme to help our customers to remain connected to our team in spite of the restrictions in place due to COVID-19. Our increased digital presence enables us to share information on current products and new innovations via virtual webinars and demonstrations, providing support for existing services.

Stakeholder engagement continued

Environment

Key metrics:
- Greenhouse gas emissions
- Energy use

Why is it important to engage?
All companies have a responsibility to work to reduce their impact on the environment and engage with stakeholders to discuss how everyone can move towards a more sustainable business model.

How we engage
Environmental issues are included in our Supplier Code of Conduct audits, helping to inform our responses to enquiries received from investors and other monitoring bodies.

Spirent continues to participate in the MSCI ESG ratings and the Carbon Disclosure Project.

Engagement in 2020
The Board has engaged with advisers to further develop its environmental strategy, details of which can be found on pages 54 to 57.

Our commitment to sustainability has been highlighted in 2020 through agreement with the Board for a more ambitious, longer-term vision for our ESG activities to develop our existing FuturePositive programme. The resulting new five-year sustainability strategy is set out in our Sustainability Report 2020 on the Company's website at https://corporate.spirent.com.

Regulators / Governmental bodies

Key metrics:
- Compliance
- Best practice

Why is it important to engage?
Policies and regulatory changes, including changes to the global political landscape and laws and regulations affecting terms of trade, may provide opportunities and pose risk to our operations.

How we engage
Ongoing engagement with trade compliance authorities ensures compliance with export regulations.

Participation in consultation exercises enables Spirent to play a part in the development of regulation and ESG best practice.

Engagement in 2020
Spirent continues to engage with authorities on export regulations, developing its reporting framework to ensure it is ready to comply with the recommendations of the Task Force on Climate-Related Financial Disclosures.

Spirent continues to comply with the UK Modern Slavery Act 2015 and the California Transparency in Supply Chains Act 2010, using our influence to support efforts to protect the human rights of workers in our supply chain around the world.

The Board monitors the Company's gender pay gap reporting process and encourages the executive management to look at ways of reducing the gap across the Group.

Suppliers

Key metrics:
- % of Supplier Code of Conduct Certifications
- % of payments made within payment terms

Why is it important to engage?
Engaging with our supply chain means that we can ensure security of supply and speed to market. We depend on the high standards of our carefully selected suppliers in order for us to deliver market-leading products and services.

How we engage
Spirent has a Supplier Code of Conduct, based on the Electronic Industry Citizenship Coalition (RBA) Code v5.1. The Code sets out our expectations for environmental management, health and safety, labour rights and management systems as well as the provision of sustainability data.

Suppliers are subject to audits to ensure they continue to meet high standards on ESG issues and to foster greater collaboration.

Engagement in 2020
Supplier Code of Conduct checks continued through 2020, with remote interviews and document reviews taking the place of in-person audits during the COVID-19 pandemic. Suppliers were also encouraged to focus on the health and wellbeing of staff throughout the period.

Community

Key metrics:
- Charitable donations and participation
- Support for STEM education efforts

Why is it important to engage?
Spirent has the capacity to create a significant positive impact in its communities, investing time and resources into projects that create lasting value in the communities where we work.

How we engage
Spirent's Charitable Giving programme provides each member of staff with two days' paid volunteer time off (VTO) per year, a new scheme to match employee charitable donations, and a further fund to provide financial support to local charities directly by the Company.

Engagement in 2020
Spirent engages with a number of educational institutions around the world, running work experience, apprenticeships and industrial placement schemes for students interested in a career in our industry. Our STEM Ambassador programme focuses on encouraging women into technology careers as part of our commitment to increasing opportunities for diversity and inclusion.

How the Board considers stakeholders when making decisions

Growth strategy

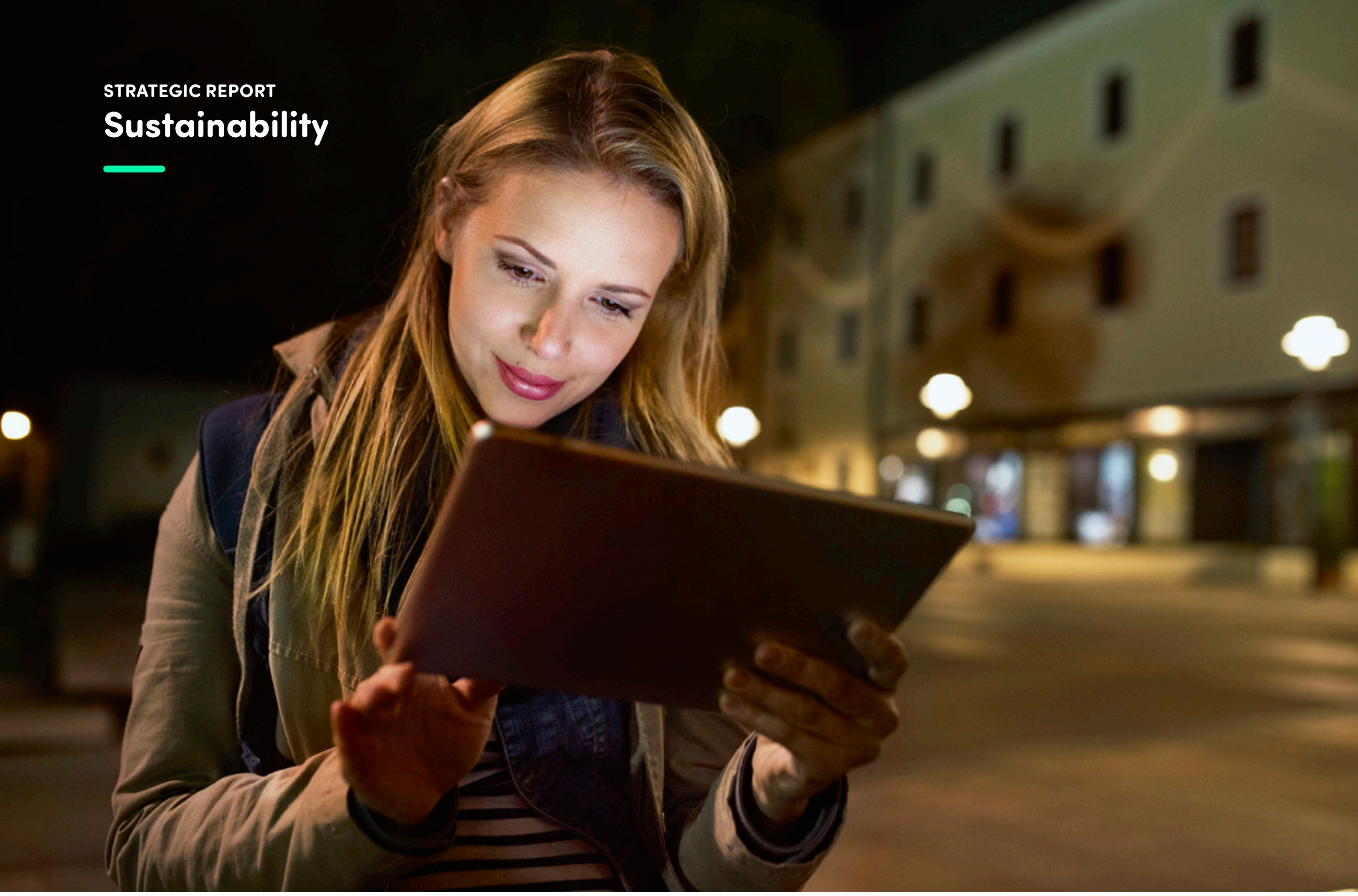
The Board carries out a review of the Company's strategy on an annual basis, including the approval of the business plan for the following three years and financial budget for the following year. In 2020 the Board's strategic review included a review of progress against strategic priorities, Spirent's long-term strategic goals, and presentation of Business Unit strategies. During its review the Board focused on selected Group priorities including: the Group's IT strategy, culture and the financial impact of the strategy. The Board also considered a portfolio review and updating of a formal M&A framework to identify areas for organic and inorganic investment.

In making its decision to approve the business plan and future strategy of the Company, the Board also considered the impact of the strategy on the long-term position of the Company and its reputation as well as feedback from engagement exercises with our workforce, customers and suppliers.

Culture and values

As part of a formal review of culture and values, the Board was deeply involved in seeking to ensure that leadership is leveraging all available resources and skills across the Group to drive the best possible performance. Two all-employee engagement surveys have been undertaken in the period plus more focused engagement surveys to address specific issues identified in the wider engagement survey. Results have been shared with the Board. In addition the Board has reviewed the revised core values and "way we work" principles introduced during the year.

In April 2020, the CEO launched the updated "The Way We Work" framework at an all-employee virtual townhall. Built on feedback from engaging with workforce, customers and suppliers, this framework sets out ambitions and behaviours that will underpin the Group's future success. Support for managers to encourage these behaviours has been made available and the Board will continue to monitor the framework as it matures.



Focused on FuturePositive

We manage our material sustainability impacts and opportunities through our FuturePositive programme. Our comprehensive programme not only ensures we comply with legislation and stakeholder expectations, but has positive social and environmental impacts for customers and for our own business.

The Board has designated the CEO as the Board member responsible for corporate social responsibility matters within the Group. The key areas of management and performance are set out below.

We also publish a comprehensive report on our corporate responsibility activities which is available on our website at https://corporate.spirent.com.

Sustainability at Spirent

We are committed to embedding the highest standards of environmental management, social practices and governance into our operations, products and across our supply chain.

We look to create long-term value for our shareholders by:

- protecting our reputation and ability to grow;
- focusing on winning business from customers who value strong environmental, social and governance (ESG) performance;
- enhancing our efficiency;
- enabling our people to work productively in a safe and inclusive environment;
- helping us to attract and retain talent, and encouraging employees to take pride in working for us; and
- reducing the risk of incidents and their associated costs.

Our material sustainability issues

Our material sustainability issues were updated in 2020 using a risk-based approach. The review identified climate change and carbon neutrality as priority issues, including the role our solutions can play in helping our customers reduce their impacts. Diversity and inclusion, staff health and wellbeing were identified as important, along with responsible business practices, sustainable product design, human and labour rights, and robust sustainability governance.

Policies

Spirent maintains a suite of responsible business policies which commit the Group to compliance with high standards of ethics and business integrity, environmental management, and employee and community welfare.

All policies are available on our website at https://corporate.spirent.com.

Progress in 2020

Key achievements

- New sustainability strategy: We developed a new sustainability strategy with ambitious objectives and targets
- Renewable energy: We sourced 100 per cent of our electricity from renewable energy in 2020
- Early career talent: We launched a new mentoring programme to develop early career leaders and technical talent
- Supplier Code of Conduct: We engaged with more than 300 key suppliers to obtain formal acceptance of our new Supplier Code of Conduct
- Customer lab consolidation: Using Velocity, we helped a customer consolidate four global labs into one, reducing the size of their lab by 71 per cent

Our focus areas

Our FuturePositive programme covers four main areas: Product, People, Property and Procurement. Our new sustainability strategy is based around five key promises:

- Deliver a sustainable future
- Be Net Zero carbon
- Promote diversity and invest in people
- Operate responsibly
- Be accountable and transparent

Full details of our programmes are set out in our 2020 Sustainability Report, available on our website at https://corporate.spirent.com.

Product

Electronic waste and use of hazardous materials

Spirent's business units comply with the EU's Waste Electrical and Electronic Equipment Regulations 2013, EU's Restriction of Hazardous Substances Directive (RoHS), Batteries Directive and the California Electronic Waste Recycling Programme.

Conflict minerals

The Group is not directly required to comply with or report under Section 1502 of the Dodd-Frank Act or the US Conflict Minerals Law. However, it has robust procedures in place to ensure that it would be in compliance if it were brought within the scope of this legislation. The Group will be subject to the EU Directive on Conflict Minerals; we are monitoring the development of the legislation and are confident our existing practices will meet the specifications required.

People

Business ethics and human rights

Spirent's values and principles are set out in the Group's Business Ethics Policy. These principles apply to all dealings with our customers, suppliers and other stakeholders, and are considered in pre-contract due diligence and monitored through ongoing supplier audits.

The Group has a zero-tolerance approach to all forms of bribery and corruption. As a UK registered company, Spirent Communications plc is bound by the laws of the UK, including the Bribery Act 2010, in respect of its conduct both at home and abroad. In addition, we will uphold all laws relevant to countering bribery and corruption, including the US Foreign Corrupt Practices Act, as well as human rights protection, in all jurisdictions in which we operate.

Regular anti-bribery training is required to be taken by certain employees. New starters received training this year and all designated employees will complete the training in 2021.

Equality and diversity

The Group employs a diverse workforce and prides itself in providing equal opportunities for all. High value is placed on rewarding our people for their commitment, their integrity and their service. Our commitment to a fair and inclusive workplace is governed by our Business Ethics and HR Policies which ensure that no-one is discriminated against, directly or indirectly, on the grounds of colour, race, ethnic and national origins, sexual orientation or gender, marital status, disability, religion or belief, or being a part-time employee or on the grounds of age.

At 31 December 2020, our gender diversity was:

Level of organisation	Female		Male		Other or no gender reported		Total
Board	2	28.6%	5	71.4%	–		7
Executive management[1]	2	20.0%	8	80.0%	–		10
Senior management[2]	3	5.4%	53	94.6%	–		56
Total employees	301	21.2%	1,113	78.4%	5	0.5%	1,419

Notes
1. The data for Executive management includes direct reports to the CEO only.
2. The data for Senior management includes all other Vice Presidents (including Regional Sales VPs and Client Partner Executives) and Senior Directors.

Although Spirent has not achieved the Hampton-Alexander Review's target of women making up one-third of the Board by the end of 2020, the Board remains committed to increasing the representation of women on boards and in other leadership roles. This work will continue with a focus on developing diversity of all types in executive and senior management roles and throughout the talent pipeline.

People continued

Gender pay gap

Having fewer than 250 employees in the UK, Spirent is not currently required to comply with the Gender Pay Gap Reporting Regulations introduced in 2017. However, as in our 2019 Annual Report, data for the 5 April 2020 snapshot date has been collected on a voluntary basis and is set out below.

UK gender pay gap

	Mean	Median
Hourly pay	17.0%	32.3%
Bonus pay	(112.0)%	25.7%

UK bonus gap

	Male	Female
Bonus	89.8%	82.9%

UK quartile split

	Top quartile	Upper-middle quartile	Lower-middle quartile	Lower quartile
Male	86.0%	88.0%	81.0%	63.0%
Female	14.0%	12.0%	19.0%	37.0%

The most significant difference since the 2019 snapshot data reflects the change of location of the CEO; as Eric Updyke is resident in the US, he is not captured in this data as his UK-resident predecessor was captured. As a result, the highest bonus-earner based in the UK is now our female CFO, Paula Bell, shifting the Mean Bonus Pay Gap figure from 28.1 per cent in 2019 to -112.0 per cent in 2020. The Board will continue to review outcomes of the Gender Pay Gap Reporting process and will encourage the Executive team to look at ways to reduce the gap across the Group.

Through 2021, the Spirent Group will be undertaking a full review of diversity and inclusion. The results of this review will inform the promotion of these issues across the Group and identify ways in which the Company can work with existing and future stakeholders to develop a workforce that more appropriately reflects the diversity of the societies in which we work and live.

Health and safety

The Board has designated the CFO as the Board member responsible for health and safety within the Group and procedures are in place for incidents to be reported through the Audit Committee to the Board as necessary.

The health and safety risk profile for the Group remained low during 2020, with two reported accidents (2019 nine), neither of which were reportable under the RIDDOR Regulations or required hospitalisation.

Training and skills

Spirent provides all its employees with a wide range of technical and business training opportunities. We manage training through personal development plans which are assessed by all managers and updated periodically. In 2020 we launched a new mentoring programme for early career leaders and principal technical talent. 30 participants from across the business have been partnered with mentors from our management team for a 12-month development and coaching programme. We also launched a new e-learning platform. The number of technical and professional development courses completed was more than double that of the year before.

Information security

Spirent takes data security and privacy seriously. We continually review the security of our data systems and procedures in order to comply with all legislation and so we can react to areas of heightened risk promptly and effectively.

We operate robust information security procedures and our Applications & Security business based in Plano and San Jose operates an ISO 27001 certified information management system.

Our procedures restrict the type and quantity of confidential information collected and stored and there are robust procedures in place to protect customer data from unauthorised access and disclosure.

Periodic information security risk assessments are performed, and training is provided to staff with the aim of preventing information security breaches. We have a whistleblowing procedure in place for staff to report information security or any other concerns.

Spirent has implemented a response procedure to manage breaches of confidential information if they were to occur.

Confidential waste is shredded if in hard copy and certificates of destruction are provided for electronic storage devices disposed of at end-of-life.

STEM initiatives and community impact projects

Spirent actively encourages its employees to become STEM Ambassadors around the globe. Restrictions in place due to COVID-19 meant that we ran a reduced STEM programme in 2020.

We provide all our employees with volunteering time off to make a positive contribution to the communities in which they work.

Through financial donations and volunteering, Spirent has continued to support community projects worldwide.

Property

Energy use

Spirent's energy use decreased by approximately 6 per cent in 2020 to 13,546MWh (2019 14,453MWh). This has been primarily driven by lower demand for office lighting and small power, with most of our staff working from home during the pandemic. Gas use decreased in the year by around 35 per cent to 506MWh (2019 798MWh). Energy use within the UK during 2020 was 647MWh (2019 794MWh).

	2020 Tonnes of CO_2e	2019 Tonnes of CO_2e
Emissions from:		
Combustion of fuel and operation of facilities (Scope 1)	**91.8**	144.7
Electricity, heat, steam and cooling purchased for own use (Scope 2)	**4,427.7**	4,829.6
Total emissions	**4,519.5**	4,974.3
Emissions intensity metrics:		
Normalised per FTE employee	**3.18**	3.60
Normalised per square metre of gross internal area of our facilities	**0.10**	0.12
Normalised per $ million of revenues	**8.65**	9.88

Greenhouse gas emissions

Spirent is committed to combating climate change and reporting its progress. Our total Scope 1 and 2 emissions decreased by 9 per cent from 2019, and our emissions per $ million of revenue were down by 12.4 per cent. We have reduced our total emissions by 33 per cent since our 2014 baseline. Carbon emissions arising from our UK operations in 2020 were 138 tonnes CO_2e (2019 180 tonnes CO_2e).

The Group responded to the Carbon Disclosure Project in 2020, completing the Climate Change and Supply Chain questionnaires. In 2020 we achieved a Climate Change rating of B (management) (2019 B) and a Supplier Engagement rating of B- (management) (2019 B). The average for our sector is C in both categories.

Methodology

Reporting on emission sources is required under the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013 and these sources fall within our consolidated financial statements. We have reported on all the emission sources that fall within our consolidated financial statements. We do not have any responsibility for any emission sources that are not included in our consolidated financial statements.

We report our emissions using the location-based methodology. We have used the GHG Protocol Corporate Accounting and Reporting Standard (Revised Edition), along with data gathered to fulfil our requirements under these Regulations, and the most recent emission factors available: UK Government's GHG Conversion Factors for Company Reporting 2020 for the UK, US EPA 2020 eGrid emissions factors for the applicable individual states in the US, and 2018 emissions factors for all other countries were sourced from the International Energy Agency's 2019 data set.

Performance against target

The Group set a target to reduce carbon emissions by 5 per cent relative to revenue from 2019 figures. We have achieved this target, having reduced carbon emissions per $ million of revenue by 12.4 per cent.

Compliance

The Group is not required to comply with stages 1 or 2 of the UK Energy Savings Opportunity Scheme (ESOS) Regulations 2014.

Procurement

Vendor assessment and auditing

Vendors are required to abide by our Code of Conduct which sets out our expectations for environmental management, labour and human rights, health and safety, and business ethics. They are assessed using a detailed questionnaire.

Priority suppliers are audited by Spirent's procurement team: 18 supplier audits were conducted in 2020, representing 87 per cent of our hardware supply chain spend. Due to COVID-19 travel restrictions, these were completed remotely or as document reviews. This met our target of completing 18 audits in the year. No material issues were identified.

In 2020 we started a process to obtain formal acceptance of our new Supplier Code of Conduct. We have engaged nearly 350 of our largest suppliers and have so far obtained confirmation from more than 200, representing more than half of our manufacturing spend.

Compliance

We comply with the requirements of the UK Modern Slavery Act 2015 and the California Transparency in Supply Chains Act 2010. We require slavery and human trafficking to be eradicated from our direct supply chain for the products we sell and we monitor suppliers by performing regular evaluation surveys to assure ourselves of each supplier's commitment in this area.

Spirent's full statement on Modern Slavery and Human Trafficking can be found on the Company's website at https://corporate.spirent.com.

Non-Financial Reporting Compliance statement

We aim to comply with the Non-Financial Reporting requirements contained in Sections 414CA and 414CB of the Companies Act 2006. The table below, and the information it refers to, is intended to help stakeholders understand our position on key non-financial matters. This builds on existing reporting that we already do under the following frameworks: CDP, Global Reporting Initiative, and Guidance on the Strategic Report (UK Financial Reporting Council).

Non-financial reporting matter	Policy/Code	
Environmental matters	Environmental Policy Sustainability Policy Supplier Code of Conduct	Property page 57 Sustainability pages 54 to 57 Procurement page 57
Employees	Business Ethics Policy Whistleblowing Policy Occupational Safety Policy Volunteering Time-Off Policy GDPR Privacy Notice	Business ethics policy page 79 Raising concerns at work page 80 Health and safety page 56 STEM initiatives and community impact projects page 56 Information security pages 56
Human rights	Business Ethics Policy Modern Slavery Policy Supplier Code of Conduct	Business ethics and human rights page 55 Compliance page 57 Procurement page 57
Social matters	Supporting charities	STEM initiatives and community impact projects page 56
Anti-corruption and anti-bribery	Anti-bribery Policy Whistleblowing Policy	Business ethics policy page 79 Raising concerns at work page 80
Policy embedding, due diligence and outcomes		Policies page 54 Business ethics policy page 79
Description of principal risks and impact of business activity		Principal risks and uncertainties pages 45 to 49 Risk management page 79
Description of the business model		Business model pages 12 and 13
Non-financial key performance indicators		Key performance indicators pages 24 and 25

Pages 2 to 58 form part of the Strategic Report, which has been reviewed and approved by the Board.

Angus Iveson
Company Secretary
11 March 2021

Chairman's introduction to governance

Sir Bill Thomas
Chairman

Compliance with the UK Corporate Governance Code

As a premium listed company on the London Stock Exchange, the Company is reporting in accordance with the UK Corporate Governance Code (the "Code") published in July 2018. The Code which sets out standards of good practice in relation to board leadership and effectiveness, remuneration, accountability and relations with shareholders. The Code is published by the UK Financial Reporting Council (FRC) and a copy of the Code is available from the FRC website at www.frc.org.uk.

The Board confirms that the Company has complied with the Code throughout the period under review with the exception of Provision 36, relating to executive directors' post-employment share ownership and Provision 38, relating to executive directors' pensions. Measures are set out in the Report on Directors' remuneration on pages 82 to 106 that are intended to deal with these issues and bring the Company into full compliance with the Code by the end of 2022.

Dear shareholder

During the year ended 31 December 2020, Spirent has applied the principles of good governance contained in the 2018 UK Corporate Governance Code (the "Code"). The Board as a whole believe good corporate governance is about how we provide confidence in the delivery of our performance to our stakeholders and is essential for the long-term sustainable success of our business.

Our aim is to set out in this report how the Board:

- sets the strategy, purpose and values for the Group;
- takes into account the views of our stakeholders, the impact of our decisions on them and the actions taken as a consequence; and
- monitors performance, embeds our values and manages risk.

The Board recognises the importance of its role in setting the tone for Spirent's culture and making sure that a framework to support that tone is embedded throughout the Group. During the year, the Board reviewed and agreed the updated strategy and values of the organisation. The Board has been pleased to see the commitment of the Group's employees embody that ambition.

We know that businesses are more successful and sustainable when they balance the needs of their stakeholders. As a Board, we pay close attention to the impact of our decisions in their broadest terms including the impact on all of our stakeholders including customers, colleagues, communities, the environment and, of course, our investors. Clear reporting on these reflections is vital; you can read more in our dedicated Stakeholder engagement section.

An engaged workforce is key to the success of Spirent. The Board has kept the safety of employees under regular review throughout the global COVID-19 pandemic and has worked to ensure that Board and executive management have continued to engage with employees through 2020. Feedback from that engagement is regularly discussed by the Board and has made a real difference to our actions.

The Board undertook an internally-led effectiveness evaluation in 2020, and I am pleased to report that your Board, its Committees and its individual Directors continue to believe that we operate in an effective and responsible manner. The Directors work to identify how we can better use our skills and experience to more effectively contribute to the success of Spirent and you can read more details of our review on page 69.

During its consideration of the Company's strategy and the outcomes of the Board and Committee's self-evaluations, the Board concluded that its contribution could be enhanced with the addition of a new non-executive director with specific experience in the growth areas of the business. An executive search firm has been engaged to assist in identifying a suitable individual and the Company will report on progress in due course.

I hope you find this report useful.

Sir Bill Thomas
Chairman
11 March 2021

Board of Directors

Sir Bill Thomas
Chairman
N

Appointed Chairman in May 2017; Non-executive Director in December 2016

Skills and experience Sir Bill brings strong commercial and management experience to the Board. His extensive international technology experience, together with his track record in leading major change in large organisations, provides valuable insight. Sir Bill is a former Senior Vice President at Hewlett Packard and was on the executive committee of EDS plc as Executive Vice President.

Other roles Chairman of Clarkson PLC; Chairman of Node4, a private equity-owned IT services firm; Chairman of the Royal Navy and Royal Marines Charity; Non-executive Director of The Co-operative Bank; member of Advisory Board of FireEye, Inc. Sir Bill was awarded a knighthood in the New Year Honours 2020.

Eric Updyke
Chief Executive Officer

Appointed Chief Executive Officer in May 2019

Skills and experience Most recently, Eric was on the Executive Management team of Amdocs reporting directly to the CEO. In his capacity as Group President, Services at Amdocs Ltd he had global responsibility for the entire Managed Services, Testing and SI businesses. This business encompassed 10,000 employees and roughly $2 billion in revenue. Prior to that role, Eric was Division President for North America at Amdocs where he managed a $1 billion P&L and was responsible for the relationship with North American communications service providers. Prior to his time at Amdocs, he held executive roles at Nokia Siemens Networks and AT&T. Eric has a great track record of success, has functional expertise in every facet of the business and has excelled in multi-cultural global companies. Eric has an MBA in Finance and a Bachelor's degree in Electrical Engineering from Cornell University.

Other roles Since 2019, Non-executive Director of Symend, Inc.

Paula Bell
Chief Financial & Operations Officer

Appointed Chief Financial Officer in September 2016

Skills and experience Paula has extensive FTSE 250 board experience and, in particular, working with global technology and engineering businesses. Paula has demonstrable experience of effective commercial, financial and operational management leading to increased earnings whilst driving a strategic agenda. Paula was previously CFO at John Menzies Plc from 2013 and CFO at Ricardo Plc from 2006 to 2013. Paula has held senior management roles at BAA plc, AWG plc and Rolls-Royce Plc, leading business development for international growth underpinned by extensive M&A activity.

Paula is a Fellow of the Chartered Institute of Management Accountants and a Chartered Global Management Accountant.

Other roles Since September 2018, Non-executive Director and, since January 2019, Chair of Audit and Risk Committee at Keller Group Plc; Non-executive Director and Chairman of Audit Committee of Laird plc between 2012 and June 2018.

Jonathan Silver
Senior Independent Non-executive Director
A N R

Appointed Senior Independent Non-executive Director in November 2016; Chairman of Audit Committee in August 2015; Non-executive Director in June 2015

Skills and experience Jonathan brings experience in finance, risk, control, governance and international business expertise. He was Chief Financial Officer at Laird plc until 2015, having held a variety of roles in his 30 years with the company.

Jonathan is a Member of the Chartered Accountants of Scotland.

Other roles Non-executive Director and Chairman of Audit Committee at Invesco Income Growth Trust; Non-executive Director and Chairman of Audit Committee at East and North Hertfordshire NHS Trust; Non-executive Director and Chairman of Audit Committee at Henderson High Income Trust PLC.

Gary Bullard A N R
Independent Non-executive Director

Appointed Chairman of Remuneration Committee in May 2017; Non-executive Director in December 2016

Skills and experience Gary brings extensive experience in senior management positions, including sales and marketing roles, at IBM and BT Group plc and was a Non-executive Director of Chloride Group plc. Until 2012 he was President at Logica UK and a member of the Executive Committee of Logica plc.

Other roles Non-executive Chairman of Gooch & Housego PLC; Chairman of Recycling Technologies plc.

Wendy Koh A N R
Independent Non-executive Director

Appointed Non-executive Director in January 2018

Skills and experience Wendy brings strong technology sector experience from various strategic and sales roles she has undertaken in the APAC region with Juniper Networks, most recently as Senior Vice President Global GTM Strategy and Business Development, a global role focused on leading transformational strategy and establishing partnerships to increase value proposition for customers. Wendy also previously worked for Cisco Systems from 1998 to 2003.

Wendy holds a Bachelor of Engineering in Electrical and Electronics from Nanyang Technological University and a Graduate Diploma in Marketing Management from the Singapore Institute of Management.

Other roles Vice President, Pathways, Alliance & Strategy APAC at NetApp Singapore.

Edgar Masri A N R
Independent Non-executive Director

Appointed Non-executive Director in January 2018

Skills and experience Edgar brings to the Board wide-ranging experience of managing companies across the technology sector with a focus on driving investment and profitability. Edgar was President and Chief Executive Officer of Qualtre, Inc., a US-based start-up acquired by Panasonic Corporation in December 2016 at the same time as acting as a member of the board of Calient Technologies until its acquisition by Chunxing Precision Mechanical Co., Ltd. Prior to this, Edgar was President and CEO of 3Com Corporation, a leading global data networking company, bringing the company to record revenue and gross margins before it was taken into private ownership.

Edgar holds a Diplôme d'Ingénieur from Ecole Centrale de Paris, a Master of Science degree in Electrical Engineering from the University of California at Berkeley, and a Master of Business Administration with distinction (Arjay Miller Scholar) from Stanford University.

Other roles CEO of Accton Technology Corporation; Director of Kollective Technology, Inc.

Committee key

- A Audit Committee
- N Nomination Committee
- R Remuneration Committee
- Committee Chair

Directors' statement on corporate governance

Board statements

Requirement	Compliance statement	Where to find further information
Strategic report	The Strategic report was approved by the Board of Directors on 11 March 2021.	Pages 2 to 58
NFR statement	The Company has complied with the Non-Financial Reporting Directive contained in Sections 414CA and 414CB of the Companies Act 2006.	Page 58
S172 of the Companies Act 2006	The Board of Directors, through the Strategic report, provides information for shareholders to help them assess how the Directors have performed their duty, under Section 172, to promote the success of the Company and, in doing so, had regard to the matters set out in that section. This includes considering the interests of other stakeholders which will have an impact on the long-term success of the Company.	Pages 50 to 53
Compliance with the UK Corporate Governance Code	In accordance with the Listing Rules of the UK Listing Authority, the Company confirms that throughout the period ended 31 December 2020 and at the date of this Annual Report, it was in compliance with all the relevant provisions as set out in the 2018 UK Corporate Governance Code, with the exception of Provision 36, relating to executive directors' post-employment share ownership, and Provision 38, relating to executive directors' pensions. Measures are set out in the Directors' report on remuneration on pages 82 to 106 that are intended to deal with these issues and bring the Company into full compliance with the 2018 UK Corporate Governance Code by the end of 2022.	Pages 59 to 112
Going concern	After making appropriate enquiries and taking into account the matters set out in this Annual Report, the Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future and therefore continue to adopt the going concern basis when preparing the financial statements.	Page 110
Viability statement	The Directors confirm that they have a reasonable expectation that the Group will continue in operation and meet its liabilities as they fall due over the three-year period under review.	Page 110
Robust assessment of the principal risks facing the Group	The Directors confirm that they have carried out a robust assessment of the principal and emerging risks facing the Group, including those that would threaten its strategy, business model and future performance. The Directors also assessed the Group's risk appetite with regard to each risk and considered how to manage and mitigate such risks.	Pages 45 to 49
Annual review of the systems of risk management and internal control	During the period ended 31 December 2020, the Audit Committee provided transparency on the Group's systems of risk management and internal control which were confirmed as effective.	Pages 75 to 81
Report on Directors' on remuneration	The Directors confirm that their report on remuneration for the period ended 31 December 2020 complies with the requirements of the Listing Rules of the UK Listing Authority, Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended) and the provisions of the 2018 UK Corporate Governance Code.	Pages 82 to 106
Competition and Markets Authority	The Audit Committee considers that the Company complied with the mandatory audit processes and Audit Committee responsibility provisions of the Competition and Markets Authority Audit Order for the period ended 31 December 2020.	Pages 75 to 81
Modern Slavery Act 2015	The Directors confirm, for the financial year ended 31 December 2020, that steps have been taken in relation to our responsibilities under Section 54 of the Modern Slavery Act 2015 and that the Board approved a statement setting out the steps that have been taken to combat modern slavery in the Group's supply chain.	Page 57

Principles of UK Corporate Governance Code 2018		Page
Board leadership and company performance	Long-term value and sustainability	84
	Culture	5
	Shareholder engagement	50 to 53
	Employee engagement	72
	Other stakeholder engagement	50 to 53
	Conflicts of interest	68
Division of responsibilities	Role of Chair	64
	Division of responsibilities	64
	Non-executive Directors	64
Composition, succession and evaluation	Appointments and succession planning	73
	Skills, experience and knowledge	68
	Length of service	73
	Evaluation	69
	Diversity	74
Audit, risk and internal control	Committee	75
	Integrity of financial statements	77
	Fair, balanced and understandable	75
	Internal control and risk management	78
	External auditor	80
	Principal and emerging risks	45
Remuneration	Policies and practices	82
	Alignment with purpose, values and long-term strategy	82
	Independent judgement and discretion	82

Directors' statement on corporate governance continued

The Board

The Board of Directors is collectively responsible to the Company's shareholders for the direction and oversight of the Company to ensure its long-term success.

The Board met regularly throughout the year to approve the Group's strategic objectives, to lead the Group within a framework of effective controls which enable risk to be assessed and managed, and to ensure that sufficient resources are available to meet the objectives set.

There are a number of matters which are specifically reserved for the Board's approval. These are set out in a clearly defined schedule which includes: matters relating to the Group's strategic plan; approving the annual business strategy and objectives; the nature and extent of principal risks to be taken to achieve the strategic objectives; changes relating to structure and capital; approval of trading statements, half year results, final results and Annual Report and Accounts; declaring interim dividends and recommending final dividends; the Group's policies and systems of internal control and risk management, approving capital projects, acquisitions and disposals valued at over $2 million; and provision of adequate succession planning.

The schedule of matters reserved for the Board was updated in 2019 and reviewed, approved and adopted at the December 2020 Board meeting.

Certain specific responsibilities are delegated to the Committees of the Board, notably the Audit, Nomination and Remuneration Committees, which operate within clearly defined terms of reference and report regularly to the Board. Further details are set out in the reports of each Committee that follow this statement.

Chairman and CEO

The roles of the Chairman and the CEO are separately held. The division of their responsibilities is clearly established, set out in writing, and agreed by the Board to ensure that no one person has unfettered powers of decision. The Chairman is responsible for the operation and leadership of the Board, ensuring its effectiveness and setting its agenda. The CEO is responsible for leading and managing the Group's business within a set of authorities delegated by the Board and the implementation of Board strategy and policy.

Authority for the operational management of the Group's business has been delegated to the CEO for execution or further delegation by him for the effective day-to-day running and management of the Group. The Group Executive Committee, led by the CEO, is made up of the direct reports to the CEO.

Senior Independent Director

The role of Senior Independent Director is to act as a sounding board for the Chairman and to serve as an intermediary for other Directors as required. He is also available to shareholders to convey concerns to the Board which they have been unable to convey through the Chairman or through the Executive Directors. During the year, led by the Senior Independent Director, the Non-executive Directors have met without the presence of the Chairman (including to appraise the Chairman's performance).

Non-executive Directors

In addition to their responsibilities for strategy and business results, the Non-executive Directors play a key role in providing a solid foundation for good corporate governance and ensure that no individual or group dominates the Board's decision making. They each occupy, or have occupied, senior positions in industry, bringing valuable external perspective to the Board's deliberations through their experience and insight from other sectors which enables them to contribute significantly to Board decision making. The formal letters of appointment of the Non-executive Directors are available for inspection at the Company's registered office.

Board Committees

The Board has established four principal Board Committees, to which it has delegated certain of its responsibilities: the Audit Committee, the Disclosure Committee, the Nomination Committee and the Remuneration Committee. The membership, responsibilities and activities of these Committees are described later in this Directors' statement on corporate governance and, in the case of the Remuneration Committee, in the Report on Directors' remuneration beginning on page 82. Membership of these Committees is reviewed annually and minutes of Committee meetings are made available to all Directors on a timely basis.

The Chairmen of the Audit, Nomination and Remuneration Committees intend to be available at the Annual General Meeting to answer questions on the work of their respective Committees.

The written terms of reference for the Audit, Disclosure, Nomination and Remuneration Committees, all of which were reviewed, updated where necessary and approved during the year, are available on the Company's website at https://corporate.spirent.com.

Governance framework

Board

Responsible for the overall management of the organisation of our business

- Sets standards, policies and strategic aims
- Ensures we have the resources in place to meet our objectives
- Monitors and reviews material strategic issues, financial performance and risk management

» More details on page 64

Audit Committee

- Reviews and monitors financial statements
- Oversees external audit
- Reviews internal audit plans
- Receives updates on ESG initiatives

» More details on pages 75 to 81

Remuneration Committee

- Sets, reviews and recommends overall Remuneration Policy and strategy
- Reviews and approves remuneration arrangements for Executive Directors and senior management

» More details on pages 82 to 106

Nomination Committee

- Makes recommendations to the Board on its composition and that of its Committees

» More details on pages 73 and 74

Disclosure Committee

- Ensures compliance with timely identification and disclosure of information to investors

» More details on page 64

CEO

Group Executive Committee

- Day-to-day management of our business operations and responsibility for monitoring detailed performance of all aspects of our business

» More details on page 64

Group Risk Committee

- Provides strategic leadership, direction, and oversight of risk

» More details on page 79

Directors' statement on corporate governance continued

Election and re-election of Directors

In accordance with the Code's recommendations, all Directors who wish to continue in their roles will be proposed for re-election at the 2021 Annual General Meeting.

The Board confirms that each of the Directors standing for re-election has been subject to a formal performance evaluation in relation to their duty to act in the long-term interests of the Company, while also having regard to other stakeholders.

Company Secretary

In his role of Company Secretary & General Counsel, Angus Iveson is responsible for advising and supporting the Chairman and the Board on corporate governance matters as well as ensuring that there is a smooth flow of information to enable effective decision making. All Directors have access to the advice and services of the Company Secretary and can take independent professional advice in respect of their duties, at the Company's expense.

Board meetings

The Board held 14 meetings during the year; due to travel restrictions during the COVID-19 pandemic all meetings since March, including a two-day strategy meeting, were held by video conference. This was an increase on the normal Board calendar, as the Board considered issues arising from the COVID-19 pandemic and other ad hoc matters.

	Board	Audit Committee	Nomination Committee	Remuneration Committee
Sir Bill Thomas	14/14	–	3/3	–
Paula Bell	14/14	–	–	–
Eric Updyke	14/14	–	–	–
Gary Bullard[1]	13/14	3/3	3/3	8/8
Wendy Koh	14/14	3/3	3/3	8/8
Edgar Masri	14/14	3/3	3/3	8/8
Jonathan Silver	14/14	3/3	3/3	8/8

Note

1. Gary Bullard was unable to attend an ad-hoc meeting called at short notice to discuss the implementation of COVID-19 measures but received updates both before and after the meeting from the Chairman.

Senior executives below Board level are invited, when appropriate, to attend Board meetings and to make presentations relating to the results and strategies of their business units and Group-wide responsibilities. Papers for Board and Committee meetings are provided to Directors in advance of the meeting. The attendance of the Directors at Board and Committee meetings during the year under review is shown in the table above. If a Director is unable to participate in a meeting either in person or remotely, the Chairman will solicit their views on key terms of business in advance of the relevant meeting, so that these can be shared with the meeting.

Directors' indemnity provisions

In accordance with its Articles of Association, the Company has granted a qualifying third party indemnity, to the extent permitted by law, to each Director. The Company also maintains Directors' and officers' liability insurance.

These provisions are qualifying third party indemnity provisions as defined in Section 234 of the Companies Act 2006. Neither the Company's indemnity nor the insurance provides cover in the event that a Director is proven to have acted dishonestly or fraudulently.

Board activities during 2020

At each Board meeting the CEO presents an update on the performance, strategy and business issues across the Group and the CFO presents a detailed analysis of the financial performance of the business units. Senior executives below Board level attend relevant parts of Board meetings in order to make presentations on their areas of responsibility; this gives the Board access to a broader group of executives and helps the Directors make ongoing assessments of the Group's succession plans. The Board has a rolling programme of visits to business unit locations to deepen its appreciation of the different opportunities and challenges that each unit faces.

Core issues considered by the Board during 2020

	Governance/compliance	Finance	Business/strategy
January		• CFO update • 2019 Full Year trading update review • CFO update • Markets update	• CEO update
March	• 2019 Full Year compliance and Annual Report review • Legal and Market Abuse Regulation update • Modern Slavery Statement review • Diversity Policy review	• CFO update • 2019 Full Year results review • Viability Statement review • Dividend Policy review • Capital Policy review • Receive Audit Committee report on internal controls and risk management	• CEO update • Investor landscape update • IT strategy review • Cyber strategy update • COVID-19 update
April	• AGM voting review	• 2020 Q1 results review • CFO update	• CEO update including COVID-19 update • M&A framework update • Business unit updates • IT strategy update
June		• CFO update	• CEO update including COVID-19 update • APAC market update • People update • M&A update
August	• 2020 Half year corporate governance and compliance review • Board effectiveness review kick-off • Regulatory and legal review • Legal and Trade compliance update	• CFO update • 2020 Half year results review • Tax update • Insurance update	• CEO update including COVID-19 update • ESG update • Workforce engagement update
September			• CEO update including COVID-19 update • Longer-term strategic vision
October	• Global Trade compliance update	• CFO update	• Strategy presentations • CEO update including COVID-19 update • IT Strategy update • Facilities update
November	• Governance compliance review • Legal review • Workforce engagement update	• CFO update • 2020 Q3 results review	• CEO update including COVID-19 update • IT Strategy update
December	• Board effectiveness review results • Governance compliance review	• CFO update • Budget 2021	• CEO update including COVID-19 update • Broker update

Directors' statement on corporate governance continued

Board composition

At the date of this report, the Board comprises the Non-executive Chairman, four Independent Non-executive Directors and two Executive Directors.

The Chairman and the Non-executive Directors contribute entrepreneurial leadership and external expertise and experience in areas of importance to the Company, such as strategic investments, corporate finance, general finance and corporate governance. They also contribute independent challenge and rigour to the Board's deliberations and assist in the development of the Company's strategy, scrutiny of the performance of management in meeting agreed goals and targets, and satisfying themselves of the integrity of the Company's internal controls and risk management systems. The Board believes that all of the Directors devote sufficient time and attention as is necessary in order to perform their duties.

The Chairman holds regular discussions with the Non-executive Directors without the Executive Directors present to ensure a free and frank exchange of views on the effectiveness of the Executive Directors and senior management.

Independence

The independence of each Non-executive Director is reviewed on appointment and at least annually. The Board determined that the current Non-executive Directors are each independent in character and judgement, save for the Chairman who was deemed independent by the Board at the date of his appointment. None have been employed by the Company previously in any capacity or have any current material business relationship with any Group company.

Non-executive Directors at Spirent receive no remuneration from the Company other than their fees (detailed in the Report on Directors' remuneration on page 90). Each Non-executive Director has confirmed that they do not represent any significant shareholder in the Company. No individual or group of individuals dominates the Board's decision making and the Code requirement stating that at least half of the Board (excluding the Chairman) should comprise independent Non-executive Directors is satisfied.

Appointments to the Board

There is a formal, rigorous and transparent procedure for the appointment of new Directors to the Board. Details are available in the Nomination Committee report on pages 73 and 74 which also provides details of the Committee's role and activities.

Commitment

The letters of appointment for the Chairman and Non-executive Directors set out the expected time commitment required of them and are available for inspection at the Company's registered office and at the Annual General Meeting.

The full list of external appointments held by Directors can be found on page 60 and 61. All of our Non-executive Directors are considered to be independent.

Board development

On appointment Directors are offered an induction programme on the operations and activities of the Group, the role of the Board and the matters reserved to its decision, the Group's corporate governance practices and procedures and their duties, responsibilities and obligations as directors of a listed public limited company. This induction may be supplemented by visits to key locations and meetings with, and presentations by, senior executives.

Further training for Directors is available as required and can be provided by means of external courses, internal computer-based training, briefings from specific consultants or in-house presentations. In addition, the Board's knowledge and understanding of the legal and regulatory environment is updated through the provision of information by the Group's advisers and by means of regular updates from the Company Secretary.

New Directors are encouraged to take advantage of opportunities to meet with major shareholders and attend presentations to analysts where possible.

Information flow

The Company Secretary manages the provision of information to the Board at appropriate times in consultation with the Chairman and CEO. In addition to formal meetings, the Chairman and CEO maintain regular contact with all Directors. The Chairman also holds informal meetings with Non-executive Directors, without any of the executives being present, to discuss any issues affecting the Group, if this is thought necessary. Regular management updates are sent to Directors to keep the Non-executive Directors informed of events throughout the Group between Board meetings and to ensure that they are kept fully advised of the latest issues affecting the Group.

Conflicts of interest procedures

The Company has procedures in place, which were reviewed and updated during the year, to deal with the situation where a Director has a conflict of interest.

As part of this process, the Board:

- considers each potential conflict situation separately on its particular facts;
- considers the potential conflict situation in conjunction with the rest of the Directors' duties under the Companies Act 2006;
- keeps records and Board minutes as to authorisations granted by Directors and the scope of any approvals given; and
- regularly reviews conflict authorisation.

Board performance evaluation

The effectiveness of the Board is reviewed at least annually and conducted according to the guidance set out in the Code and FRC Guidance on Board Effectiveness. An externally facilitated evaluation was conducted by Independent Audit Limited in 2018, with the next externally facilitated evaluation scheduled for 2021.

Evaluation process

A questionnaire was developed for the Board and each of its Committees by the Chairman and Company Secretary, with questions structured on the basis of feedback from the 2019 evaluation, including areas for improvement and any additional observations.

Directors completed the confidential survey online, with further discussions between each individual Director and the Chairman on their own performance and between the Directors and the Senior Independent Director on the Chairman's performance.

The Company Secretary compiled responses, including analysis of themes and proposed actions. The Company Secretary and Chairman discussed the findings, and the resulting report being brought to the Board at its December 2020 meeting.

Evaluation findings

The Board concluded that excellent progress had been made on the areas for further focus identified in the 2019 review:

Evaluation action from 2019 review	Progress in 2020
Growth Strategy Consider the most effective use of capital to drive the growth strategy of the Group	The Board considered a number of presentations during the year on the growth potential of existing markets and promising new growth areas. A review of the long-term vision of the Company was held in advance of our usual standard three-year planning exercise to discuss the future growth opportunities that are available. The Board has overseen the updating of the Company's formal M&A framework to ensure appropriate inorganic options are properly considered which may accelerate our growth in attractive areas.
Culture and Engagement Consider employee engagement data and other workforce feedback to ensure promotion of a healthy corporate culture	Two all-employee engagement surveys have been undertaken in the period plus more focused engagement surveys to address specific issues identified in the wider engagement survey. Results have been shared with the Board. In addition the Board has reviewed the revised core values and "way we work" principles introduced during the year. Non-executive Directors have continued to meet (virtually) with employee focus groups to discuss global and local issues, with feedback being discussed at Board level.
People Continue to review talent pipeline and build management capability, in particular driving enhanced effectiveness in sales and marketing	The Board has conducted two reviews of leadership and talent during the period which included a review of the existing talent pipeline and actions to continue to strengthen management bench strength. The Board also received updates on the effectiveness of the Leader Assured programme which seeks to prepare identified high performers for future roles in the Group.
Cyber Threats Review the Group's cyber threats and the risk mitigation procedures in place	The Board discussed the results of a Company-wide cyber-security assessment in Q1 of 2020, with the results being used to develop the Group's approach for the remainder of 2020 and beyond. The Board is acutely aware of the evolving cyber threat. Regular assessments will continue to be completed, with results being discussed by the Board in due course.
Audit Tender Undertake tender programme for external audit provision and begin integration of selected provider	The tender process to select a new External Audit was conducted during Q2 of 2020, with Non-executive Directors involved in the discussions throughout. Following consideration of the proposals received, the Board will be recommending the appointment of Deloitte LLP to shareholders at the 2021 Annual General Meeting. Discussions and plans are now under way to integrate the new external auditor in preparation for the audit of the 2021 financial year.

The evaluation concluded that the Board, its Committee Chairs and Committees were effective and that all Directors were considered to have demonstrated considerable commitment and time to their roles, notwithstanding any other positions held by them outside Spirent. The Board is also satisfied that the contribution of each Director is, and continues to be, important to the Company's long-term sustainable success.

Areas for focus for 2021

Develop a deeper understanding of how our products and solutions are competitively positioned against those of our direct competitors in each of our key markets
Continue to consider the most effective use of capital to drive the growth strategy of the Group
Ongoing review of the Group's cyber risk profile and the appropriateness of the risk mitigation measures in place
Review Board composition and consider if the mix of skills and experience is optimal to effectively support the Company's strategy and whether the Board is sufficiently diverse

Directors' statement on corporate governance continued

Financial and business reporting

The Board recognises its responsibility to present a fair, balanced and understandable assessment of Spirent in all of its reporting obligations. This responsibility covers the Annual Report and extends to the half year report and other regulatory announcements. The Directors consider this Annual Report, taken as a whole, to be fair, balanced and understandable, providing the information necessary for shareholders to assess the Company's performance, business model and strategy. In arriving at this position, the Board asked the Audit Committee to review and confirm a process is in place to support this assessment. The Audit Committee confirmed that a robust approach is in place to support the fair, balanced and understandable assessment, details of which can be found in the Audit Committee's report on pages 75 to 81.

Business model

A description of the Company's business model for sustainable growth is set out in "Our business model" on pages 12 and 13.

This section provides an explanation of the basis on which the Group generates value and preserves it over the long term and its strategy for delivering its objectives.

Going concern

After making enquiries, the Directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Accordingly, and consistent with the guidance contained in the document titled "Guidance on Risk Management, Internal Control and Related Financial and Business Reporting" published by the FRC, they continue to adopt the going concern basis in preparing the annual financial statements.

Internal control and risk management

The Board acknowledges its responsibilities for the Group's system of internal control in order to facilitate the identification, assessment and management of risk, the protection of shareholders' investments and the Group's assets. The Directors recognise that they are responsible for providing a return to shareholders which is consistent with the responsible assessment and mitigation of risks.

Effective controls ensure that the Group's exposure to avoidable risk is minimised, that adequate accounting records are maintained, that the financial information used within the business is reliable and that the consolidated accounts preparation and financial reporting processes comply with all relevant regulatory reporting requirements. The dynamics of the Group and the environment within which it operates are continually evolving, together with its exposure to risk. Internal controls can only provide reasonable and not absolute assurance against material misstatement or loss. The Directors confirm that there is an ongoing, robust process for identifying, evaluating and managing the principal risks faced by the Group and the operational effectiveness of the related controls; this has been in place for the year under review and up to the date of approval of the Annual Report and Accounts. They also confirm that they have regularly reviewed the system of risk management and internal controls utilising the review process set out below.

The Directors confirm that a robust assessment of the principal risks facing the Company has been carried out, including those risks that would threaten its business model, future performance, solvency or liquidity. More details are set out in the Principal risks and uncertainties section on pages 45 to 49 of this Annual Report.

Management and control of US subsidiary

Spirent Federal Systems Inc ("Spirent Federal"), which contributed approximately $53.3 million to the Group's revenue in 2020 (2019 $52.5 million), operates under a Proxy agreement, as detailed below, with the remainder of the US business operating outside the Proxy regime and therefore allowing the same reporting lines and processes as the Group's other, non-regulated businesses.

Spirent Federal and the Proxy arrangement

Spirent Federal Systems Inc is a wholly-owned subsidiary of Spirent in the United States. It has been placed under a Proxy arrangement as it is required by the US National Industrial Security Program to maintain facility security clearances and to be mitigated of the risks of foreign ownership, control, or influence for the business it undertakes. Under the Proxy agreement, Spirent Federal and the US Department of Defense (DoD) are parties to a Proxy agreement that relates to the management and operation of Spirent Federal.

In addition to their powers as Directors, the United States Government expects the Proxy Holders to exercise independently the prerogatives of share ownership of Spirent Federal. The Proxy holders have a fiduciary duty, and agree, to perform their interests in the best interests of Spirent as a shareholder (including the legitimate economic interest), and in a manner consistent with the national security interests of the United States. Spirent may not remove the Proxy holders other than for acts of gross negligence or wilful misconduct or for breach of the Proxy agreement (and always only with the consent of the US Defense Security Service).

In terms of the power to govern, the Proxy agreement vests certain powers solely with the Proxy holders and certain powers solely with Spirent. For example, the Proxy holders cannot carry out any of the below without Spirent's express approval:

- sell or dispose of, in any manner, capital assets or the business of Spirent Federal;
- pledge, mortgage or encumber assets of Spirent Federal for purposes other than obtaining working capital or funds for capital improvements;
- merge, consolidate, reorganise or dissolve Spirent Federal; and
- file or make any petition under the federal bankruptcy laws or similar law or statute of any state or any foreign country.

Spirent can require the above to be carried out and these are, therefore, considered to be significant participative features.

Spirent maintains its involvement in Spirent Federal's activities through normal business interaction and liaison with the Chair of the Proxy Board. Members of Spirent's senior management team attend meetings of the Proxy Board periodically.

Standards

Guidelines on the minimum Group-wide requirements for health and safety and environmental standards are set out in policy documents and procedures. There are also guidelines on the minimum level of internal control that each of the business units should exercise over specified processes. Each business has developed and documented policies and procedures to comply with the minimum control standards established, including procedures for monitoring compliance and taking corrective action.

High level controls

All businesses prepare annual operating plans and budgets which are supplemented by regular forecasts throughout the year. Performance against budget is monitored both at operational level and centrally, with variances being reported promptly. The cash position at Group and operational level is monitored constantly and variances from expected levels are investigated thoroughly. Clearly defined guidelines have been established for capital expenditure and investment decisions. These include the preparation of budgets, appraisal and review procedures, and delegated authority levels.

Financial reporting

Detailed management accounts are prepared every month, being consolidated in a single system and reviewed by senior management and the Board. They include a comprehensive set of financial reports and key performance indicators covering commercial and operational issues. Performance against budgets and forecasts is discussed regularly at Board meetings and at meetings between operational and Group management. The adequacy and suitability of key performance indicators is reviewed regularly.

Internal audit

All of the internal audit activities are co-ordinated by the Head of Risk & Internal Audit who has direct access to the Board Chairman and to the Audit Committee Chairman and is accountable to the Audit Committee.

All Group businesses are required to comply with the Group's financial control framework that sets out minimum control standards. A key function of the Group's internal audit resource is to undertake audits to ensure compliance with the financial control framework and make recommendations for improvement in controls where appropriate.

Senior members of the Group finance team meet with the Chairman of the Audit Committee as appropriate but at least annually, without the presence of Executive management, and have direct access to the Chairman.

Remuneration

The Directors' report on remuneration is set out on pages 82 to 106 and provides details of our Remuneration Policy and how it has been implemented, together with the activities of the Remuneration Committee.

Articles of Association and share capital

Information in relation to share capital, the appointment and powers of Directors, the issue and buyback of shares and significant interests in share capital is set out in the Directors' report on pages 109 to 110.

The Board will be seeking shareholder approval for an updated set of Articles of Association at the 2021 Annual General Meeting. Details of the proposed updates are set out in the Notice of 2021 Annual General Meeting, available on the Company's website at https://corporate.spirent.com.

Relations with shareholders

The Board is committed to maintaining good communications with shareholders. The Chairman, CEO and CFO have regular one-to-one contact with individual institutional shareholders in order to develop an understanding of their views. These are then discussed with the Board. Key themes for discussion in 2020 have included developments in the Company's growth strategy and the impact of the global COVID-19 pandemic on the Group's business.

All Directors are offered the opportunity to develop a dialogue with major shareholders to listen to their views. Executive Directors receive regular reports prepared by an independent capital markets advisory firm which provides comprehensive information relating to the Company's major shareholders.

Presentations are made to analysts, investors and prospective investors covering the full year and half year results. The Company seeks to maintain a dialogue with the various bodies which monitor the Company's governance policies and procedures.

In addition to its standard stakeholder engagement programme, the executive management held an online Capital Markets Day on October 2020 with presentations on Spirent's strategic objectives. These presentations are still available to all stakeholders on the Company's website at https://corporate.spirent.com.

The Company is always keen to hear the views of its private shareholders and we encourage them to access our website at https://corporate.spirent.com for our Company reports and business information. Detailed enquiries can be sent to our shareholder mailbox at investor.relations@spirent.com.

Any concerns raised by shareholders or their representatives, whether expressed directly or through voting patterns at the Company's AGM, are discussed by the Directors. An appropriate response is given either specifically to the concerned party or, if it is felt to be of wider benefit, made available to all shareholders via the Company's website at https://corporate.spirent.com.

Directors' statement on corporate governance continued

Workforce engagement

In 2020 feedback from employees was gathered in a number of ways including regular employee engagement surveys throughout the year and regular virtual town-hall meetings for all employees and also for smaller sub-groups.

In light of the Code, in 2019 the Board introduced a programme of Board level engagement with the workforce and this has continued throughout 2020, albeit using a more virtual approach. The Board continues to feel that rather than designate any single Non-executive Director to lead the engagement, it is more practical and effective for a Non-executive Director to be designated as the liaison point for employees in the three geographical areas in which the Company operates:

- Americas – Edgar Masri
- APAC – Wendy Koh
- EMEA – Gary Bullard

Meetings for each of the three areas took place on a virtual basis throughout 2020, with feedback being reported to the Board at their regular meetings.

Annual General Meeting

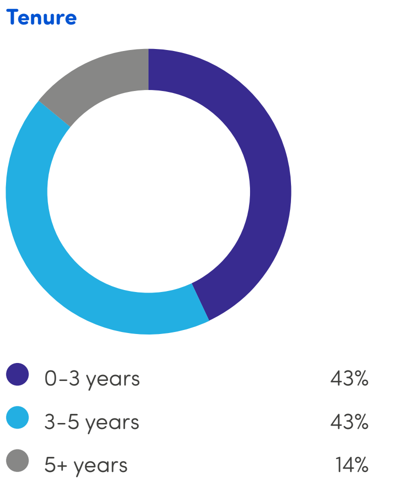
The Company's 2021 Annual General Meeting (2021 AGM) will be held at 10.30am on Wednesday 28 April 2021 at the Company's registered office at Origin One, 108 High Street, Crawley, West Sussex RH10 1BD.

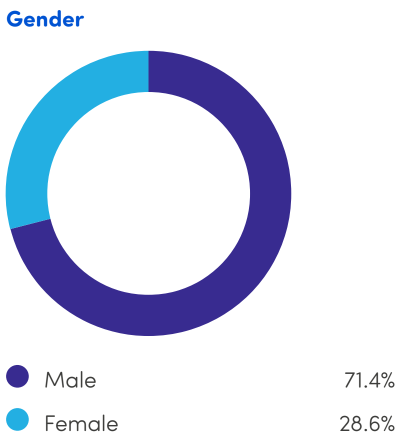
Due to the UK Government's restrictions on public gatherings and AGMs specifically due to the COVID-19 pandemic, shareholders will not be permitted to attend the AGM in person. The Board therefore strongly urges all shareholders to register their votes in advance by appointing the Chair of the Meeting as their proxy and not another named individual who will not be able to attend in their place.

The Board continues to view the AGM as a valuable opportunity to communicate with private shareholders in particular, for whom it provides the opportunity to ask questions of the Chairman and, through him, the Chairmen of the key Committees and other Directors. In order that this engagement can continue in spite of the restrictions noted above, the Company will provide a facility to enable shareholders to submit questions to the Board, which will be answered during a live webcast alongside the formal business of the AGM. Details of this webcast, how to submit questions, and further information about the AGM or notifications of any alternative arrangements that arise after the publication of this Annual Report will be published on the AGM page on the Company's website at https://corporate.spirent.com/shareholder-information/agm and by announcement via a Regulatory Information Service.

Nomination Committee report

Sir Bill Thomas
Committee Chairman





Members

During the year and at the date of this Annual Report:

- Sir Bill Thomas (Chairman)
- Jonathan Silver
- Gary Bullard
- Wendy Koh
- Edgar Masri

Key duties

In accordance with its terms of reference, the Nomination Committee's key duties include:

- leading the search process and making recommendations to the Board for the appointment of new Directors;
- regularly reviewing the Board structure, size and composition (including the skills, knowledge, independence, experience and diversity), recommending any necessary changes and considering plans for orderly succession; and
- making recommendations to the Board about suitable candidates for the role of Senior Independent Director, and membership of the Audit and Remuneration Committees, in consultation with the Chairmen of the relevant Committees.

How the Committee operates

Members of the Nomination Committee are appointed by the Board from the Directors of the Company. The Committee comprises a minimum of three independent Non-executive Directors. A quorum consists of two members, being either two independent Non-executive Directors or one independent Non-executive Director and the Chairman.

Only members of the Committee have the right to attend Committee meetings. Other individuals, such as the CEO and external advisers, may be invited to attend meetings when appropriate.

When dealing with the appointment of the Chairman, the Committee is chaired by the Senior Independent Director.

The terms of reference of the Nomination Committee, which were reviewed and approved during the year, are available on the Company's website at https://corporate.spirent.com.

Meetings

The Nomination Committee met three times during the year under review.

Committee activities during 2020

Succession planning

A key part of the Committee's role is to maintain an ongoing assessment of the senior leadership depth, and improving the effectiveness of the internal talent pipeline continues to be one of the Board's priorities.

A full review of leader development and the internal succession pipeline was undertaken during 2020, with the aim of providing visibility and awareness of the Group's leadership talent, strengths and gaps, while also enhancing an open, honest leadership team dialogue on what teams contribute and how. The Committee supports management in recognising that understanding and deploying the Group's talent is a critical and dynamic business planning process that can help the organisation to make huge strides in cross-functional collaboration and the sharing of knowledge and experience.

2020 saw the first outcomes from our "Leader. Assured." programme, designed to build additional management competencies in our internal talent pipeline. The Committee was pleased to receive updates on the important corporate initiatives in which the employees who have completed the programme were involved.

Policy on diversity and inclusion at Board level

The Committee noted the findings and recommendations of the Hampton-Alexander Review on Improving Gender Balance in FTSE Leadership published in November 2019, and the Parker Review on Ethnic Diversity published in 2017. The Board does not currently set specific aspirations in respect of diversity at Board level, however it does have a policy of supporting fully the Code's principles and the recommendations in the Hampton-Alexander Review and the Parker Review in respect of this key issue.

Spirent as a whole recognises the benefits of diversity beyond that of gender, taking account of diversity of social and ethnic backgrounds and cognitive and personal strengths when considering appointments at all levels, whilst ensuring appointments are made on merit and ability to enhance the performance of the business.

Although Spirent has not achieved the Hampton-Alexander Review's target of women making up one-third of the Board by the end of 2020, the Board remains committed to increasing the representation of women on boards and in other leadership roles. The Board currently has two members from ethnic minority backgrounds, as defined in the Parker Review, ahead of it's target of one.

Through 2021, the Spirent Group will be undertaking a full review on diversity and inclusion. The results of this review will inform the promotion of these issues across the Group, identifying ways in which the Company can work with existing and future stakeholders to develop a workforce that more appropriately reflects the diversity of the societies in which we work and live.

An analysis of data on the gender balance at different levels within the Company can be found in the Sustainability section of this Annual Report on page 55.

Board composition

The Committee reviews the results of the annual Board effectiveness evaluation that specifically relate to the composition of the Board, and whether the time commitment of those who fulfil the roles of Chairman, Senior Independent Director and Non-executive Director was appropriate.

After considering the growth areas highlighted in the Company's strategy, the Board has concluded that its contribution to the Group's future direction would be enhanced by the addition of a new non-executive director with specific experience in growth areas of the business.

The services of external executive consulting firm Russell Reynolds Associates have been retained to identify suitable candidates. Russell Reynolds Associates is independent, with no other connection to the Company, and is a signatory to the Voluntary Code of Conduct for Executive Search Firms on diversity and best practice. The Company will report on progress in due course.

Performance review

The performance of the Committee was reviewed as part of the annual Board effectiveness evaluation and the Committee was found to be operating effectively.

Re-election of Directors

The Committee was satisfied that all non-executive members of the Board devote sufficient time to their duties and remain independent in nature and recommends all continuing Directors for re-election by shareholders at the forthcoming AGM.

Sir Bill Thomas
Chairman
11 March 2021

Audit Committee report

Jonathan Silver
Committee Chairman

Fair, balanced, understandable

In making its recommendation to the Board that the Annual Report, taken as a whole, is fair, balanced and understandable, the Committee applied robust governance arrangements, including:

- clear guidance and instruction of the disclosure requirement provided to contributors;
- comprehensive Group and subsidiary accounts processes, with written confirmations provided by each business unit;
- management teams on the health of the financial control environment;
- a verification process applied to factual content with the aim of providing the information necessary to assess the Company's performance, business model and strategy;
- reviews of the Annual Report undertaken at different levels of the Group and by the senior management team that aim to ensure consistency and overall balance;
- additional scrutiny by senior management including focused review of risk registers;
- additional Committee reviews of the draft Annual Report in advance of final sign-off; and
- external audit review.

Final approval of the Annual Report is provided by the Board, on the recommendation of the Committee.

Dear shareholder

On behalf of the Audit Committee, I am pleased to present its report for the period ended 31 December 2020.

The Committee continues to play a key role within the Company's governance framework to support the Board in matters relating to financial reporting, internal control and risk management. Members have been selected to provide the wide range of financial and commercial expertise necessary to fulfil the Committee's duties and responsibilities, and the Board considers the members' financial experience to be recent and relevant for the purposes of the Code. Further, in accordance with the Code, the Board has determined that the current composition of the Committee as a whole has competence relevant to the sector in which the Group operates.

The challenges brought by the COVID-19 pandemic were one of the key focuses of risk management in 2020. Spirent's business continuity planning was well and truly tested, with the business responding with resilience and agility with 95 per cent of employees working effectively from home and with minimal disruption to the supply chain ensuing.

Throughout the ongoing pandemic, PwC continued to provide a co-source arrangement to assist with the Group's Internal Audit Plan, reporting to the Audit Committee and the Company's Head of Risk & Internal Audit. Notwithstanding the increased challenges COVID-19 brought in 2020, the Committee has been able to exercise sufficient oversight and obtain adequate levels of assurance.

Travel restrictions due to COVID-19 prevented internal audit teams undertaking site visits. However, video conferencing, together with digital document exchanges, mitigated this to a great extent.

Ernst & Young LLP (EY) have been our Company's external auditor since our first audit in 1949. In my time as a Non-executive Director and latterly as Chairman of the Audit Committee, I have found their conduct professional and effective. I would like to thank the firm, the teams and in particular the current audit partner, Joe Yglesia, who have worked with me over recent years.

After an extensive tender process the Committee has recommended that the Board seeks shareholder approval at the 2021 Annual General Meeting for the appointment of Deloitte LLP as the Company's external auditor for the 2021 financial period. More details of the tender process are provided later in this Committee report. I am confident that Deloitte will provide a robust external audit to the Company and recommend that shareholders vote to approve this appointment.

On behalf of the Committee I would like to thank everyone for their hard work over the past year, especially the finance teams across our businesses.

I look forward to meeting with shareholders at the Annual General Meeting to answer any questions on the work of the Committee.

Jonathan Silver
Chairman, Audit Committee
11 March 2021

Audit Committee report continued

Members

During the year and at the date of this report, Committee members were:

- Jonathan Silver (Committee Chairman)
- Gary Bullard
- Wendy Koh
- Edgar Masri

It is intended that the Audit Committee is comprised of at least three members, all of whom are independent Non-executive Directors of the Company with the necessary range of financial and commercial expertise to challenge management. Two members constitute a quorum.

The Code requires the inclusion of one financially qualified member (as recognised by the Consultative Committee of Accountancy Bodies) with recent and relevant financial experience. Currently, the Committee Chairman fulfils this requirement.

Key duties

In accordance with its terms of reference, the Audit Committee's key duties include:

- monitoring the integrity of the Group's financial statements and any formal announcements relating to the Company's performance, by reviewing significant financial reporting judgements contained in them before their submission to the Board for approval;
- on matters of financial reporting, reviewing and challenging where necessary the consistency of and any changes to accounting and treasury policies, for example considering whether the Group has followed appropriate accounting policies and made appropriate estimates and judgements, the clarity and completeness of disclosure, significant adjustments resulting from the audit, and the going concern assumption and compliance with auditing standards;
- at the request of the Board, reviewing the content of the Annual Report and Accounts and advising the Board on whether, taken as a whole, it is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy;
- as requested by the Board, assisting in relation to the Board's assessment of the principal and emerging risks facing the Company and the prospects of the Company for the purposes of disclosures required in the Annual Report and Accounts;
- reviewing the effectiveness of the Group's internal financial controls, including the policies and overall process for assessing established systems of internal financial control and timeliness and the effectiveness of corrective action taken by management;
- reviewing the most appropriate fulfilment of the internal audit function, agreeing and assessing the annual internal audit plan and its effectiveness in the context of the Company's overall risk management system;
- overseeing the Group's policies, procedures and controls for preventing bribery and identifying money laundering, and the Group's arrangements for whistleblowing; and
- overseeing the relationship with the Group's external auditor, reporting to the Board each year whether it considers the audit contract should be put out to tender taking into account any legal requirements for tendering or rotation of the audit contract, reviewing and monitoring its objectivity and independence including seeking information from the external auditor on an annual basis about its policies and procedures for maintaining independence, agreeing the scope of its work and fees paid to it for audit, assessing the effectiveness of the audit process, and agreeing the policy in relation to the provision of non-audit services.

How the Committee operates

All Committee members are expected to be financially literate and to have an understanding of the following areas:

- the principles of, and developments in, financial reporting including applicable accounting standards and statements of recommended practice;
- key aspects of the Company's operations including corporate policies and the Group's internal control environment;
- matters which may influence the presentation of accounts and key figures;
- the principles of, and developments in, company law, sector-specific laws and other relevant corporate legislation;
- the role of internal and external auditing and risk management; and
- the regulatory framework for the Group's businesses.

The Committee invites the Chairman, CEO, CFO and senior representatives of the external auditor to attend its meetings in full, although it reserves the right to request any of these individuals to withdraw.

During the year, the Committee held two meetings with the external auditor without Executive Directors.

The Committee has unrestricted access to Company documents and information, as well as to employees of the Company and the external auditor.

The Committee's effectiveness is reviewed on an annual basis as part of the Board's performance evaluation process and in 2020 the Committee was found to be operating effectively.

The terms of reference of the Audit Committee were reviewed and approved during the year and can be viewed on the Company's website at https://corporate.spirent.com.

Meetings

The Audit Committee met three times during the year, with the Committee agenda linked to events in the Group's financial calendar.

Activities during 2020

The Audit Committee's activities principally related to financial reporting, internal control and risk management, the preparation for publishing a Viability Statement and the external audit with the addition this year of running a tender process for the provision of external audit services for the Company. The Committee considered all material controls, including financial, operational and compliance controls and their effectiveness. The Audit Committee considered other specific matters such as the Group's approach to IT controls and cybersecurity.

In addition, the Committee has received regular updates from the Risk Committee since March 2020 on the Group's approach to the global COVID-19 pandemic, with an emphasis on the health and safety of employees, but also on ensuring that internal control processes remain resilient.

Financial reporting and significant issues

During the year, the Audit Committee:

- reviewed the full year and half year financial statements, trading updates, key accounting policies and significant financial reporting judgements contained therein (with particular reference to the critical accounting assumptions and judgements as set out in note 2 of the consolidated financial statements) and recommended the financial statements to the Board for approval;
- reviewed whether the Annual Report, taken as a whole, is fair, balanced and understandable and formed an opinion thereon prior to recommending it to the Board;
- reviewed and monitored risk management processes and the potential for risks to impact on the viability of the Group;
- reviewed and considered assumptions in relation to the going concern basis for preparation of financial statements;
- reviewed the appropriateness of alternative performance measures;
- reviewed and responded to a request for information on the Group's approach to, and disclosure of, revenue recognition from the Financial Reporting Council's Corporate Reporting Review. The Committee's response was later confirmed as acceptable;
- reviewed the external auditor's report on the interim review and year end audit and management's responses to the issues raised; and
- undertook a tender process for the provision of external audit services to be in place for the audit of the financial period ending 31 December 2021.

The Committee Chairman reports any significant findings or identified weaknesses to the Board.

Significant financial issues considered

The Audit Committee has reviewed each of the following key significant financial risks by:

- reviewing papers and management updates;
- holding discussions with management and key finance staff to challenge assumptions made;
- debating alternative treatments;
- receiving periodic reports on key areas of judgement;
- discussing with the external auditor; and
- considering presentations to analysts to assess for inconsistencies or areas of bias.

Revenue recognition

The Committee is aware that continuing pressure on management to meet certain targets and to respond to specific customer requests may drive additional deal complexity which could, in turn, lead to complex or judgemental accounting, in particular due to the impact of external factors on business sentiment. This may result in inappropriate recognition of revenue and associated balances.

Significant financial issues considered continued

Revenue recognition continued

As part of its audit procedures agreed with the Committee EY has also examined the allocation of revenue, reviewing specific large and complex transactions and contracts containing non-standard acceptance clauses to ensure that revenue has been recognised appropriately. EY has also tested the allocation of revenue to the service element of multi-element contracts to ensure that deferred revenue and other associated balances have been recognised in accordance with Group accounting policies and IFRS, validating management's allocation methodology under IFRS 15.

Deferred tax assets

The Committee recognises there is a risk that inappropriate use of brought forward tax losses, tax credits and other temporary differences due to the volatility in forecast taxable income may result in incorrect recognition of deferred tax assets.

The Committee noted that the VP, Taxation has performed a detailed review of the recognition of deferred tax assets in the Group accounts and EY, as part of its audit review, has also performed a detailed review which confirmed a good level of challenge of management's underlying assumptions.

Goodwill impairment

In the light of the continuing uncertain economic and political environment resulting from COVID-19, and sustained tensions in US/China relations, there is a heightened risk that goodwill in the Group financial statements may be overstated.

Management undertook its annual review of impairment at the end of 2020; the Committee challenged the assumptions made and concluded that management's assessment of goodwill is appropriate.

As part of its audit process EY also undertook a review of the procedures followed and judgements made by management and agreed management's conclusions to be appropriate.

Provisions and contingencies

The Committee has reviewed and agreed the quantum and disclosure of the provisions for the ongoing French Customs dispute and the restructuring arising from the new CEO's strategic review.

Misstatements

Management reported to the Committee that it was not aware of any material or immaterial misstatements made intentionally to achieve a particular outcome. The auditor reported to the Committee misstatements it had found in the course of its work. After due consideration the Committee concurred with management that no adjustments were required.

Internal control and risk management

During the year the Audit Committee:

- monitored and reviewed internal control and risk management systems;
- reviewed and approved the internal audit programme for 2020; and
- reviewed regular reports on taxation, treasury operations, health and safety and cybersecurity.

The Board is responsible for the effectiveness of the Group's system of internal control, which has been designed and implemented to meet the particular requirements of the Group and the risks to which it is exposed. Details can be found below on the Group's internal control environment, how risk is managed and the Committee's review of the effectiveness of the risk management and internal control systems.

Internal control environment

The primary aim of the Group's internal controls is to operate a system which is appropriate to the business and which can support the Group in delivering its strategic objectives, safeguard the Group's assets and, over time, enhance shareholder value. The system is designed to identify, evaluate and manage the significant risks faced by the Group rather than to eliminate the risk of failure to achieve business objectives and can only provide reasonable and not absolute assurance against material misstatement or loss. This is in accordance with the Guidance on Risk Management, Internal Control and Related Financial and Business Reporting issued by the FRC in September 2014.

The CFO is responsible for internal financial control and for ensuring that the finance department employs a level of management and specialists appropriate for maintaining financial records and processes that provide financial information that is relevant and reliable, complies with applicable laws and regulations, and is distributed both internally and externally in a timely manner. A review of the consolidation and financial statements is undertaken by senior management to ensure that the financial position and results of the Group are appropriately reflected. All financial information published by the Group is subject to the approval of the Audit Committee prior to it being approved by the Board.

The following key elements comprise the internal control environment:

- an appropriate organisational structure with clear lines of responsibility;
- an experienced and qualified finance function which regularly assesses the possible financial impact of the risks facing the Group;
- a comprehensive annual business planning process and strategy review;
- systems of control procedures and delegated authorities which operate within defined guidelines, and approval limits for capital and operating expenditure together with other key business transactions and decisions;
- a robust financial control, budgeting and forecast system which includes regular monitoring, variance analysis, key performance indicator reviews and risk and opportunity assessments at Board level;
- procedures by which the consolidated financial statements are prepared, which are monitored and maintained through the use of internal control frameworks addressing key financial reporting risks arising from changes in the business and accounting standards;
- established policies and procedures setting out expected standards of integrity and ethical standards which reinforce the need for all employees to adhere to all legal and regulatory requirements;
- an annual internal controls compliance checklist; and
- the Head of Risk & Internal Audit is supported by a co-sourced internal audit resource.

During the year ended 31 December 2017, the Group adopted a co-source arrangements and appointed PwC, which continues to support the Head of Risk & Internal Audit to formulate and execute the Group's internal audit plan. The plan for 2020 was approved to ensure that there was appropriate coverage of the internal control environment, strategic priorities and key risks identified by the Board. At each Committee meeting the Head of Internal Audit & Risk, assisted by PwC, gives an update on the progress of the internal audit plan, which is reviewed to ensure that it is in line with the Committee's expectations.

During the year the internal audit plan was amended so that additional areas were added to the plan based on the changes that gave rise to increased levels of risk. These changes to the agreed audit plan were approved by the Committee.

The Head of Risk & Internal Audit has direct access to the Board Chairman and to the Committee Chairman and is accountable to the Committee meeting regularly with both the Committee and its Chairman, without the presence of management, to consider the work of internal audit.

The effectiveness of the execution of the Internal Audit plan is monitored at each Audit Committee meeting and also forms part of the Board's annual evaluation process.

The 2020 evaluation confirmed that the Directors are satisfied with the arrangements and approach currently in place.

Risk management

Members of the Group Executive Committee meet to challenge and debate the assessment of risk including emerging risks, for the Group as a whole and within each business unit, which have submitted local risk registers for analysis and ranking together with Company-wide risks to form a robust corporate risk register. This corporate risk register is presented to the Audit Committee at least twice each year. Actions arising from the Audit Committee's review of the corporate risk register are fed back to the business units for their management.

Committee oversight

Day-to-day responsibility for effective internal control and risk management and monitoring rests with senior management at business unit level. During the year, the CFO and Head of Risk & Internal Audit attended all Audit Committee meetings to report on internal control and risk management and notified the Committee of any control weaknesses, control failings and risks, their impact and the actions taken to deal with the issues. Detailed updates on specific areas, such as cybersecurity or business continuity, are provided at the Committee's request.

Business Ethics Policy

A policy that sets standards of professionalism and integrity for all employees and operations was relaunched during 2018 and is regularly refreshed. The Business Ethics Policy includes sections relating to bribery and corruption to ensure that all of Spirent's systems, controls and training comply with the anti-bribery and corruption legislation in the countries in which we operate, and that a culture of prevention and detection of all forms of bribery and corruption is in place. Anti-bribery training is required to be taken by certain employees periodically. New employees received training during 2020 and all designated employees will complete the training in 2021.

Acquisitions and divestments

A disciplined due diligence process and post-acquisition integration programme is in place.

Fraud

The Group's Business Ethics Policy has been communicated to all employees and states that all employees have a responsibility for fraud prevention and detection. Any suspicion of fraud will be reported immediately and investigated vigorously.

Internal control environment continued

Raising concerns at work

The Committee aims to ensure that employees are able to raise any concern in confidence about any possible improprieties in business practices or other matters. A Group-wide Whistleblowing Policy is in place and is regularly highlighted to employees, and an external third party reporting service is available to employees for the reporting of any concerns.

Disclosures under this arrangement are investigated promptly by the Company Secretary, with the support of the Head of Risk & Internal Audit, and are escalated to the Executive Directors and the Committee as appropriate, with follow-up action being taken as soon as practicable thereafter.

The Committee is satisfied that the means for employees to raise concerns at work are appropriate to the size and scale of the Group.

External audit

The Committee is responsible for overseeing the Company's relations with the external auditor.

The Committee places great importance on ensuring that high standards of quality and effectiveness are maintained within the external audit process. It considers a number of areas in relation to the external auditor: its performance in discharging the audit and interim review of financial statements, its independence and objectivity, and its re-appointment and remuneration and feedback on these matters is given to the external audit partner.

Auditor appointment

Each year the Committee assesses and reports to the Board on the qualification, expertise, resources, and the effectiveness of the audit process as well as the independence of the external auditor and his team.

The Committee notes and confirms compliance with the Competition and Markets Authority Order 2014 (CMA Order) in respect of statutory audit services for large companies.

Following the recommendation of the Board, EY was appointed (as predecessor firm Lindsay, Jamieson & Haldane) by the Company at its Annual General Meeting on 9 May 1950 to audit the financial statements of the Company for the period ending 31 December 1949 and subsequent financial periods. EY's total uninterrupted period of engagement, covering the period from appointment to the period currently under review, is 70 years. The current audit partner, Joe Yglesia, was appointed in 2016.

In line with the CMA Order and the EU Audit Regulations the Committee completed a tender process during 2020 in order to select a new external audit firm to replace EY following the audit of the 2020 financial statements. The selection process was steered by the Head of Risk & Internal Audit, supported by the Group Financial Reporting Manager, who both worked closely with a Selection Committee comprising the Chair of the Audit Committee, CFO, Group Chief Accountant and Head of Risk & Internal Audit.

Following the receipt of proposals and presentations from several service providers, the Selection Committee considered the merits of each proposal and agreed a list of areas of positive differentiation against the criteria laid out in the request for proposals document; after consideration, the Selection Committee unanimously agreed to recommend Deloitte to the Board as the most suitable candidate firm for the role of external auditor. This recommendation was accepted by the Board as a whole and on that basis, formal approval will be sought from shareholders at the 2021 AGM for the appointment of Deloitte as external auditor to the Company for the 2021 financial period.

There are no contractual obligations in existence that restrict the Company's choice of auditor.

Auditor effectiveness

The Committee assesses the effectiveness of the audit process on an ongoing basis, with particular attention to the mindset and culture, skills, character and knowledge, quality control and judgement of the external auditor in its handling of key judgements, responsiveness to the Committee and in its commentary where appropriate on the systems of internal control.

The Committee holds regular private meetings with the external auditor to assist with its assessment, including discussion of:

- how the auditor has identified and addressed potential risks to audit quality;
- the controls in place within the audit firm to identify risks to audit quality, including the results of internal and external inspections of the audit team and firm;
- whether the auditor has met the agreed audit plan, in particular how it has responded to any changes that have been required during the process;
- feedback from the key people involved in the audit; and
- the content of the auditor's management letter.

In addition, the Committee monitored the audit partner's involvement in his team's work to ensure sufficient oversight and direction of work was evident, in particular with regard to the audit of significant components involving judgements.

The effectiveness of the external auditor also formed part of the Board's annual evaluation process, with positive feedback supporting the Committee's satisfaction with EY's performance.

Auditor independence

The Committee assesses the independence and objectivity of the external auditor annually, taking into consideration relevant UK law, regulation, the FRC Revised Ethical Standard and other professional requirements. EY has provided a letter confirming its belief that it remained independent throughout 2020 and has discussed with the Committee the threats to its independence and the safeguards applied to mitigate those threats.

As part of this review, the Committee examined in particular:

- a report from the external auditor describing its arrangements to identify, report and manage any conflicts of interest; and
- the extent of non-audit services provided by the external auditor.

Policy on non-audit services

The Committee is responsible for pre-approving the engagement of the external auditor for any and all non-audit services, with the objective of ensuring that the provision of such services by the external auditor does not impair its independence or objectivity. Taking into account relevant ethical guidance, the Committee's policy precludes a number of non-audit services, including those relating to the accounting records and financial statements, internal audit, IT consulting, legal and investment services and other services deemed by regulators to be precluded.

The Committee accepts that certain work of a non-audit nature may be best undertaken by the external auditor. The policy is reviewed annually and financial limits for the provision of non-audit services, including audit-related fees and other fees, are set on the same annual basis (2020 $0.3 million (2019 $0.3 million)). These were less than one-third of the Group's audit fee of $1.2 million (2019 $1.1 million). The Committee can confirm that no such non-audit services were provided by EY during the period under review (2019 nil).

Report on Directors' remuneration

Gary Bullard
Committee Chairman

Compliance statement

This Report on Directors' remuneration for the year ended 31 December 2020 has been prepared on behalf of the Board by the Remuneration Committee in accordance with Schedule 8 to the Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013 and the relevant sections of the Companies Act 2006 and meets the requirements of the Listing Rules of the Financial Conduct Authority. The Report also describes how the Board has complied with the provisions of the 2018 UK Corporate Governance Code and explains what steps are being take by the Committee to comply where current practice is not compliant.

The Report is presented in two parts: the Directors' Annual Remuneration Report and the Directors' Remuneration Policy.

The Directors' Annual Remuneration Report sets out details of how our Remuneration Policy was implemented for the year ended 31 December 2020 and how it will be applied for the year ended 31 December 2021. At the 2021 AGM to be held on 28 April 2021 the Directors' Annual Remuneration Report on pages 82 to 98 will be put to an advisory shareholder vote.

The Company's previous Directors' Remuneration Policy was approved by a binding vote at the 2019 AGM and became effective on 2 May 2019. A revised remuneration policy, which is set out on pages 98 to 106 of this Report, will be put to shareholders at the 2021 AGM on 28 April 2021 and, if approved, will become effective on 29 April 2021 and apply for the following three years.

Dear shareholder

2020 has been an extraordinary year. Despite the significant challenges that COVID-19 has presented, Spirent has continued to perform well, delivering year-on-year growth in revenue, profitability and order intake. The safety of our people and communities has been paramount throughout the year. In March we moved 95 per cent of our employees to remote working virtually overnight in order to support the government requests to work from home where possible. Our employees have received full pay throughout the period with none furloughed, and the Company has not accessed any government support schemes. Our financial performance continues to be strong and we have been able to continue to pay dividends to shareholders. In spite of COVID-19, our share price has continued to perform strongly.

Committee's activities in 2020

In 2020 the Committee focused on:

- navigating through the impact of COVID-19 both in terms of executive remuneration and understanding the impact on employees and other shareholders;
- consulting with shareholders on Remuneration Policy proposals for 2021 and beyond;
- overseeing preparations for the refreshing of all-employee share plan offerings;
- reviewing metrics and setting targets for annual incentives;
- reviewing metrics and targets for long-term incentives; and
- monitoring the changing landscape of investor expectations with regard to remuneration.

Remuneration Policy review

At the coming AGM we are seeking shareholders' support for a new Directors' Remuneration Policy. Our current Policy was formulated by the Remuneration Committee in 2018 and approved by shareholders at the 2019 AGM, and can remain in place for up to three years from approval. However, since 2018, a lot has changed at Spirent. With the arrival of a new Chief Executive Officer in early 2019, we embarked on a programme of transformation focused on three strategic priorities: Customer Centricity, Innovation for Growth and Operational Excellence. This new direction has already started to yield strong growth in profitability and the Company has moved from the FTSE Small Cap index to the upper end of the FTSE 250.

Shareholder Consultation

As part of the Committee's process of reviewing the Policy, we consulted with our 25 largest shareholders, who account for approximately 70 per cent of the Company's issued share capital, on our initial proposals. We have attempted to incorporate their feedback, including adding an element into variable pay based on measurable ESG objectives, retaining a TSR element within the LTIP but reducing its weighting and raising its target, and ensuring that the targets are sufficiently challenging given the additional quantum of awards.

Proposed changes

These changes we are proposing to remuneration will reflect the organisation Spirent has become, meet the current expectations for best corporate governance for the largest listed companies, and create the right incentives for management as they embark on the next phase of the Company's transformation.

While the individual changes are permissible under the current Policy, the Committee considers that articulating our proposals in totality and allowing shareholders a binding vote on a renewed policy is the most transparent way of seeking endorsement for a structure which is intended to remain in place for several years to come.

To that end, the Committee is proposing to increase the variable pay opportunity available to the Executive Directors (details of which are set out below) along with other changes to the Remuneration Policy in order to align with the UK Corporate Governance Code and best practice.

The principal changes from the current Policy are:

Quantum of LTIP awards

As Spirent continues to develop in the coming years, we are very conscious of the central role the current executive team will play in our continued success. Whilst we are comfortable that our existing remuneration approach will appropriately reward the success delivered to date, it falls short of the levels offered by comparable companies in the UK market and our international peers.

We are increasing the level of the LTIP award from 150 per cent of salary to 200 per cent of salary for the CEO and 125 per cent of salary to 175 per cent of salary for the CFO, effective for the awards to be granted in 2021. As noted above, these increases are within the limits set in the current Directors' Remuneration Policy which allows awards of up to 200 per cent of salary.

The Committee's primary reference point is a comparison with peer companies in the sector and UK companies of similar size and complexity which indicates that the executives are below what we believe to be the appropriate level of potential reward. We also consider the market in the US since a large proportion of our workforce and operations is in the US and many of our direct competitors for talent are US companies. This is particularly relevant for the CEO as he is a US national and US based.

These changes would narrow the overall target pay gap of the CEO and CFO to these companies; moreover the CEO's LTIP award will still position him below the potential award levels of our US competitors. However, we are conscious of the need to maintain a balance between UK norms and investor expectation and practices in the markets in which we operate.

Given these increases are to performance-linked remuneration, the Executive Directors will only receive this potential incremental remuneration if the Company meets our stretching long-term performance targets. We have changed the weighting of performance metrics to 75 per cent on earnings per share to reflect more dependence on management performance and 25 per cent on Absolute TSR. The Absolute TSR target is set at higher levels than in recent years to align executive reward with the shareholder experience (details of which are set out on page 86). Our record of LTIP outcomes, when compared to growth in value and shareholders returns, demonstrates our commitment to clear alignment between pay and performance. Any shares vesting would also be subject to a two-year holding period as in our existing LTIP policy, strengthening long-term alignment between the Executive Directors and shareholders.

Implementation of post-cessation share ownership requirement

We plan to introduce a post-cessation share ownership requirement in order to increase the alignment of Executive Directors with shareholders and to ensure compliance with the new UK Corporate Governance Code. This will apply to newly-appointed Executive Directors who will be required to hold the lower of the respective in-role shareholding guideline and the actual shareholding immediately prior to departure for a period of two years, in line with the Investment Association's guidance.

Reduction in Pension Contributions

Our existing Remuneration Policy already includes a provision that newly-appointed executive directors will be eligible for pension contributions in line with the rates applying to employees hired into the workforce as a whole in their respective countries.

We are now proposing that the CFO's pension contribution, currently 20 per cent of salary, will be reduced to the UK average workforce level (currently 9.2 per cent) from the end of 2022 in line with the UK Corporate Governance Code and guidance from the Investment Association.

Other Committee activities in 2020

The Committee's activities during the year continue to take into account the wider remit introduced by the Code:

- The Committee has had oversight of senior management remuneration for many years. It considers and approves the reward structure and levels of remuneration for each of the CEO's direct reports and approves the budget of the Long-Term Incentive Plan awards for employees below Executive Committee level. In addition, the Committee reviews pay in the wider workforce before setting any pay increases for the Executive Directors.
- The Committee considers clarity, simplicity, risk, predictability, proportionality and the Group's culture when setting remuneration principles and structure.
- The Committee considered the relationship between executive reward and the reward structures in place for other Group employees.
- In response to feedback from the workforce engagement programme in 2019 the Committee has considered the most appropriate way the Company can encourage share ownership among employees and has overseen the development of enhancements to the existing employee share purchase plans during the year. New incentive offerings will be launched in 2021 to employees in Canada, China, France, Germany, Hong Kong, India, the UK and US, representing more than 97 per cent of our total workforce, with work continuing to expand into additional countries (where possible) in 2022. To ensure maximum flexibility, the Company will be seeking to renew the shareholder approval of its US and Global Employee Share Purchase Plans at the 2021 AGM and will also seek approval of a new UK Sharesave Plan.

Meetings in all three areas continued through the year, with feedback being reported to the Board and, where it specifically relates to remuneration, to the Remuneration Committee.

Executive remuneration in 2020

The Annual Incentive for 2020 was based on achievement of targets for profitability, revenue and strategic and operational priorities. Full details of the specific targets, and the Executive Directors' achievements against them, can be found on pages 88 to 89. As demonstrated elsewhere in this Annual Report, Spirent performed well, delivering revenue growth and significant growth in profitability in 2020 and this is reflected in the level of payouts. One-third of the Annual Incentive achieved for 2020 will be deferred into shares, to be retained for a period of three years.

The Long-Term Incentive Plan awards granted to Paula Bell and former CEO Eric Hutchinson in 2017 achieved full vesting on both the EPS and TSR measures, reflecting the exceptionally strong growth over this period. The vesting of Mr Hutchinson's award was pro-rated to represent the time he served prior to his retirement; more details of the vesting are set out on page 87.

An award of restricted shares awarded to Eric Updyke on appointment, to partially compensate him for award forfeited when he left his previous employer, vested in part during 2020. We were pleased that Mr Updyke retained the majority of these shares on vesting to begin to build his shareholding, selling only those required to settle the tax liability arising on the vesting of the award (more details are set out on page 87). The two remaining tranches of this award, made under the Spirent Long-Term Incentive Plan are due to vest in May 2021 and May 2022.

In considering these incentive outcomes the Committee considered the Company's overall performance and the context of the external environment - in particular, the impact of COVID-19 on employees and stakeholders. It concluded that the remuneration outcomes for 2020 are appropriate, given that Spirent has kept all employees working throughout the pandemic without the need for government support, has continued to deliver strong financial performance and share price growth and maintained payment of a dividend to shareholders.

Executive remuneration in 2021

Base salaries for the Executive Directors have been increased over the prior year, reflecting the general range of increase in the workforce.

For the Annual Incentive, the metrics of profitability, revenue and strategic and operational priorities remain the same, with the targets for the financial metrics updated to require growth from the achievements of 2020. The Committee believes the targets they have set to be challenging and appropriate; details of the actual targets will be disclosed in the 2021 Annual Report. One-third of the Annual Incentive achieved will be deferred into shares, to be retained for a period of three years.

Following a comprehensive review of the appropriateness of performance metrics during 2020 and the shareholder consultation exercise and as described above, Long-Term Incentive Plan awards in 2021 will retain the EPS and Absolute TSR metrics, but change the weighting to 75 per cent EPS and 25 per cent Absolute TSR. Our view is that EPS remains the best overall indicator of long-term profitable growth. We considered a relative TSR metric but decided after a detailed exercise that it is not possible to establish a suitable peer group given that Spirent operates in a sector that often moves independently of the broader market and has few directly comparable sector comparators.

As described elsewhere in the report, the Board has given consideration during the year to measuring and managing Spirent's environmental and social impact. The Committee is committed to introducing measurable and quantifiable ESG elements into variable pay. In 2021 this will be included as an element of the strategic and operational objectives that form part of the Annual Incentive for Executive Directors, which will be cascaded down to senior management. In the longer term we will consider extending these into the long-term incentives.

I hope you find this Report clear and informative. I will be available at the 2021 AGM to respond to any questions that shareholders may have with respect to the work of the Committee.

Gary Bullard
Chairman, Remuneration Committee
11 March 2021

Annual Remuneration Report 2020

Statement of implementation of Remuneration Policy in 2021 (unaudited)

Information on how the Company intends to implement the Directors' Remuneration Policy in 2021 is set out below.

Base salary

	2021	2020	Per cent change
Paula Bell	£373,221	£362,350	3.0 per cent
Eric Updyke[1]	£594,897	£577,570	3.0 per cent

Note
1. The figures shown represent the annual base salaries for Eric Updyke at an exchange rate of $1.284: £1.

Benefits

- Life insurance cover of four times annual base salary
- Permanent health insurance
- Private healthcare cover for executive and family
- Car allowance

Retirement benefits

Eric Updyke is eligible to participate in the Spirent Communications, Inc 401k programme with a 4 per cent Company match of his own contributions, subject to any applicable IRS cap.

Paula Bell will receive a taxable cash sum in lieu of pension at a rate of 20 per cent of base salary.

Annual Incentive

The Committee has set targets for the year focused on adjusted operating profit, revenue and strategic and operational priorities.

Although the target detail is considered commercially sensitive, the weightings for the year ended 31 December 2021 are as follows:

Adjusted operating profit	50 per cent
Revenue	30 per cent
Strategic and operational priorities	20 per cent

On-target and maximum annual incentive payments are as follows:

	On-target performance per cent of base salary	Maximum performance per cent of base salary
Paula Bell	75	125
Eric Updyke	90	150

One-third of any incentive achieved through the Annual Incentive will be deferred into shares for an additional period of three years.

Details of these targets and their achievement will be disclosed in the Directors' Annual Remuneration Report 2021.

Award under Spirent Long-Term Incentive Plan

It is anticipated that the following award will be made under the LTIP in 2021:

	Per cent of base salary	Anticipated value of award
Paula Bell	175	£653,137
Eric Updyke[1]	200	£1,189,794

Note
1. The figure shown represents the annual base salary for Eric Updyke at an exchange rate of $1.284: £1.

The awards are made in the form of Performance Shares, which are valued at the share price on the date of grant.

Having reviewed the performance targets for awards under the LTIP, the Committee has determined that for the Performance Share awards to be made in 2021, the following parameters are appropriate, calculated over a three-year performance period:

Annual Remuneration Report 2020 continued

75 per cent of award:

The EPS performance period starts at the beginning of the financial year in which the award is made, in this case on 1 January 2021, and ends after three years, in this case on 31 December 2023. The adjusted EPS figure reported for the financial period to 31 December 2020, which forms the baseline for this performance target, is 14.68 cents.

Target EPS (adjusted) at the conclusion of the performance period	Proportion of Performance Shares vesting (per cent)
Below 16.99 cents	0
16.99 cents	25
Above 16.99 cents and below 20.62 cents	On a straight-line basis between 25 and 100
20.62 cents and higher	100

25 per cent of award:

In determining Absolute TSR growth for the Company, share prices will be averaged over 90-day periods immediately prior to, and at the end of, the performance period, which will commence 14 days prior to the date of award and will end three years later.

Absolute TSR[1]	Proportion of Performance Shares vesting (per cent)
Below 20 per cent growth	0
20 per cent growth	25
Above 20 per cent growth but below 48 per cent growth	On a straight-line basis between 25 and 100
48 per cent growth or higher	100

Note
1. Share price including reinvested dividends.

Awards made to Executive Directors under the Spirent Long-Term Incentive Plan in 2021 will be subject to a post-vesting holding period of an additional two years.

Audited information

Single figure of total Directors' remuneration 2020

The tables below set out the single figure of remuneration received by the Executive Directors and the Non-executive Directors during 2020[1]. Details of performance under the Annual Incentive and Long-Term Incentive Plans are set out on page 88 and 89 and 87 respectively.

Executive Directors

	Paula Bell £000		Eric Hutchinson[2] £000		Eric Updyke[3] £000	
	2020	2019	**2020**	2019	**2020**	2019
Salary/fees[4,5]	**362.3**	350.1	**–**	264.2	**577.1**	411.7
Benefits[6]	**16.7**	16.7	**–**	8.4	**23.0**	17.4
Retirement benefits[7]	**72.5**	70.0	**–**	42.2	**8.9**	–
Fixed remuneration[8]	**451.5**	436.8	**–**	314.8	**609.0**	429.1
Annual incentive[9]	**367.1**	379.9	**–**	269.6	**720.9**	539.7
Long-term incentive[10,11]	**743.3**	620.9	**687.2**	1,006.4	**537.7**	–
Variable remuneration[12]	**1,110.4**	1,000.8	**687.2**	1,276.0	**1,258.6**	539.7
Total[13]	**1,561.9**	1,437.6	**687.2**	1,590.8	**1.867.6**	968.8

Non-executive Directors[14]

	Gary Bullard £000		Wendy Koh £000		Edgar Masri £000		Jonathan Silver £000		Sir Bill Thomas £000	
	2020	2019	**2020**	2019	**2020**	2019	**2020**	2019	**2020**	2019
Salary/fees[4,5]	**62.0**	60.5	**53.0**	51.5	**53.0**	51.5	**64.0**	62.5	**180.2**	175.0
Benefits[6]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Retirement benefits[7]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Fixed remuneration[8]	**62.0**	60.5	**53.0**	51.5	**53.0**	51.5	**64.0**	62.5	**180.2**	175.0
Annual incentive[9]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Long-term incentive[10,11]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Variable remuneration[12]	**–**	–	**–**	–	**–**	–	**–**	–	**–**	–
Total	**62.0**	60.5	**53.0**	51.5	**53.0**	51.5	**64.0**	62.5	**180.2**	175.0

Notes

1. Two of the Executive Directors who served during 2019 and 2020 are UK based and paid in Sterling; therefore the data is presented in this currency. Data for Eric Updyke, who is US based and paid in US Dollars has been converted using an exchange rate of $1.284:£1.
2. Eric Hutchinson stepped down from the Board on 1 May 2019 and retired from the Company on 30 June 2019; the 2019 figures shown represent the amounts earned until the date of his retirement in June 2019.
3. Eric Updyke joined the Company on 1 April 2019.
4. Salary/fees: cash paid in respect of the year.
5. Eric Hutchinson's 2019 salary/fees figure includes a payment of £52,787 relating to annual leave that remained outstanding and untaken at his leaving date of 30 June 2019.
6. Benefits: taxable value of all benefits in respect of the year which comprise relocation expenses, private healthcare, permanent health insurance, life insurance and car allowance.
7. Retirement benefits: cash value in lieu of pension for Paula Bell and Eric Hutchinson; Company contribution to 401k plan for Eric Updyke.
8. Fixed remuneration subtotal: Salary/fees, Benefits and Retirement benefits.
9. Annual Incentive: cash incentive payable in respect of performance during the year. The 2019 Annual Incentive earned by Eric Hutchinson has been pro-rated to reflect the time served.
10. Long-Term Incentive based on 2020 performance:
    The figures quoted comprise values for the elements of LTIP awards which vest based on performance during 2020.
    (i) TSR element of May 2017 LTIP Award to Eric Hutchinson and Paula Bell – actual value calculated based on the market price of a Spirent Ordinary Share at the date of vesting (235.0000 pence).
    (ii) EPS element of May 2018 LTIP Award – level of vesting calculated based on audited EPS figure published in this Annual Report 2020; estimated value calculated based on the three-month average price of a Spirent Ordinary Share to 31 December 2020 of 274.2700 pence and pro-rated for the portion of the performance period completed while Mr Hutchinson was employed by the Company. This estimated value will be restated in the 2021 Annual Report on Remuneration to reflect the actual share prices on the dates of vesting for each award.
    (iii) On appointment to the Company in April 2019, Eric Updyke received an award of Restricted Stock under the LTIP to partially compensate Mr Updyke for remuneration forfeited at his previous employer; the award would vest in three tranches after one, two and three years based on continued employment and satisfactory performance. The first tranche of the award vested on 5 May 2020, with Mr Updyke receiving 225,681 shares. The actual value of these shares is based on the market price of 238.2800 pence at the date of vesting.
    (iv) Value attributable to share price growth:
    In May 2017, Paula Bell received an LTIP award with a face value of £330,000. This award vested in 2020, achieving an actual value of £657,203. The growth in value attributable to share price growth was therefore £327,203.
    In May 2017, Eric Hutchinson received an LTIP award with a face value of £599,999. This award vested in 2020 on a pro-rata basis based on time served. Had the full award vested, it would have achieved a value of £1,194,914, with growth in value attributable to share price growth of £594,915. After applying the pro-rating to the original award, its face value would have been £416,665; the pro-rated award vested in 2020 achieving an actual value of £829,799, with growth in value attributable to share price growth of £413,134.
11. Long-Term Incentive based on 2019 performance:
    The figures quoted comprise values for the elements of LTIP awards which vest based on performance during 2019:
    (i) TSR element of June 2016 LTIP Award to Eric Hutchinson and September 2016 LTIP Award to Paula Bell – actual value calculated based on the market price of a Spirent Ordinary Share at the date of vesting (197.740 pence on 30 September 2019 for Paula Bell and 151.326 pence on 16 June 2019 for Eric Hutchinson).
    (ii) EPS element of 2017 LTIP Award – level of vesting calculated based on audited EPS figure published in this Annual Report 2019; estimated value calculated based on the three-month average price of a Spirent Ordinary Share to 31 December 2019 of 211.04 pence and pro-rated for the portion of the performance period completed while Mr Hutchinson was employed by the Company. This estimated value has been restated in the 2020 Annual Report on Remuneration to reflect the actual share prices on the dates of vesting for each award.
    (iii) Value attributable to share price growth:
    In June 2016, Eric Hutchinson received an LTIP award with a face value of £600,000. This award vested in 2019, achieving an actual value of £1,056,568.72. The growth in value attributable to share price growth was therefore £456,568.72.
    In September 2016, Paula Bell received an LTIP award with a face value of £240,000. This award vested in 2019, achieving an actual value of £516,896.31. The growth in value attributable to share price growth was therefore £276,896.31.
12. Variable remuneration subtotal: Annual Incentive and Long-Term Incentive.
13. The total single figure of remuneration for 2019 for each Executive Director is restated to reflect the restated Long-Term Incentive figure (see note 11(ii) above).
14. Non-executive Directors do not receive benefits or pension payments and are not eligible for variable remuneration.

Annual Incentive

During 2020 incentives were available to Executive Directors on an annual basis, with the following maximum total Annual Incentive available:

	2020 Base Salary £000	On-target total incentive available % of base salary	On-target total incentive available £000	Maximum total incentive available % of base salary	Maximum total incentive available £000
Paula Bell	362.3	75	271.8	125	452.9
Eric Updyke	577.6	90	519.8	150	866.4

The maximum Annual Incentive which could be earned was determined by reference to growth targets in the Company's adjusted operating profit and revenue, representing 50 per cent and 30 per cent of the incentive respectively, with performance against an agreed set of strategic and operational priorities linked to improving Spirent's performance representing the remaining 20 per cent of the incentive.

Adjusted operating profit element (50 per cent of Annual Incentive)

	Target $ million	Achievement $ million
Entry point (20 per cent)	93.1	
On-target (60 per cent)	98.0	
Maximum (100 per cent)	102.9	103.5
Achievement		100 per cent

Revenue (30 per cent of Annual Incentive)

	Target $ million	Achievement $ million
Entry point (20 per cent)	508.0	
On-target (60 per cent)	530.0	
Maximum (100 per cent)	551.0	522.4
Achievement		46.3 per cent

Strategic and operational priorities (20 per cent of Annual Incentive)

Eric Updyke and Paula Bell were each set priorities at the start of 2020, with performance of each target to be equally weighted.

Services (CEO: Eric Updyke; CFO: Paula Bell)

Objective: To develop a services organisation and create and sell a range of service offerings.

Achievements: Details in the CEO review on pages 6 and 7 and Our strategic priorities on pages 18 to 23.

	Achievement
Achievement	90 per cent

Strategy (CEO: Eric Updyke; CFO: Paula Bell)

Objective: To articulate the Group strategy, create a formal M&A framework and undertake a targeted portfolio review.

Achievements: Details in the CEO review on pages 6 and 7 and Our strategic priorities on pages 18 to 23.

	Achievement
Achievement	100 per cent

People (CEO: Eric Updyke)

Objective: To update Company values, refresh leadership competencies and complete a talent pipeline review.

Achievements: Details in the Chairman's statement on pages 4 and 5, Stakeholder engagement on pages 50 to 53 and Sustainability on pages 54 to 57.

	Achievement
Achievement	100 per cent

IT Strategy (CFO: Paula Bell)

Objective: To define the IT strategy approach, define investment plans and implement security assessment priority actions.

Achievements: Details in the CEO review on pages 6 and 7, Our strategic priorities on pages 18 to 23 and Principal risks and uncertainties on pages 45 to 49.

	Achievement
Achievement	67.5 per cent

Summary of Annual Incentive target outcomes

	% of total incentive	CEO Eric Updyke: Achievement as % of on-target	CEO Eric Updyke: Achievement as % of maximum	CFO Paula Bell: Achievement as % of on-target	CFO Paula Bell: Achievement as % of maximum
Adjusted operating profit	50	166.7	100.0	166.7	100.0
Revenue	30	77.1	46.3	77.1	46.3
Strategic and operational priorities	20	161.1	96.7	143.1	85.8
• Services		150.0	90.0	150.0	90.0
• Strategy		166.7	100.0	166.7	100.0
• People		166.7	100.0	–	–
• IT Strategy		–	–	112.5	67.5
Total	100	138.7	83.2	135.1	81.0

	2020			2019		
	Per cent on-target Annual Incentive	**Per cent of annual base salary**	**£**	Per cent on-target Annual Incentive	Per cent of annual base salary	£
Paula Bell	**135.1**	**101.3**	**367,091**	144.7	108.5	379,883
Eric Hutchinson[1]	**–**	**–**	**–**	141.9	63.9	269,648
Eric Updyke[2]	**138.7**	**124.8**	**720,923**	141.9	95.8	539,638

Notes
1. Eric Hutchinson stepped down as CEO following the AGM on 1 May 2019 and retired from the Company on 30 June 2019; the Annual Incentive paid for the 2019 financial period is pro-rated to reflect time served to his retirement date of 30 June 2019.
2. Eric Updyke was appointed as CEO following the AGM on 1 May 2019; the Annual Incentive paid for the 2019 financial period is pro-rated to reflect time served.

Deferred Bonus Plan

The Remuneration Policy approved by shareholders at the 2019 AGM has introduced the deferral of one-third of the incentive achieved under the Annual Incentive into shares, to be retained for a period of three years. This applies to Executive Directors employed by the Group at the date of the payment of the Annual Incentive.

The deferral element of the Annual Incentive will be applied as follows:

	Total value of Annual Incentive achieved £	Value of Annual Incentive payable as cash £	Value of Incentive deferred into shares £	Vesting date for deferred shares
Paula Bell	367,091	244,727	122,364	March 2024
Eric Updyke	720,923	480,615	240,308	March 2024

Relocation expenses

No relocation expenses were paid to an Executive Director during 2020.

Total pension entitlements

Paula Bell receives a taxable cash allowance in lieu of pension of 20 per cent of base salary. For 2020, the allowance paid was £72,470 (2019 £70,019).

Eric Updyke is eligible to participate in the Spirent Communications, Inc 401k programme with a 4 per cent Company match of his own contributions, subject to any applicable IRS cap. Mr Updyke elected not to participate in the programme during 2019 but enrolled in the programme on 1 January 2020, receiving company contributions for 2020 of £8,879.

External appointments

On appointment in 2016, the Board agreed that it was acceptable for Paula Bell to continue with her non-executive role with Laird plc, however, this appointment ended in July 2018 on the acquisition of Laird plc by Advent International.

From 1 September 2018, and with the approval of the Company's Board, Paula Bell was appointed to a non-executive director role with Keller Group plc; she became Chairman of the Audit Committee of Keller Group plc on 1 January 2019.

Fees in respect of this directorship are paid directly to and retained by Ms Bell.

On appointment in 2019 the Board agreed that it was acceptable for Eric Updyke to continue with his non-executive role with Symend, Inc.

Fees in respect of this directorship are paid directly to and retained by Mr Updyke.

Payments to past Directors

During 2020 former CEO Eric Hutchinson received payments relating to the vesting of the Long-Term Incentive Plan award he received in 2017, which was pro-rated to reflect Mr Hutchinson's time in service. Details of this payment are set out on page 87. No other payments were made to past Directors during the year under review.

Payments for loss of office

There were no payments for loss of office during the year under review.

Payments of advances, credits or guarantees

There were no payments of advances, credits or guarantees to Directors during the year under review.

Non-executive Director fees

Details of individual appointments are as follows:

Director	First appointed as a Director	Current appointment due to expire
Gary Bullard	1 December 2016	2023 AGM
Wendy Koh	11 January 2018	2021 AGM
Edgar Masri	11 January 2018	2021 AGM
Jonathan Silver	25 June 2015	2022 AGM
Sir Bill Thomas	1 December 2016	2023 AGM

Details of the fees paid to the Non-executive Directors during the year are set out on page 87.

During 2020 fees for the Non-executive Directors were reviewed with effect from 1 January 2021.

Under the matters reserved to the Board, the Board considered and agreed that in keeping with the range of salary increases applied across the Group's employees, the basic annual fee for Non-executive Directors should be increased by 3.0 per cent, from £53,045 to £54,636, with effect from 1 January 2021.

The Board decided that the additional fees payable to the Chairman of the Audit and Remuneration Committees would be increased from £11,000 per annum to £12,000 for the Chairman of the Audit Committee and from £9,000 per annum to £11,000 for the Chairman of the Remuneration Committee with effect from 1 January 2021.

The additional fee of £7,500 per annum in recognition of the increased time commitment associated with the role of Senior Independent Non-executive Director will also be increased to £10,000 per annum; however the individual who currently fills this role has chosen to continue to waive this additional fee during the period under review and for 2021.

Similarly, under the terms of reference of the Remuneration Committee, it considered and agreed that the annual fee for the Chairman should also be increased by 3.0 per cent, from £180,250 to £185,657, with effect from 1 January 2021.

Non-executive Directors are not eligible for variable remuneration.

Statement of Directors' shareholdings and share interests

The beneficial interests of the Directors and their connected persons in the shares of the Company are set out below:

	At 31 December 2019 Ordinary Shares[1]	At 31 December 2020 Ordinary Shares[1]	At 11 March 2021 Ordinary Shares[1]
Executive Directors			
Paula Bell[2]	365,488	363,979	364,080
Eric Updyke	–	116,349	116,349
Non-executive Directors			
Gary Bullard	51,170	52,044	52,044
Wendy Koh	–	–	–
Edgar Masri	20,000	20,000	20,000
Jonathan Silver	70,000	70,000	70,000
Sir Bill Thomas	67,442	67,442	67,442

Notes

1. Directors' beneficial interests do not form part of the remuneration provided by the Company.
2. Events since 31 December 2020:
   On 25 January 2021 Paula Bell acquired 49 Ordinary Shares under the UK Employee Share Purchase Plan at a price of 256.0000 pence per share.
   On 24 February 2021 Paula Bell acquired 52 Ordinary Shares under the UK Employee Share Purchase Plan at a price of 238.0000 pence per share.

Shareholding guidelines for Executive Directors

The Committee believes that to further align their interests with those of shareholders, Executive Directors should have a significant shareholding in the Company. Under the 2019 Remuneration Policy, the Committee requires Executive Directors to build a holding of shares equivalent in value to 200 per cent of base salary.

Under the 2019 Remuneration Policy, Executive Directors are not required to hold on to beneficially owned shares after the end of their employment with the Group.

The table below sets out the holdings of the Executive Directors who served during the year at 31 December 2020:

	Beneficially owned shares	Value as Percentage of salary[1]	Guideline target achieved?	LTIP Unvested (with performance conditions)	LTIP Unvested (no performance conditions)	LTIP Vested, but not exercised	Deferred Bonus Plan (no performance condition)
Paula Bell	363,979	257.5	Yes	760,946	–	–	59,227
Eric Updyke[2]	116,349	51.6	No	895,149	438,088	–	83,783

Notes

1. The value of shareholdings is based on the closing price of a Spirent Ordinary Share on 31 December 2020 and the number of Ordinary Shares held by the individual on that date. The percentage is calculated based on 2021 base salary.
2. Mr Updyke was appointed to the Company in April 2019 and is in the process of building up a shareholding to meet the guideline.

Outstanding share incentive awards[1]

The share incentive interests of Executive Directors who served during the period 1 January 2020 to the date of this report are set out below:

Paula Bell

Plan type	LTIP	LTIP	LTIP	DBP	LTIP
Award type	PS	PS	PS	RSU	PS
Award date	4 May 2017	22 May 2018	16 May 2019	5 March 2020	6 May 2020
At January 2020 (or date of appointment)	279,661	302,402	276,276	–	–
Granted during the period	–	–	–	59,227	182,268
Vested during the period	279,661	–	–	–	–
Lapsed during the period	–	–	–	–	–
Any other adjustments during the period	–	–	–	–	–
At 31 December 2020 (or at date of cessation)	–	302,402	276,276	59,227	182,268
Market price at date of award (£)[2]	1.180000	1.124000	1.584000	2.1380	2.4850
Face value of award granted in period (£)	–	–	437,621.25	126,627.32	452,935.98
Exercise price (£)[3]	Nil	Nil	Nil	Nil	Nil
Subject to performance conditions?	Yes	Yes	Yes	No	Yes
Performance condition	50% EPS, 50% TSR	50% EPS, 50% TSR	50% EPS, 50% TSR	–	50% EPS, 50% TSR
Performance condition testing date[4]	4 May 2020	22 May 2021	16 May 2022	–	6 May 2023
Result of performance condition testing	EPS 100% vest, TSR 100% vest	–	–	–	–
Market price at vesting date (£)	2.350000	–	–	–	–
Exercise date	4 May 2020	–	–	–	–
Market price at exercise date (£)	2.350000	–	–	–	–
Gain on exercise (£)	657,203.35	–	–	–	–
Expiry date	4 May 2020	22 May 2021	16 May 2022	5 March 2023	6 May 2023
Expiry of post-vesting holding period	–	–	16 May 2024	–	6 May 2025

Eric Updyke

Plan type	LTIP	LTIP	DBP	LTIP
Award type	RSU	PS	RSU	PS
Award date	1 April 2019	16 May 2019	5 March 2020	6 May 2020
At January 2020 (or date of appointment)	663,769	532,672	–	–
Granted during the period	–	–	83,783	362,477
Vested during the period	225,681	–	–	–
Lapsed during the period	–	–	–	–
Any other adjustments during the period	–	–	–	–
At 31 December 2020 (or at date of cessation)	438,088	532,672	83,783	362,477
Market price at date of award (£)[2]	1.446000	1.584000	2.1380	2.4850
Face value of award granted in period (£)	959,809.97	843,752.80	179,128.05	900,755.34
Exercise price (£)[3]	Nil	Nil	Nil	Nil
Subject to performance conditions?	Yes	Yes	No	Yes
Performance condition	Continuing employment and satisfactory performance	50% EPS, 50% TSR	–	50% EPS, 50% TSR
Performance condition testing date[4,5]	5 May 2020, 5 May 2021, 5 May 2022	16 May 2022	–	6 May 2023
Result of performance condition testing	5 May 2020 100%	–	–	–
Market price at vesting date (£)	5 May 2020 2.382800	–	–	–
Exercise date	5 May 2020	–	–	–
Market price at exercise date (£)	2.382800	–	–	–
Gain on exercise (£)	537,752.68	–	–	–
Expiry date	5 May 2022	16 May 2022	5 March 2023	6 May 2023
Expiry of post-vesting holding period	–	16 May 2024	–	6 May 2025

Eric Hutchinson

Plan type	LTIP	LTIP
Award type	PS	PS
Award date	4 May 2017	22 May 2018
At January 2020 (or date of appointment)	508,474	549,822
Granted during the period	–	–
Vested during the period	353,106	–
Lapsed during the period	155,368	–
Any other adjustments during the period	–	–
At 31 December 2020 (or at date of cessation)	–	549,822
Market price at date of award (£)[2]	1.180000	1.124000
Face value of award granted in period (£)	–	–
Exercise price (£)[3]	Nil	Nil
Subject to performance conditions?	Yes	Yes
Performance condition	50% EPS, 50% TSR	50% EPS, 50% TSR
Performance condition testing date[4]	4 May 2020	22 May 2021
Result of performance condition testing	EPS 100% vest, TSR 100% vest	–
Market price at vesting date (£)	2.350000	–
Exercise date	4 May 2020	–
Market price at exercise date (£)	2.350000	–
Gain on exercise (£)	829,799.10	–
Expiry date	4 May 2020	22 May 2021
Expiry of post-vesting holding period	–	–

Notes

An explanation of each share plan and its operation is given in note 33 to the audited consolidated financial statements of the Group.

1. Key to share plan and type of award:
   LTIP PS – 2016 Long-Term Incentive Plan Performance Shares awarded as conditional share awards.
   LTIP RSU – 2016 Long-Term Incentive Plan Restricted Stock Units awarded as conditional share awards.
   DBP RSU – Deferred Bonus Plan Restricted Stock Units awarded as conditional share awards.
2. The market price on date of grant is the price of an Ordinary Share at the close of business on the day before the date of grant.
3. There is no exercise price payable for a Performance Share upon vesting.
4. Awards which have passed the date first exercisable have vested and are unfettered, having passed the relevant performance conditions.
5. The 1 April 2019 award to Mr Updyke formed an additional share incentive award to partially compensate Mr Updyke for remuneration forfeited at his previous employer. When determining these awards, the Committee took into account the form and time horizon of the forfeited compensation. The award will vest in three tranches: 34 per cent on 5 May 2020, 33 per cent on 5 May 2021 and 33 per cent on 5 May 2022, with each tranche being subject to Mr Updyke's continuing employment with the Company and satisfactory performance in his role as CEO. The vesting and exercise details provided relate only to the tranche of the award that vested on 5 May 2020, where Mr Updyke elected to sell sufficient shares to settle the arising tax liability, receiving the balance of the award in shares.

Share incentive interests awarded during the year

In March 2020 the Committee approved an award of Restricted Stock Units to Ms Bell and Mr Updyke under the Deferred Bonus Plan; details of the awards are set out on page 92.

In May 2020 the Committee approved an award of Performance Shares to Ms Bell and Mr Updyke under the Long-Term Incentive Plan equivalent to 125 per cent and 150 per cent of base salary respectively. Awards made to the Executive Directors under the Long-Term Incentive Plan since the approval by shareholders of the Company's revised Remuneration Policy on 1 May 2019 have a two-year post-vesting holding period.

50 per cent of award:

The EPS performance period for this award started at the beginning of the financial year in which the award is made, in this case on 1 January 2020, and ends after three years, in this case on 31 December 2022. The adjusted EPS figure reported for the financial period to 31 December 2019, which forms the baseline for this performance target, is 13.40 cents.

Target EPS (adjusted) at the conclusion of the performance period	Proportion of Performance Shares vesting (per cent)
Below 15.50	0
15.50 cents	25
Above 15.50 cents and below 18.82 cents	On a straight-line basis between 25 and 100
18.82 cents and higher	100

Share incentive interests awarded during the year continued

50 per cent of award continued:

In determining Absolute TSR growth for the Company, share prices will be averaged over 90-day periods immediately prior to, and at the end of, the performance period, which will commence 14 days prior to the date of award and will end three years later.

Absolute TSR[1]	Proportion of Performance Shares vesting (per cent)
Below 17.00 per cent growth	0
17.00 per cent growth	25
Above 17.00 per cent growth but below 42.00 per cent growth	On a straight-line basis between 25 and 100
42.00 per cent growth or higher	100

Note
1. Share price including reinvested dividends.

Share incentive interests vesting during 2021

Both Ms Bell and Mr Hutchinson have awards which are due to vest on 22 May 2021, subject to an EPS performance condition and an Absolute TSR performance condition.

- The EPS condition has passed the growth threshold required for full vesting.
- The Absolute TSR condition will be tested after the conclusion of the performance period. Current estimates, based on the growth in market price of a Spirent Ordinary Share between the beginning of the performance period and the date of this report, suggest it is likely that this will achieve full vesting.

Mr Hutchinson's award will be pro-rated to reflect the proportion of the performance period for which he was employed by the Company.

The second tranche of Mr Updyke's buyout award of Restricted Stock (awarded under Listing Rule 9.4.2) is due to vest on 5 May 2021, subject to his continuing employment and his satisfactory performance of the role of CEO. The Remuneration Committee will consider the approval of the vesting prior to 5 May 2021.

Full details of the vesting of the these awards will be disclosed in the Directors' Annual Remuneration Report 2021.

No new shares were issued during the year, with all exercises of share incentives being satisfied by the transfer of shares held by the Company's Employee Share Ownership Trust (ESOT). At the date of this report, the ESOT holds 2.8 million Ordinary Shares for the purpose of satisfying the exercises of current and future awards by employees and former employees of the Group.

Dilution

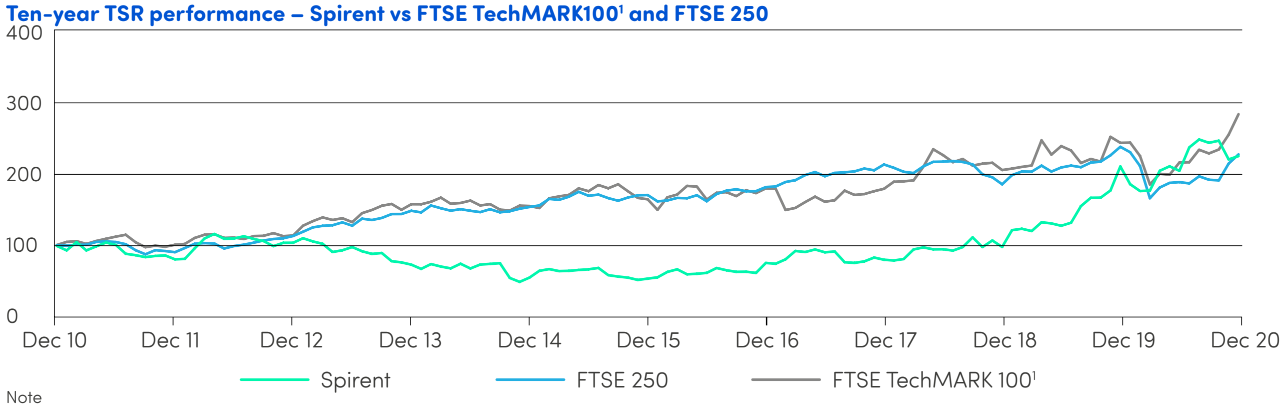
Overall shareholder dilution resulting from the Company's share incentive plans (on a rolling ten-year basis) has fallen by 1.0 per cent when comparing the positions at 31 December 2020 (1.7 per cent) and 31 December 2019 (2.7 per cent). The overall number of share incentives outstanding has fallen to 8.1 million at 31 December 2020 (2019 9.2 million).

Unaudited information

Total Shareholder Return performance

The graph below shows the TSR performance for the last ten financial years of Spirent Communications plc against the FTSE 250 Index and the FTSE TechMARK 100 Index, excluding those companies who were also constituents of the FTSE 100 Index at the commencement of the period. These indices have been selected as the most relevant comparators for Spirent across the time period reflected in the graph below due to Spirent's business operations in the technology space and the Company's market capitalisation and size.

Ten-year TSR performance – Spirent vs FTSE TechMARK100[1] and FTSE 250



Note
1. As of 1 January 2011, excluding FTSE 100 companies.

The middle market price of an Ordinary Share at the close of business on 2 January 2020 and 31 December 2020 (being the first and last days the London Stock Exchange was open for trading in 2020) was 247.00 pence and 264.00 pence respectively, and during that period ranged between a high of 304.00 pence and a low of 151.60 pence.

Table of CEO remuneration[1]

Year	CEO	CEO single figure of total remuneration £000	Annual bonus payout against maximum opportunity Per cent	Long-term incentive vesting rates against maximum opportunity Per cent
2020	Eric Updyke	1,867.6	83.2	100
2019	Eric Updyke[2]	968.8	85.1	–
2019	Eric Hutchinson[3]	1,548.6	85.1	89
2018	Eric Hutchinson	1,533.4	80.0	63
2017	Eric Hutchinson	1,292.6	86.8	–
2016	Eric Hutchinson	632.6	22.6	–
2015	Eric Hutchinson	497.1	–	–
2014	Eric Hutchinson	521.6	–	–
2013	Eric Hutchinson[4]	186.9	12.0	–
2013	Bill Burns[5]	401.3	–	–
2012	Bill Burns	931.8	40.5	34
2011	Bill Burns	1,309.6	93.3	84
2010	Bill Burns	1,279.9	100.0	100
2009	Bill Burns	997.8	93.9	100

Notes
1. Data for Mr Updyke's earnings are presented in Sterling based on an average exchange rate for 2020 of 1.284. Prior year data in this table has been recalculated from US Dollars to be presented in Sterling at the following average exchange rates: 2019 $1.2779:£1; 2014 $1.65:£1; 2013 $1.56:£1; 2012 $1.58:£1; 2011 $1.60:£1; 2010 $1.54:£1; 2009 $1.57:£1.
2. Eric Updyke took up the position of CEO on 1 April 2019.
3. Earnings disclosed are to 30 June 2019, when Eric Hutchinson retired from the Spirent Group.
4. Eric Hutchinson took up the position of CEO on 3 September 2013.
5. Earnings disclosed are to 3 September 2013, when Bill Burns stepped down as CEO.

Percentage change in remuneration of the Directors and Average Employee

The table below shows the movement in salary, benefits and Annual Incentive for each of the Directors between the current and prior years compared to the remuneration of the Average Employee:

	2019-2020			2018-2019		
	Base salary % change	**Benefits[1] % change**	**Annual incentive[2] % change**	Base salary % change	Benefits[1] % change	Annual incentive[2] % change
Eric Updyke[3] CEO	**3.0**	**38.2**	**0.7**	31.1	(77.6)	39.4
Paula Bell CFO	**3.5**	**2.9**	**(3.4)**	3.0	2.7	36.3
Sir Bill Thomas[4] Chairman	**3.0**	**–**	**–**	9.4	–	–
Gary Bullard[4] NED, Chair of Remuneration Committee	**2.6**	**–**	**–**	2.5	–	–
Wendy Koh[4] NED	**2.9**	**–**	**–**	5.7	–	–
Edgar Masri[4] NED	**2.9**	**–**	**–**	5.7	–	–
Jonathan Silver[4] SID, Chair of Audit Committee	**2.4**	**–**	**–**	2.5	–	–
Average Group employee[5]	**4.1**	**7.1**	**6.2**	4.8	(6.6)	12.3

Notes
1. Benefits include employer retirement benefit contributions, car allowance, health insurance and life assurance.
2. Total Annual Incentive includes all annual incentive payments and commission.
3. CEO data for 2019 is based upon Eric Updyke's starting salary, and annualised benefits and incentives. CEO data for 2018 is based upon Eric Hutchinson's actual remuneration.
4. Non-executive Directors do not receive benefits or pension payments and are not eligible for variable remuneration.
5. Average Group employee data is based on the Employee remuneration costs and average number of employees set out in note 8 to the consolidated financial statements with costs for the CEO, CFO and Non-executive Directors removed.

Relative importance of the spend on pay

The following table shows the total expenditure on pay for all of the Company's employees compared to distributions to shareholders by way of dividend. In order to provide context for these figures, adjusted operating profit is also shown.

	2020 $ million	2019 $ million	Per cent change
Employee remuneration costs[1]	232.6	219.9	5.8
Distributions to shareholders[2]	33.6	28.6	17.5
Adjusted operating profit[3]	103.5	92.9	11.4

Notes
1. Remuneration, social security costs, pension and other related costs and expense of share-based payment (see note 8 to the consolidated financial statements).
2. Dividends declared and paid in the year (see note 12 of the consolidated financial statements).
3. Before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment amounting to $7.8 million in total (2019 $4.3 million) (see note 11 of the consolidated financial statements).

CEO pay ratio

For the purposes of this year's disclosure, the gender pay gap data from our 5 April 2020 snapshot has been used to identify the three appropriate employees for comparison with the CEO (Option B). Further detail on the methodology is set out below.

The table below compares the 2020 single figure of remuneration for the individual who fulfilled the role of CEO during the period with that of the Group employees who are paid at the 25th percentile (lower quartile), 50th percentile (median) and 75th percentile (upper quartile) of its UK employee population.

Year	Method	25th percentile pay ratio	Median pay ratio	75th percentile pay ratio
2020	Option B	50:1	32:1	18:1
2019[1]	Option B	72:0	53:1	24:1

Note
1. The data provided for 2019 is the aggregate 2019 single figure of remuneration for the two individuals who fulfilled the role of CEO during the period which includes a three month period where both individuals were receiving remuneration, and annual incentive payments to both individuals.

The remuneration figures for all employees were determined at 31 December 2020.

Under Option B, the latest available gender pay gap data is used to identify the best equivalent for three Group employees in the UK whose hourly rates of pay are at the 25th, 50th and 75th percentiles for the Group and their total pay and benefits figure for 2020 is then calculated. The identified employees are considered to be reasonably representative since the structure of their remuneration arrangements is in line with that of the majority of the UK workforce. The table below sets out the salary and total pay and benefits for the three identified quartile point employees:

Year	25th percentile (P25)	Median (P50)	75th percentile (P75)
Salary (£)	35,549	55,375	81,336
Total pay and benefits (£)	37,081	58,484	102,506

Each employee's pay and benefits were calculated using each employees' remuneration, consistent with the CEO remuneration, on a full-time equivalent basis. No adjustments were made and no components of pay have been omitted.

Base salaries of all employees, including our Executive Directors, are set with reference to a range of factors including market practice, experience, and performance in role. In reviewing the ratios the Committee also noted that the CEO's remuneration package is weighted more heavily towards variable remuneration (including the Annual Incentive and Long-Term Incentive Plan) than the wider workforce due to the nature of the role. This means the ratio is likely to fluctuate depending on the performance of the business and associated outcomes of incentive plans in each year.

The Committee notes that the 2019 ratio data covered a period during which there were two individuals in the role of CEO, one of whom (Eric Hutchinson) received a significant vesting of an LTIP award during the period; although the 2020 data includes the vesting of the first tranche of Eric Updyke;s buy-out award of restricted stock, this award was at a lower quantum.

The Committee continues to believe the median pay ratio is consistent with the pay, reward and progression policies for our UK employees. The salary and total pay and benefits levels for the CEO and median representative employee are competitively positioned within the relevant markets and reflect the operation of our remuneration structures. These are effective in appropriately incentivising staff, while having regard to the Company's risk framework, risk appetite and to rewarding the approach as well as the outcome of performance.

In future years we will continue to provide context to the ratios and set out a table showing changes over time and narrative explaining them, together with a chart tracking CEO to employee pay ratios.

Statement of shareholder voting

At the 2020 AGM on 29 April 2020 the results of shareholder voting on remuneration matters were as follows:

Advisory vote regarding the Report on Directors' remuneration for the year to 31 December 2019:

Votes for[1]	Per cent	Votes against	Per cent	Votes cast	Votes withheld[2]
431,525,323	83.03	88,204,140	16.97	519,729,463	1,724,175

The most recent binding vote for the Company's Remuneration Policy, approved by shareholders at the 2019 AGM and effective from 2 May 2019:

Votes for[1]	Per cent	Votes against	Per cent	Votes cast	Votes withheld[2]
478,026,071	95.89	20,467,919	4.11	498,493,990	14,343

Notes
1. The "For" vote includes those giving the Company Chairman discretion.
2. A vote withheld is not a vote in law and is not counted in the calculation of the votes "For" and "Against" the resolution.

Votes "For" and "Against" are expressed as a percentage of total votes cast.

Remuneration Committee

Responsibilities

The Remuneration Committee is responsible to the Board for determining:

- Remuneration Policy for the Executive Directors and Chairman, taking into account remuneration trends across the Company;
- specific terms and conditions of employment of each individual Executive Director;
- overall policy for remuneration for the Executive Directors' direct reports;
- design and monitoring of the operation of any Company share incentive plans;
- setting stretching incentive targets to encourage enhanced performance;
- an approach that rewards fairly and responsibly contribution to the Company's long-term success; and
- other provisions of the Executive Directors' service agreements, ensuring that contractual terms on termination and payments made are fair to the individual and the Company and that failure is not rewarded and loss is mitigated.

The Committee's remit is set out in detail in its terms of reference, which are reviewed regularly and were approved in December 2020.

The Committee's terms of reference are available on the Company's website at https://corporate.spirent.com.

Composition of the Committee

At the date of this Report, the Remuneration Committee comprises four Independent Non-executive Directors, one of whom acts as Committee Chairman. The Company Secretary serves as Secretary to the Committee. All members are considered independent within the meaning of the 2018 UK Corporate Governance Code.

Advisers to the Committee

During the period under review the Committee consulted with the Company's Chairman, CEO, CFO and Company Secretary & General Counsel but not on matters relating to their own remuneration.

Following a formal tender Aon was appointed by the Committee in August 2018 to undertake a market review of executive remuneration practices and assist with the design and introduction of an updated Remuneration Policy that was put to shareholders at the 2019 Annual General Meeting. The Committee remained satisfied that Aon was independent, thoughtful and challenging throughout the contracted period. Aon is a member of the Remuneration Consultants Group and complies with its voluntary Code of Conduct in respect of the provision of remuneration consulting services, details of which can be found at www.remunerationconsultantsgroup.com.

The fees paid to Aon to carry out work for the Remuneration Committee during the period under review totalled £18,352 (2019 £87,871). Fees are based on a fixed retainer for certain services and time and materials otherwise.

In July 2020, following a restructure at Aon, the lead adviser to the Committee transferred to work at PwC. Following a conflict check, the Committee confirmed that it was satisfied that PwC is independent, thoughtful and challenging. PwC is a member of the Remuneration Consultants Group and complies with its voluntary Code of Conduct in respect of the provision of remuneration consulting services, details of which can be found at www.remunerationconsultantsgroup.com.

The fees paid to PwC to carry out work for the Remuneration Committee during the period under review totalled £36,000 (2019 nil). Fees are based on a fixed retainer for certain services and time and materials otherwise.

Remuneration Committee continued

Advisers to the Committee continued

Kepler Associates Limited, which was acquired in June 2015 by Mercer Limited, was appointed by the Committee some years ago to provide the results of TSR testing to determine the vesting of share incentives. The Committee has retained Mercer Limited in this role because it values the robust data provided and continuity of advice from the consultants involved. The Committee remains satisfied that Mercer Limited is independent, thoughtful and challenging. Mercer Limited is a member of the Remuneration Consultants Group and complies with its voluntary Code of Conduct in respect of the provision of remuneration consulting services, details of which can be found at www.remunerationconsultantsgroup.com and has no other connection to the Company.

The fees paid to Mercer Limited to carry out work for the Remuneration Committee during the period under review totalled £3,000 (2019 £7,242) and were based on time and materials.

Directors' Remuneration Policy (Unaudited)

The Committee's Policy is to set remuneration levels which ensure that the Executive Directors are fairly and responsibly rewarded in return for high levels of performance. The Remuneration Policy aims to promote value creation through transparent alignment with the agreed corporate strategy, supporting performance and encouraging the underlying sustainable financial health of the business while promoting sound risk management for the benefit of all stakeholders. The Committee believes that the aims of the Policy are achieved by ensuring that a significant proportion of executive remuneration is tied to the achievement of the agreed corporate strategy and long-term value creation.

The Company's previous Remuneration Policy was subject to a binding vote at the 2019 AGM on 1 May 2019 and received 95.89 per cent of all votes cast in favour. The revised Policy is broadly consistent with the previously approved Policy. However, certain changes were made to ensure that the new Policy remains fit for purpose for the next three years for the Company and its shareholders. A number of amendments to the language of the Policy have been made to improve its clarity. The principal changes from the previously approved Policy are set out below:

- **Post-cessation share ownership requirement:** The implementation of a post-cessation share ownership requirement for newly appointed Executive Directors, who will be required to hold the lower of the respective in-role shareholding guideline and the accrual shareholding immediately prior to departure for a period of two years, in line with the Investment Association's best practice guidance.
- **Reduction in pension contributions:** The alignment of existing Executive Director pension contributions with that of the wider workforce from the end of 2022 in line with the UK Corporate Governance Code and Investment Association expectations.

Considerations of UK Corporate Governance Code principles

When determining the Remuneration Policy, the Committee were mindful of their obligations under Provision 40 of the Corporate Governance Code in order to ensure that the Policy and other remuneration practices were clear, simple, predictable, proportionate, aligned to the culture of the Company and accounted for reputational and other risks linked to excessive reward. Set out below are examples of how the Committee addressed these factors:

Clarity Remuneration arrangements should be transparent and promote effective engagement with shareholders and the workforce.	The Committee consulted with its shareholders on the proposed changes within the Policy and received positive feedback The Committee believes that the remuneration arrangements are transparent and align to market and best practice.
Simplicity Remuneration structures should avoid complexity and their rationale and operation should be easy to understand.	The Committee is not proposing any significant structural changes to the incentive plans. Spirent operates two incentive plans, which it believes are easy to communicate and for stakeholders to understand and the structure of which is aligned to market practice. The performance measures provide a clear link to business performance and business strategy.
Risk Remuneration arrangements should ensure reputational and other risks from excessive rewards, and behavioural risks that can arise from target-based incentive plans, are identified and mitigated.	The Committee is mindful of mitigating risks in relation to excessive reward through the application of discretion, as well as through malus and clawback provisions in respect of incentive awards.
Predictability The range of possible values of rewards to individual Directors and any other limits or discretions should be identified and explained at the time of approving the Policy.	The range of possible rewards for Executive Directors is considered on page 106. The Committee has the ability to apply discretion in relation to the variable pay elements of the awards, for new joiners and for leavers, which were revisited as part of the Remuneration Policy Review.
Proportionality The link between individual awards, the delivery of strategy and the long-term performance of the Company should be clear. Outcomes should not reward poor performance.	The Committee strongly believes that the awards implemented ensure continued delivery of the short and long term goals and the business strategy. The Committee also has discretion to adjust incentive outcomes to ensure that they reflect the Company's performance over the relevant period.
Alignment to culture Incentive schemes should drive behaviours consistent with Company purpose, values and strategy.	The Committee believes that the incentive schemes detailed in the Remuneration Policy are consistent with Company purpose, values and strategy.

Policy table

This section of the Report describes the key components of each element of the remuneration arrangements for the Executive Directors.

Component and link to strategy	Operation	Maximum opportunity	Framework to assess performance
Fixed remuneration			
Base salary			
To provide fixed remuneration for each role which reflects the size and scope of the Executive Director's responsibilities and their individual skills and experience.	Base salaries are normally reviewed annually. Set at levels to recruit and retain the high calibre talent needed to deliver the Group's strategy without paying more than is considered necessary. Salaries are typically set after considering various factors including the salary levels in companies of a similar size and complexity, the responsibilities of each individual role, internal relativities, progression within the role, individual performance and an individual's experience and with regard to market salary levels in the country in which the executive resides. Our overall policy, having had due regard to the factors noted, is normally to target salaries at the median market level.	While there is no defined maximum salary, any increase in salary will ordinarily be (in percentage terms) in line with those of the wider workforce, having regard to the increases in the country in which the individual resides. Increases beyond those granted to the wider workforce (in percentage terms) may be awarded in certain circumstances, for example where there is a change in responsibility, progression in the role, experience or a significant increase in the scale of the role and/or size, value and/or complexity of the Group. Details of current salary levels are set out in the Annual Remuneration Report.	Not applicable.
Benefits			
To provide market levels of benefits on a cost-effective basis.	May include private health cover for the Executive Director and their family, life insurance cover, permanent health insurance and a car allowance. Executive Directors may participate in any all-employee share plans which may be operated by the Company on the same terms as other employees. Relocation support and any associated costs or benefits may also be provided if considered by the Committee to be appropriate and reasonable to meet the requirements of the business. Other benefits may be offered from time to time broadly in line with local market practice in the country of residence of the Executive Director. Reasonable business-related expenses may be reimbursed (including tax thereon, if deemed to be a taxable benefit).	The overall value of benefits will depend on the individual's circumstances and therefore there is no formal maximum. Participation in all-employee share plans will be in line with relevant statutory limits. It is intended that the maximum value of benefits offered will remain broadly in line with market practice in the location in which the Executive Director operates.	Not applicable.

Policy table continued

Component and link to strategy	Operation	Maximum opportunity	Framework to assess performance
Retirement benefits			
To provide cost-effective and competitive post-retirement benefits.	Defined contribution scheme or cash allowance in lieu of Company pension contributions or a combination of both. Other post-retirement benefits may be offered from time to time broadly in line with local market practice in the country of residence of the Executive Director.	The maximum Company contribution is set at 20 per cent of base salary (combined cash supplement and/or defined contribution plan). For existing Executive Directors, the retirement benefits will be set in line with the general rates applicable to the wider workforce in their country of residence by the end of 2022. Retirement benefit levels for newly appointed Executive Directors will be set in line with the general rates applicable to new employees in the country of residence of the new Executive Director. Pension arrangements for current Executive Directors are set out in the Annual Remuneration Report.	Not applicable.
Variable remuneration			
Annual Incentive			
To reward and incentivise the achievement of annual financial and strategic goals which are selected to align the strategy of the business and support enhancement of shareholder value.	Two-thirds of any bonus earned is payable in cash with the remaining one-third deferred into shares. The deferred bonus shares ordinarily vest after three years. Dividend equivalents may be paid on vested shares in respect of dividends arising over the period between the grant date and the vesting date. Both the cash and deferred share elements of the annual bonus are subject to clawback and malus provisions.	Maximum opportunity is capped at 150 per cent of base salary. The Annual Incentive starts accruing from threshold levels of performance, which results in 20 per cent of the maximum payout. Current maximum potential for each Executive Director is set out in the Annual Remuneration Report.	Annual incentives may be based on a mix of financial, individual and business objectives with at least 50 per cent of the weighting being given to financial metrics. The payment of any bonus is at the absolute discretion of the Committee and the Committee may exercise its discretion to override the formulaic outcome.
Long-term incentive			
To incentivise executives to achieve the Company's long-term strategy and enhance sustainable shareholder value.	Discretionary awards of conditional shares or nil-cost options may be granted to Executive Directors annually, calculated as a percentage of base salary. Awards will ordinarily vest, subject to performance, on the third anniversary of grant and will be subject to an additional two-year holding period post-vesting, during which time awarded shares may not ordinarily be sold (other than to settle tax liabilities incurred by the vesting of the award). Dividend equivalents may be paid on vested shares in respect of dividends arising over the period between the grant date and the vesting date (or, where an award is structured as a nil-cost option and subject to a holding period, to the expiry of the holding period or the date of exercise (if earlier)). Malus and clawback provisions will apply to all awards made under the Spirent Long-Term Incentive Plan.	Maximum plan limit for awards is 200 per cent of base salary in respect of any financial year. No more than 25 per cent of the relevant part of the award will vest for achieving threshold performance, increasing to full vesting for the achievement of maximum performance. Details of proposed award levels for 2020 are set out in the Annual Remuneration Report.	Award levels and performance conditions are reviewed before each award cycle to ensure they remain appropriate. Awards are currently subject to challenging Earnings Per Share and Total Shareholder Return targets. However, different measures may be applied for future award cycles as appropriate to reflect the business strategy. A full description of the performance conditions applicable to long-term incentive awards is set out in the Annual Remuneration Report. In respect of awards granted in 2019 and beyond, the Committee has the discretion to override the formulaic out-turn of the award if appropriate to do so to take into account the underlying financial and operational performance of the Company and, in exceptional circumstances, individual performance.

Notes to the policy table

Performance conditions applicable to the Annual Incentive

The Annual Incentive is designed to drive and reward excellent short-term financial and operational performance. The Committee reviews the Annual Incentive plan measures each year in order to ensure that they are aligned with the Group's strategy. The Committee may alter the choice and weighting of the metrics for future Annual Incentive cycles to reflect the changing needs of the business. The Committee also retains the discretion to retrospectively amend the measures, weightings, targets and/or method of assessment for the in-year Annual Incentive to take into account changes in the business strategy, significant acquisitions or disposals, changes in accounting treatment or other exceptional events to ensure that the scheme is able to fulfil its original purpose. The payment of any Annual Incentive is at the sole discretion of the Committee.

Annual Incentives are currently based on:

- adjusted operating profit – a key driver of shareholder return and a key measure of business success;
- revenue – reflecting Spirent's strategic priority of delivering top-line growth; and
- other strategic and operational priorities – these account for a minority of the Annual Incentive and ensure a rounded assessment of performance.

Performance conditions applicable to awards under the Spirent Long-Term Incentive Plan (LTIP)

Long-term incentive awards will be granted in accordance with the rules of the LTIP and the discretions contained therein. The Committee reviews the appropriateness of performance parameters for each award under the LTIP and sets stretching performance conditions in light of the Company's current and expected performance over the performance cycle.

The performance conditions for awards to Executive Directors are (ordinarily) measured over a period of three years and are set using a sliding scale of targets and no more than 25 per cent of the award (under each measure) will vest for achieving the threshold performance hurdle. The choice of measures may change for future award cycles, but is currently based on:

- Absolute Total Shareholder Return – generates a strong alignment of interest between executives and shareholders; and
- Adjusted Earnings per Share – this provides an assessment of the profitability of the revenues delivered and aligns with the interests of shareholders. Challenging targets for earnings per share are set based on internal and external forecasts.

The Committee would consult with shareholders in advance of a significant change in the choice or weighting of the performance measures to be applied to future award cycles. Under the rules of the LTIP, the Committee has the discretion to amend or substitute the performance conditions for in-flight awards in exceptional circumstances, providing the new targets are no less challenging than originally envisaged.

Malus and clawback

The rules of the LTIP and the Company's Annual Incentive (including any element deferred into shares) include provisions for malus and clawback to apply if the Committee concludes that:

- the relevant individual has committed misconduct;
- there has been a restatement of any member of the Group's financial results, due to inaccurate or misleading data;
- the extent to which an award was granted or has vested was based on inaccuracy or error;
- the Group (or a business unit within the Group) suffered a material financial loss as a result of circumstances that could reasonably have been risk managed;
- the Company has suffered an instance of corporate failure resulting in the appointment of a liquidator or administrator;
- a material failure of risk management and/or regulatory non-compliance resulting in damage to the Company's business or reputation; or
- any other circumstances that the Board considers to have a similar nature or effect.

Clawback may be applied for up to two years following cash payment of an Annual Incentive and vesting under the LTIP, and malus up to three years following the granting of awards under the Company's deferred bonus arrangements.

Shareholding guidelines

The Executive Directors are required to build and maintain a shareholding in the Company equivalent to 200 per cent of salary and are expected to retain shares vesting under the deferred annual bonus and LTIP (net of tax) until such time as the guideline shareholding has been achieved.

New Executive Directors are required to maintain a post-cessation share ownership requirement to hold the lower of the respective in-role shareholding guideline and the actual shareholding immediately prior to departure for a period of two years.

The Company's policy in respect of vested and unvested share awards post-cessation of employment is set out below in the section on Exit Payment Policy.

Discretions retained by the Committee in operating the LTIP and other variable pay schemes

The Committee operates the Group's various incentive plans according to their respective rules and (where applicable) in accordance with relevant legislation and HMRC guidance. In order to ensure efficient administration of these plans, certain operational discretions are reserved to the Committee. These include:

- determining who may participate in the plans;
- determining the timing of grants of awards and/or payments under the plans;
- determining the quantum of any awards and/or payments (within the limits set out in the Policy table above);
- in exceptional circumstances, determining that a share-based award (or any dividend equivalent) shall be settled (in full or in part) in cash;
- determining the performance measures and targets applicable to an award (in accordance with the statements made in the Policy table above);
- where a participant ceases to be employed by the Company, determining whether "good leaver" status shall apply;
- determining the extent of vesting of an award based on assessment of the performance conditions, including discretion as to the basis on which performance is to be measured if an award vests in advance of normal timetable (on cessation of employment as a "good leaver" or on the occurrence of corporate events);
- whether, and to what extent, pro-ration shall apply in the event of cessation of employment as a "good leaver" or on the occurrence of corporate events;
- whether malus and/or clawback shall be applied to any award and, if so, the extent to which they shall apply; and
- making appropriate adjustments to awards on account of certain events, such as major changes in the Company's capital structure.

Approach to recruitment remuneration

In the event that the Company recruits a new Executive Director (either from within the organisation or externally), when determining the appropriate remuneration arrangements, the Committee will take into consideration all relevant factors, (including but not limited to quantum, the type of remuneration being offered and the jurisdiction which the candidate was recruited from) to ensure that arrangements are in the best interests of both shareholders and the Company without paying more than is necessary to recruit an executive of the required calibre.

Element	Recruitment Policy
Base salary	The Committee will take into consideration a number of factors, including internal relativities, external market forces, skills and current level of pay. Salary may (but need not necessarily) be set below the normal market rate, with a series of planned increases implemented over the following few years to bring it to the desired positioning, subject to individual performance.
Benefits	Benefits provision would be in line with normal policy. The Committee may agree that the Company will meet appropriate relocation costs.
Retirement benefits	In line with normal Policy.
Annual Incentive	Eligible to take part in the Annual Incentive, with a maximum bonus of up to 150 per cent of salary in line with Policy. Depending on the timing of the appointment, the Committee may deem it appropriate to set Annual Incentive performance metrics that are different from those that apply to the current Executive Directors for the first performance year in which the appointment falls.
Long-term incentive	A normal award of up to 200 per cent of salary, in line with Policy.
Buy-out awards	In exceptional circumstances, the Committee may offer additional cash or share incentive awards (using Listing Rule 9.4.2, if necessary) to compensate an individual for remuneration forfeited on leaving a previous employer. The awards would not exceed what is felt to be a fair estimate of the remuneration forfeited and would reflect (as far as possible) the nature and time horizons attached to that remuneration and the impact of any performance conditions. The Company would aim to replace any forfeited cash awards with shares wherever possible. Shareholders will be informed of any such payments at the time of appointment.

For an internal appointment, any remuneration terms awarded in respect of the previous role may either continue on its original terms or be adjusted to reflect the new appointment.

When recruiting Non-executive Directors, the remuneration arrangements offered would normally be in line with those paid to existing Non-executive Directors, details of which are set out in the Annual Remuneration Report.

Service contracts
Executive Directors
In normal circumstances, it is the Company's Policy that service contracts for Executive Directors have no fixed term and are capable of termination on no more than 12 months' notice from either the Company or the Executive Director. It is intended that this Policy would also apply to new appointments of Executive Directors.

Eric Updyke currently has a service agreement with Spirent Communications, Inc, and, being a US resident, his contract is in line with US employment practice and is governed by the laws of the state of New Jersey. Mr Updyke's service agreement, dated 1 April 2019, may be terminated on 12 months' notice from the Company and six months' notice from Mr Updyke.

Paula Bell currently has a service agreement with Spirent Communications plc, and, being a UK resident, her contract is in line with UK employment practice and is governed by the laws of England and Wales. Ms Bell's service agreement, dated 12 April 2016, may be terminated on 12 months' notice from the Company and six months' notice from Ms Bell.

The Company recognises that its Executive Directors may, from time to time, be invited to become non-executive directors of other companies and that such appointments can broaden their knowledge and experience, to the benefit of the Company. Details of any such appointments are set out in the Annual Remuneration Report.

The service agreements of Executive Directors are available for inspection at the Company's registered office on request and will be available for inspection at the 2021 AGM.

Exit Payment Policy
The Committee is committed to ensuring that it does not pay more than is necessary when Executive Directors leave Spirent and its Policy on exit payments is and will continue to be in line with market practice in the country in which the Executive Director resides. The current Exit Payment Policy is:

- service contracts contain provisions for the removal of the Executive Director without compensation for not performing their duties to the standard required by the Board or material misconduct;
- payment in lieu of notice may be paid under service contracts if the relevant notice period is not given to the Executive Director or if, having received notice from the Executive Director, the employer does not wish him/her to serve it. Any payment in lieu of notice shall ordinarily be paid in monthly instalments, in respect of annual base salary and pension contributions only;
- unless provided for in the service contract, the Company would seek to apply practical mitigation measures to any payment of compensation on termination, for example by reducing payments to reflect payments received in respect of alternative employment, taking into account all relevant circumstances;
- service contracts do not contain provision for additional compensation on termination following a change of control (as detailed in the Change of Control provisions set out in the Directors' Report);
- service contracts do not contain provision for liquidated damages of any kind; and
- service contracts contain appropriate provisions to protect the legitimate interests of the Company with respect to preventing any terminated Executive Director from working in a business which competes against the Company.

Element	Termination policy
Salary, benefits and pension	Payment will be made up to the termination date in line with relevant contractual notice periods and will not exceed contractual entitlements.
Annual Incentive	Unless otherwise provided in the service contract to be consistent with market practice in the country in which the Executive Director resides, Executive Directors are not entitled to accrued cash incentives payable following termination unless the individual is determined by the Committee to be a good leaver (defined as an individual leaving employment due to redundancy, ill health, injury or disability, retirement, death, the individual's employing company ceasing to be under the control of the Group, or a transfer of the undertaking in which the individual works (Good Leaver)).
Deferred Share Bonus Plan	Awards will ordinarily continue to vest on the normal vesting date, unless the Committee determines that early vesting should apply. The Committee reserves the discretion to scale the awards down (including to nil) in the event of misconduct by the individual or to reflect individual performance.

Exit Payment Policy continued

Element	Termination policy
Spirent Long-Term Incentive Plan 2016	Unvested awards will generally lapse at the time of exit. For individuals determined by the Committee to be a "Good Leaver" (see below), the Committee will ordinarily assess the performance conditions at the end of the applicable vesting period and unvested awards will ordinarily vest on the normal timetable. Exceptionally, and always in the case of death, the Committee may assess performance conditions at the point of cessation by testing the performance conditions up to (or as close as reasonably practicable to) the date of cessation. Awards will then vest following such early assessment of performance. Except in the case of death, any shares which vest following the assessment of the performance conditions would normally be pro-rated to reflect the proportion of the vesting period actually served by the individual. For the purposes of the LTIP, a Good Leaver is any individual who leaves due to death, ill health, injury, disability, agreed retirement, redundancy, a transfer of the business for which the individual works out of the Group or for any other reason at the Committee's discretion (except where the individual is summarily dismissed). Any post-vesting holding period would normally continue to apply to a leaver's vested and unvested awards.
Legacy arrangements: Employee Incentive Plan (EIP)	Unvested awards generally lapse at the time of exit. For individuals determined by the Committee to be a Good Leaver, performance conditions are assessed by the Committee at the point of exit by testing the performance conditions up to the date of exit for TSR performance and to the end of the most recent financial period for EPS performance. Vesting is then pro-rated for the proportion of the performance period actually served and the individual has 12 months following the date of termination of employment in which to exercise them.

For all leavers, the Committee may also determine to make a payment in reimbursement of a reasonable level of outplacement and legal fees in connection with a settlement agreement. The Company may pay any statutory entitlements, to which an Executive Director is entitled, or settle or compromise any claims made in connection with the termination of employment or appointment of an Executive Director where the Committee considers such claims to have a reasonable prospect of success and that it is in the best interests of the Company to do so. Where appropriate, private health cover may continue for a suitable period post-cessation of employment.

The Committee has now introduced a formal Policy in respect of post-cessation shareholdings for new executive directors. Following the approval of this Policy and in respect of the incentive awards granted to newly-appointed executive directors thereafter, the following will ordinarily apply:

- unvested shares under the Deferred Bonus Plan will continue to vest on the normal vesting date (i.e. up to four years post-cessation);
- unvested shares under the LTIP will, subject to the participant being a Good Leaver, continue to vest on the normal vesting date and be subject to a post-vesting holding period;
- be subject to a post-vesting holding period;
- vested shares under the LTIP will remain subject to the holding period; and
- other beneficially owned shares may be sold as long as the individual continues to maintain a shareholding at least equal to the minimum shareholding guidelines which applied during their employment.

Current Executive Directors will also be subject to this Policy, with the exception of its application to other beneficially owned shares, over which there will be no sale restrictions.

The above will ensure that the Executive Directors continue to have an interest in the Company after having left employment, promoting a culture of sustainable long-term performance. Furthermore, additional safeguards are in place through the malus and clawback provisions which can continue to be invoked irrespective of employment status.

In the event of change in control of the Company, in accordance with rules of the respective plans, any outstanding share awards will ordinarily vest on the date of such an event. For awards under the LTIP, vesting will be subject to an assessment of achievement against the applicable performance conditions and, unless the Board determines otherwise, a reduction to reflect the curtailed vesting period.

Non-executive Directors

All Non-executive Directors have a letter of appointment with the Company for a period of not more than three years, subject to the Company's Articles of Association. However, since 2011 and in accordance with the Code, all Directors who are not stepping down from the Board will stand for re-election at each AGM.

The letters of appointment of Non-executive Directors are available for inspection on request and will be available for inspection at the 2021 AGM. An example of a letter of appointment for a Non-executive Director is available on the Company's website at https://corporate.spirent.com. Details of the remuneration for Non-executive Directors are set out in the Annual report on remuneration.

Consideration of employee remuneration arrangements elsewhere in the Group

When setting the Policy for Directors' remuneration, the Committee has regard to the pay and employment conditions elsewhere within the Group, particularly in the jurisdictions in which the Executive Directors are based. The Committee is kept informed on a regular basis of salary increases for the general employee population and takes these into account when determining salary increases for Executive Directors and the Executive Management team.

Where relevant, the Committee seeks to align the Remuneration Policy for Executive Directors with that for other senior managers. Selected employees are able to share in the success of the Group through participation in the Management Incentive Plan. Executive Directors, other members of the Executive Management team and key employees are also eligible for participation in the Long-Term Incentive Plan.

The Committee is aware of the 2018 UK Corporate Governance Code and its requirements for increasing engagement with stakeholders including employees and details of the workforce engagement programme can be found on page 50 of this Annual Report.

Consideration of the views of shareholders in setting Remuneration Policy

The Committee is mindful of the views of shareholders in determining appropriate levels of remuneration and in ensuring that shareholder and Director interests are aligned. The Committee is committed to an ongoing dialogue with shareholders and seeks shareholder views when any significant changes are proposed to remuneration arrangements. Over the past few years, the Committee consulted with major shareholders and shareholder representatives as follows:

- January 2016: consultation related to the introduction of the new LTIP;
- December 2017: consultation related to the Committee's approach to base salary, cash incentives and LTIP awards in 2018;
- December 2018: consultation regarding the revised Remuneration Policy for which the Committee sought shareholder approval at the 2019 Annual General Meeting; and
- December 2020: consultation regarding the revised Remuneration Policy for which the Committee will seek shareholder approval at the 2021 Annual General Meeting.

Legacy matters

For the avoidance of doubt, in approving this Remuneration Policy, authority is given to the Company to make payments and honour any commitments entered into with current or former Directors (such as the payment of pension or the unwinding of legacy share schemes) where the terms were agreed either prior to 24 April 2014 (the effective date of the first Directors' Remuneration Policy) or at a time when a previous Remuneration Policy was in force, or at a time when the relevant individual was not a director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a director. Details of any payments will be set out in the Annual Remuneration Report as they arise.

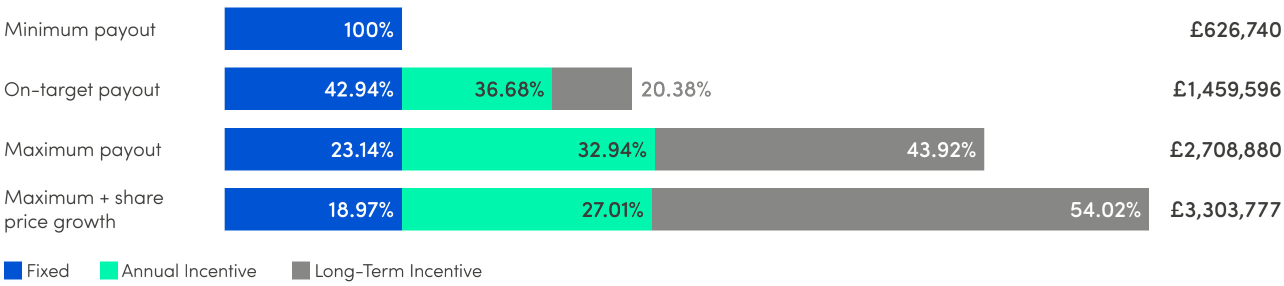
Illustrations of the application of Remuneration Policy in 2021

A significant proportion of remuneration is linked to performance, particularly at maximum performance levels. The charts below show how much the Executive Directors could earn under Spirent's Remuneration Policy under different performance scenarios in the 2021 financial year. The following assumptions have been made:

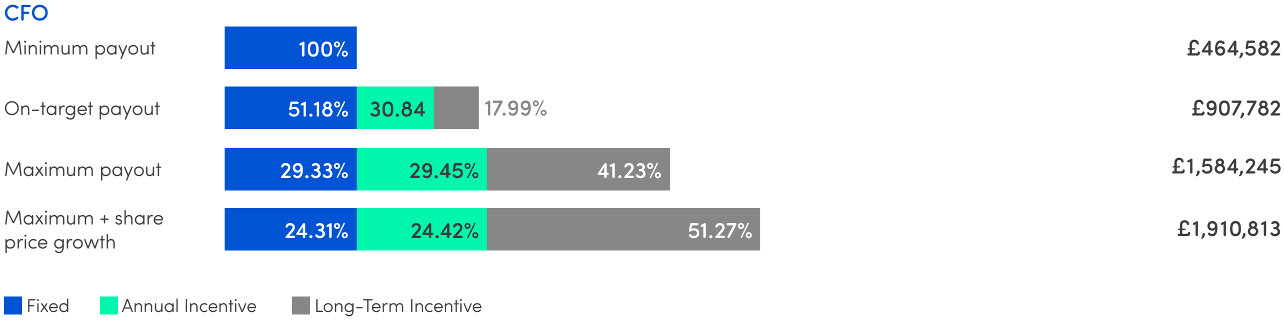
	Fixed remuneration	Variable remuneration	
		Annual Incentive	Long-Term Incentive
Minimum	Base salary[1] Benefits[2] Pension[3]	–	–
Target	Base salary[1] Benefits[2] Pension[3]	On-target[4]	Threshold vest (25 per cent)
Maximum	Base salary[1] Benefits[2] Pension[3]	Maximum[5]	Full vest (100 per cent)
Maximum + 50 per cent share price growth	Base salary[1] Benefits[2] Pension[3]	Maximum[5]	Full vest (100 per cent) + 50 per cent growth in share price from date of grant

Notes
1. Base salary effective 1 January 2021.
2. Benefits as received during 2020 financial year.
3. Cash contribution to the Company's 401k plan during 2020 financial year for CEO and cash sum in lieu of pension equal to 20 per cent of base salary received during 2020 financial year for CFO.
4. Annual Incentive on-target payout of 90 per cent of base salary for CEO and 75 per cent of base salary for CFO.
5. Annual Incentive maximum payout of 150 per cent of base salary for CEO and 125 per cent of base salary for CFO.
6. Long-term Incentive on-target payout of 25 per cent of award and maximum payout of 100 per cent of award.

CEO



CFO



Dilution

The Committee is strongly committed to continuing to manage shareholder dilution in a responsible manner. Details of the Company's dilution are set out in the Annual Remuneration Report.

Directors' report

This section contains additional information which the Directors are required by law and regulation to include within the Annual Report.

This section, along with the information from the Board of Directors and the Directors' statement on corporate governance on pages 60 to 72 (which are incorporated herein by reference), constitutes the Directors' Report for the purposes of the Companies Act 2006.

Future developments

The Company has chosen, in accordance with the Companies Act 2006 Section 414C(II), to include the disclosure of likely future developments in the Strategic Report on pages 2 to 58.

Research and development

The Company has chosen, in accordance with the Companies Act 2006 Section 414C(II), to include the disclosure of research and development in the Strategic Report on pages 2 to 58.

Greenhouse gas emissions and gender diversity

Information on environmental matters and disclosures relating to diversity, gender, and human rights are contained in the Sustainability section on pages 54 to 57.

Results and dividends

The consolidated income statement is on page 123. Profit for the financial year attributable to equity shareholders amounted to $84.4 million.

The Directors recommend a final dividend of 3.87 cents per Ordinary Share to be paid. In addition, the Directors also recommend a special dividend of 7.50 cents per Ordinary Share. Subject to approval by shareholders at the 2021 AGM, the final and special dividends will be paid in aggregate on 30 April 2021 to shareholders on the Register of Members at close of business on 19 March 2021.

These final and special dividends, together with the interim dividend paid in September 2020, will represent a total dividend of 13.54 cents per Ordinary Share for the year ended 31 December 2020 (2019 5.39 cents).

Directors

The names of the persons who were Directors of the Company during the period under review and as at 11 March 2021 appear on pages 60 and 61. All current Directors are standing for re-election at the 2021 AGM.

Appointment of Directors

The Company's Articles of Association (the "Articles") give the Directors power to appoint and replace Directors. Under the terms of reference of the Nomination Committee, an appointment must be recommended by the Nomination Committee for approval by the Board. The Articles require Directors to submit themselves for election at the first AGM following their appointment and all Directors who held office at the time of the two preceding AGMs to submit themselves for re-election. The Articles notwithstanding, all Directors will stand for re-election at the AGM this year in compliance with the 2018 UK Corporate Governance Code. Details of unexpired terms of Directors' service contracts are set out in the Directors' report on remuneration on page 90.

Powers of Directors

The Directors are responsible for managing the business of the Company and may exercise all the powers of the Company subject to the provisions of relevant statutes, to any directions given by special resolution, and to the Company's Articles. Powers relating to the issuing of shares are included in the Articles and such authorities are renewed by shareholders at the AGM each year.

Directors' share interests

Details regarding the share interests of Directors and their connected persons in the share capital of the Company, including any interests under long-term incentive plans, are set out in the Directors' report on remuneration on page 91.

Stakeholder engagement

Information on how the directors have had regard to the need to foster the Company's business relationships with suppliers, customers and other stakeholders, and the effect of that regard (including on principal decisions taken by the Company during the period under review) is contained in the Stakeholder Engagement section on pages 50 to 53.

Employees

The average number of Group employees during 2020 was 1,484 worldwide (2019 1,465). The Group strives to maintain the following principles:

Equal opportunities

The Group is committed to offering equal opportunities in recruitment, training, career development and promotion to all people, including those with disabilities, having regard for their particular aptitudes and abilities. As a matter of policy, full and fair consideration is given to applicants with disabilities and every effort is made to give employees who become disabled whilst employed by the Group an opportunity for retraining and continuation in employment. It is Group policy that the training, career development and promotion of disabled persons should, as far as possible, be the same as that of other employees.

Employees continued

Health and safety

Health and safety are considered as equal in importance to that of any other function of the Group and its business objectives, and the Group is committed to providing a safe and healthy workplace to protect all employees, visitors and the public from foreseeable work hazards.

Harassment

Sexual, mental or physical harassment in the workplace will not be tolerated. It is expected that incidents of harassment are reported to the appropriate Human Resources director.

Human rights

The Group provides opportunities that promote human rights and dignity every day through the employment created, both directly and indirectly, in its global supply chain and through the positive contribution its products make to people's lives. Further details on the Group's approach to human rights can be found in the Sustainability section of the Strategic Report on pages 54 to 57.

Communication

Employees are briefed on all relevant matters on a regular basis to achieve a common awareness of all the financial and economic factors affecting the performance of the Group, along with information on the performance of their business unit. Their involvement is encouraged in a variety of ways, such as through engagement surveys, town-hall meetings, and management presentations.

Further details of the workforce engagement in place across the Group are set out in the Stakeholder engagement section on pages 50 to 53 of this Annual Report and in the Directors' statement on corporate governance on page 72.

The Group encourages an open culture in all its dealings between employees and people with whom it comes into contact. The Group's whistleblowing policy sets out guidelines for individuals who feel they need to raise issues in confidence with the Company, or their own business unit, or through an independent third party. Every effort is made to protect the confidentiality of those who raise concerns and employees may come forward without fear for their position.

Change of control provisions

The Company does not have agreements with any Director or employee that would provide compensation for loss of office or employment resulting from a takeover except that provisions of the Company's share incentive plans may cause outstanding unvested options and awards granted to employees under such plans to vest on a takeover as follows:

Share incentive plan	Change of control	Effect on vesting provisions in the rules	Performance condition
2005 Employee Incentive Plan[1]	Yes	Pro-rated	Still applies
Spirent Long-Term Incentive Plan	Yes	Pro-rated	Still applies
Spirent Deferred Bonus Plan	Yes	Full-vesting	N/a

Note
1. All outstanding awards granted under the 2005 Employee Incentive Plan have now completed their performance condition performance periods and have either lapsed or have fully or partially vested.

The Company is not aware of any significant agreements to which it is party that take effect, alter or terminate upon a change of control of the Company following a takeover.

Share capital

The Company has a single class of share which is divided into Ordinary Shares of 3 & 1/3 pence each. Each Ordinary Share carries one vote and all of the Ordinary Shares rank pari passu. There are no special control rights relating to any of the Ordinary Shares. At the date of this Report, 611.7 million Ordinary Shares of 3 & 1/3 pence each had been issued which are fully paid up and are listed on the London Stock Exchange. The Company also operates a Level 1 American Depositary Receipt (ADR) programme with each ADR representing four Ordinary Shares. The ADRs trade on the US over-the-counter market and BNY Mellon is the authorised depositary bank for the programme. Further details on share capital are set out in note 29 to the consolidated financial statements and note 17 to the parent Company financial statements. The rights, including those relating to voting, obligations and any restrictions on transfer relating to the Company's Ordinary Shares, as well as the powers of the Company's Directors, are set out in the Company's Articles of Association, a copy of which can be found on our website at https://corporate.spirent.com/ or can be obtained from Companies House or by writing to the Company Secretary.

The Company's Articles of Association may only be amended by a special resolution at a general meeting of shareholders. The most recent changes to the Articles of Association were approved at the 2010 AGM and became effective at the close of that meeting on 5 May 2010. The Company will be seeking approval for the adoption of updated Articles of Association at the 2021 AGM; more details can be found in the Company's Notice of 2021 Annual General Meeting at https://corporate.spirent.com/

The Company has established two employee benefit trusts in connection with the operation of the Company's share incentive plans: the Spirent Employee Share Ownership Trust (ESOT) and the Spirent Sharesave Trust (SST). The trustees of both trusts have waived their right to receive dividends on any Ordinary Shares held by them except for a nominal amount of 1 pence other than for those Ordinary Shares held in the ESOT which are the beneficial property of an employee/shareholder.

Share capital continued

For further details on the employee benefit trusts see "Investment in own Ordinary Shares" in note 29 to the consolidated financial statements and note 17 to the parent Company financial statements. The Trustees of both trusts do not vote their Ordinary Shares, except for those Ordinary Shares held in the ESOT that are the beneficial property of an employee/shareholder, which the trustees will vote in accordance with the instructions received from the beneficial owner.

Restrictions on share transfers

There are no restrictions on the transfer of Ordinary Shares in the capital of the Company other than certain restrictions which may from time to time be imposed by law, for example insider trading law or as required under the Company's Remuneration Policy for Executive Directors. In accordance with the Market Abuse Regulation, certain employees are required to seek the approval of the Company prior to dealing in its securities.

The Company is not aware of any agreements between shareholders that may result in restrictions on the transfer of securities or on voting rights. The Company is also not aware of any contract of significance between itself or any subsidiary undertaking and a controlling shareholder.

Powers for issue of new shares

During the year to 31 December 2020 and to the date of this Report, no new Ordinary Shares have been allotted as a result of the exercise of options and rights pursuant to the Company's share incentive plans.

At each AGM the Directors seek authority to allot shares for cash and to disapply pre-emption rights within prescribed limits. At the 2021 AGM authority will be sought to allot new Ordinary Shares up to a nominal value of £6,797,132, which is equal to approximately 33.3 per cent of the Company's issued share capital as at 11 March 2021.

Return of capital

The Company was first authorised to repurchase up to 14.99 per cent of its own issued Ordinary Shares, within certain limits and as permitted by the Company's Articles of Association, at the 2006 AGM. This authority has been renewed at each subsequent AGM, reducing to 9.99 per cent at the 2010 AGM and subsequent AGMs. The authority from the 2020 AGM remains valid until the earlier of the 2021 AGM or 30 June 2021. Since the Company began returning capital to shareholders in May 2006, a total of £270.2 million has been returned through the repurchase of 397.6 million Ordinary Shares. No shares were repurchased during 2020 or to the date of this Report.

The Company will seek authority to repurchase up to 9.99 per cent of its own Ordinary Shares at the 2021 AGM to facilitate any further return of capital, if the Board concludes that it is in the best interests of shareholders to do so.

Substantial shareholdings

In accordance with Listing Rule 9.8.6(2), the Company has been notified of the following significant interests in its Ordinary Shares pursuant to Disclosure Guidance and Transparency Rule 5.

The following notifications have been received during the period 1 January 2020 to 31 December 2020 or earlier as applicable:

	Date of notification	Total holding	Per cent of Company's total voting rights
Ameriprise Financial, Inc	1 June 2020	97,835,894	15.99
Aviva plc	27 October 2020	55,730,576	9.11
BlackRock, Inc	4 August 2020	34,351,674	5.62
Standard Life Investments Ltd	27 January 2011	32,370,026	5.29
Brandes Investment Partners LP	3 March 2016	30,537,440	4.99
AXA Investment Managers SA	6 June 2019	30,515,747	4.99
Franklin Templeton Fund Management Limited	17 March 2020	30,507,422	4.99
Prudential plc	5 July 2019	30,472,411	4.98
Aberforth Partners	29 April 2019	30,368,910	4.96
Neptune Investment Management Limited	24 July 2018	29,775,214	4.87
Artemis Investment Management Limited	6 November 2017	29,195,146	4.77
Schroders plc	9 October 2014	26,986,598	4.41
PrimeStone Capital LLP	28 November 2019	26,231,082	4.29
Teleios Capital Partners LLC	7 May 2019	24,639,977	4.03
Sun Life Assurance Company of Canada (UK) Limited	5 December 2018	23,382,347	3.82
Kames Capital	6 February 2012	18,507,514	3.03
Norges Bank	31 December 2020	18,416,515	3.01

Substantial shareholdings continued

The following notifications have been received during the period 1 January 2021 to 11 March 2021:

	Date of notification	Total holding	Per cent of Company's total voting rights
Norges Bank	6 January 2021	19,017,558	3.11
Norges Bank	11 February 2021	18,068,435	2.95
PrimeStone Capital LLP	12 February 2021	26,434,581	4.32
Aviva plc	1 March 2021	61,206,908	10.00

Political donations

In accordance with the Group's Business Ethics Policy, no political donations were made during the year (2019 nil).

Financial risk management

Details of the Group's use of financial instruments, together with information on our risk objectives and policies and our exposure to price, credit, liquidity, cash flow and interest rate risks, can be found in note 28 to the consolidated financial statements.

Going concern

After making appropriate enquiries and taking into account the matters set out in the Principal risks and uncertainties section on pages 45 to 49 of this Annual Report, the Directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. For this reason, they continue to adopt the going concern basis when preparing the financial statements.

Viability Statement

In accordance with provision 31 of the 2018 UK Corporate Governance Code, the Directors have assessed the viability of the Group over a period significantly longer than 12 months from the date of approval of the financial statements, and concluded whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over that period.

The Board has concluded that the most appropriate period for this assessment should be three years.

This period was selected for the following reasons:

- the Group's strategic planning cycle covers a three-year period;
- the Board reviews a three-year financial corporate plan;
- it reflects the period over which the principal risks would be realised; and
- when considering a major investment in product development, three years is considered by the Board to be a reasonable time horizon in which the product should achieve meaningful sales.

The Board's assessment has been made with reference to the Company's current financial position and prospects, the budget for 2021, the Group's long-term strategy, the Board's risk appetite and the Group's principal risks and uncertainties as set out on pages 45 to 49 of this Annual Report.

The plans and cash flow projections used as the basis for the assessment were the 2021 budget and the three-year strategic plan.

They were drawn up on the basis that the Group ends 2020 with a cash balance of $241.2 million and maintains a cash balance sufficient to fund normal operations, and that there will be no material changes to the business structure throughout the review period.

The Board has reviewed plausible and severe stress tests based on the occurrence of a combination of the principal risks to which the Company is exposed, considering the potential impact of these risks on the business model, future performance, solvency and liquidity over the period.

Based on this assessment and the expected successful impact of mitigating actions, the Directors have a reasonable expectation that the Company will be able to continue in operation and meet its liabilities as they fall due over the three-year period.

Post-balance sheet events

On 4 March 2021, Spirent acquired octoScope, Inc (octoScope), a company based in the United States for an initial cash consideration of $55 million, subject to customary purchase price adjustments. Contingent consideration of up to $18 million is payable based on annual revenue growth targets for 2021 and 2022 and retention of key staff. The transaction was funded by surplus cash in the Group.

octoScope will be incorporated into our Lifecycle Service Assurance operating segment along with our emerging Wi-Fi revenue stream currently residing in high-speed Ethernet business within the Networks & Security operating segment.

Disclosure of information to auditor

Each of the Directors of the Company at the date of this Report confirms that:

- so far as the Director is aware, there is no information needed by the Company's auditor in connection with preparing its report of which the Company's auditor is unaware; and
- he (she) has taken all the steps that he (she) ought to have taken as a Director in order to make himself (herself) aware of any information needed by the Company's auditor in connection with preparing its report and to establish that the Company's auditor is aware of that information.

Independent auditor

As described in more detail on page 80 of the Audit Committee report, an audit tender process was completed during 2020, and as a result the Board will be proposing a resolution to appoint Deloitte as auditor at the 2021 AGM.

Annual General Meeting

The 2021 AGM will be held at 10.30am on Wednesday 28 April 2021 at the Company's registered office at Origin One, 108 High Street, Crawley, West Sussex RH10 1BD. Due to the UK Government's restrictions on public gatherings and AGMs specifically due to the COVID-19 pandemic, shareholders will not be permitted to attend the AGM in person. The Board therefore strongly urges all shareholders to register their votes in advance by appointing the Chair of the AGM as their proxy. The Board does not recommend the appointment of any other person as your proxy as they will not be able to attend the AGM and your vote will not be counted. More details can be found in the Company's Notice of 2021 Annual General Meeting and on the Company's website at https://corporate.spirent.com.

By Order of the Board

Angus Iveson
Company Secretary
11 March 2021

Spirent Communications plc
Company number 470893

Directors' responsibilities statement

The Directors are responsible for preparing the Annual Report, the Report on Directors' remuneration, the consolidated financial statements of the Group and the financial statements of the parent Company in accordance with applicable United Kingdom law and regulations.

Company law requires the Directors to prepare financial statements for each financial year. Under that law they have elected to prepare the consolidated financial statements of the Group in accordance with international accounting standards in conformity with the requirements of the Companies Act 2006 and have elected to prepare the parent Company financial statements in accordance with UK Generally Accepted Accounting Principles (including FRS 101) and applicable law.

The consolidated financial statements of the Group are required by law and International Financial Reporting Standards (IFRS) to present fairly for each financial period the financial position and performance of the Group; the Companies Act 2006 provides, in relation to such financial statements, that references in the relevant part of that Act to financial statements giving a true and fair view are references to their achieving a fair presentation.

The parent Company financial statements are required by law to give a true and fair view of the state of affairs and of the profit or loss of the parent Company.

Under the Financial Conduct Authority's Disclosure Guidance and Transparency Rules, consolidated financial statements are required to be prepared in accordance with international financial reporting standards (IFRSs) adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union.

In preparing each of the consolidated financial statements of the Group and parent Company financial statements, the Directors are required to:

- select suitable accounting policies in accordance with IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- in respect of the consolidated financial statements of the Group, state whether international accounting standards in conformity with the requirements of the Companies Act 2006 and IFRSs adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union have been followed, subject to any material departures disclosed and explained in the consolidated financial statements;
- in respect of the parent Company financial statements, state whether applicable UK Accounting Standards, including FRS 101, have been followed, subject to any material departures disclosed and explained in the parent Company financial statements;
- prepare the financial statements on a going concern basis unless it is inappropriate to presume the Group and the parent Company will continue in operational business for the foreseeable future;
- present information including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information; and
- provide additional disclosures when compliance with the specific requirements in IFRSs and in respect of the parent Company financial statements, FRS 101, is insufficient to enable users to understand the impact of particular transactions, other events and conditions on the Group and parent Company financial position and financial performance.

The Directors confirm that they have complied with the above requirements in preparing the financial statements.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's and Group's transactions and disclose with reasonable accuracy at any time the financial position of the Group and the parent Company and enable them to ensure that parent Company and the Group financial statements comply with the Companies Act 2006. They have general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group and to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the Directors are also responsible for preparing a strategic report, a Directors' report, a Directors' remuneration report and a statement on corporate governance that comply with the law and those regulations. They are also responsible for the maintenance and integrity of the corporate and financial information included on the Company's website at https://corporate.spirent.com.

Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

The Directors consider that the Annual Report, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position, performance, business model and strategy.

This Annual Report complies with the Disclosure Guidance and Transparency Rules (DTR) of the Financial Conduct Authority in respect of the requirement to produce an annual financial report.

The Annual Report and consolidated financial statements are the responsibility of, and have been approved by, the Directors. Each of the Directors confirms that, to the best of their knowledge:

- the consolidated financial statements of the Group and parent Company financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and the profit or loss of the Company and the undertakings included in the consolidation taken as a whole; and
- the Annual Report including the strategic report, includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

By Order of the Board

Paula Bell
Chief Financial & Operations Officer
11 March 2021

Independent auditor's report to the members of Spirent Communications plc

Opinion

In our opinion:

- Spirent Communications plc's Group financial statements and parent Company financial statements (the 'financial statements') give a true and fair view of the state of the Group's and of the parent Company's affairs as at 31 December 2020 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union;
- the parent Company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006.

We have audited the financial statements of Spirent Communications plc (the 'parent Company') and its subsidiaries (the 'Group') for the year ended 31 December 2020 which comprise:

Group	Parent Company
Consolidated balance sheet as at 31 December 2020	Balance sheet as at 31 December 2020
Consolidated income statement for the year then ended	Statement of changes in equity for the year then ended
Consolidated statement of comprehensive income for the year then ended	Related notes 1 to 20 to the parent Company financial statements including a summary of significant accounting policies
Consolidated statement of changes in equity for the year then ended	
Consolidated cash flow statement for the year then ended	
Related notes 1 to 35 to the financial statements, including a summary of significant accounting policies	

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law and International Accounting Standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union. The financial reporting framework that has been applied in the preparation of the parent Company financial statements is applicable law and United Kingdom Accounting Standards, including FRS 101 "Reduced Disclosure Framework" (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report below. We are independent of the Group and parent Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the Directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate. Our evaluation of the Directors' assessment of the Group and parent Company's ability to continue to adopt the going concern basis of accounting included:

- In conjunction with our walkthrough of the Group's financial close process, we confirmed our understanding of management's going concern assessment process and engaged with management to ensure all key factors were considered in their assessment.
- We obtained management's going concern assessment, including the detailed cash forecast for the period ending 31 December 2020 supplemented with additional cash flows for the 3 months ended 31 March 2022 based on the Group's business plan for 2022. The Group has performed reverse stress testing in order to identify what factors would lead to the Group utilising all liquidity during the going concern period.
- We have tested the factors and assumptions included in each modelled scenario for the cash flow forecasts, including testing the effect of external factors on these forecasts, including the anticipated impact of US/China trade tensions, COVID-19 and Brexit. We considered the appropriateness of the methods used to calculate the cash forecasts and determined through inspection and testing of the methodology and calculations that the methods utilised were appropriately sophisticated to be able to make an assessment for the entity.
- We considered the mitigating factors included in the cash flow forecasts that are within control of the Group. This includes review of the Group's non-operating cash outflows and evaluating the Group's ability to control these outflows as mitigating actions if required.

Independent auditor's report to the members of Spirent Communications plc continued

Conclusions relating to going concern continued

- We have modelled adverse scenarios in their cash forecasts in order to incorporate unexpected changes to the forecasted liquidity of the Group.
- We reviewed the Group's going concern disclosures included in the Annual Report in order to assess that the disclosures were appropriate and in conformity with the reporting standards.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group and parent Company's ability to continue as a going concern for the period ended 31 March 2022, which is at least 12 months from the date of approval of the financial statements from when the financial statements are authorised for issue.

In relation to the Group and parent Company's reporting on how they have applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the Directors' statement in the financial statements about whether the Directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the Directors with respect to going concern are described in the relevant sections of this report. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's ability to continue as a going concern.

Overview of our audit approach

Audit scope	• We performed an audit of the complete financial information of four components and audit procedures on specific balances for a further four components. • The components where we performed full or specific audit procedures accounted for 95 per cent of profit before tax adjusted for non-recurring items, 93 per cent of revenue and 96 per cent of total assets.
Key audit matters	• Inappropriate revenue recognition. • Recoverability of deferred tax assets. • Carrying value of goodwill (Group) and investments in subsidiary undertakings (parent Company only).
Materiality	• Overall Group materiality of $4.9 million which represents 5 per cent of profit before tax adjusted for non-recurring items.

An overview of the scope of our audit

Tailoring the scope

Our assessment of audit risk, our evaluation of materiality and our allocation of performance materiality determine our audit scope for each entity within the Group. Taken together, this enables us to form an opinion on the consolidated financial statements. We take into account size, risk profile, the organisation of the Group and effectiveness of Group-wide controls, changes in the business environment and other factors such as recent internal audit results when assessing the level of work to be performed at each entity.

In assessing the risk of material misstatement to the Group financial statements, and to ensure that we had adequate quantitative coverage of significant accounts in the financial statements of the reporting components of the Group, we selected components covering entities within the United Kingdom, North America and Asia, which represent the principal business units within the Group.

Of the eight components selected, we performed an audit of the complete financial information of four components (full scope components) which were selected based on their size or risk characteristics. For the remaining four components (specific scope components), we performed audit procedures on specific accounts within that component that we considered had the potential for the greatest impact on the significant accounts in the financial statements either because of the size of these accounts or their risk profile.

Reporting components	2020 Number	2020 % of Group adjusted profit before tax*	2020 % of Group revenue	2020 % of Group assets	2020 See note	2019 Number	2019 % of Group adjusted profit before tax*	2019 % of Group revenue	2019 % of Group assets
Full scope	4	108	93	62	1,2	4	102	93	68
Specific scope	4	(13)	–	34	3,4	4	(8)	1	28
Full and specific scope coverage	8	95	93	96		8	94	94	96
Remaining components	16	5	7	4	5	16	6	6	4
Total reporting components	24	100	100	100		24	100	100	100

Notes

* Profit before tax adjusted for non-recurring items as defined in the 'Our application of materiality' section of this report.

1. The Group audit risk in relation to the carrying value of goodwill was subject to full scope audit procedures by the Group audit team on the entire balance.
2. The Group audit risk in relation to the recoverability of deferred tax assets was subject to full scope audit procedures by the Group audit team on the entire balance.
3. One of the four specific scope components relates to the corporate division of the parent Company which includes consolidation and elimination adjustments.
4. The specific scope loss before tax adjusted for non-recurring items coverage of negative 13 per cent represents three specific scope components having a positive contribution of 3 per cent offset by the corporate component having a negative contribution of 16 per cent.
5. Of the remaining components that together represent 5 per cent of the Group's profit before tax adjusted for non-recurring items, none are individually greater than 2 per cent of the Group's profit before tax adjusted for non-recurring items. For these components, we performed other procedures, including analytical review procedures and specified procedures to respond to any potential risks of material misstatement to the Group financial statements.

Changes from the prior year

Our scoping is comparable with the prior year.

Involvement with component teams

In establishing our overall approach to the Group audit, we determined the type of work that needed to be undertaken at each of the components by us, as the Group audit engagement team, or by component auditors from other EY global network firms operating under our instruction. Of the four full scope components, audit procedures were overseen on one of these directly by the Group audit partner with the other three performed by component audit teams. Of the four specific scope components audit procedures were performed on three of these directly by the Group audit team and one by component audit teams. Where the work was performed by component auditors, we determined the appropriate level of involvement to enable us to determine that sufficient audit evidence had been obtained as a basis for our opinion on the Group as a whole.

At the start of the audit, a Global Team Planning event was held in the UK with representatives from all full and specific scope component audit teams in attendance. Detailed instructions were sent to all auditors in these locations. These instructions covered the significant areas that should be addressed by the component team auditors (which included the relative risks of material misstatement detailed above) and set out the information to be reported back to the Group audit team. Travel restrictions as a result of COVID-19 resulted in the Group audit team performing a revised Group oversight programme with virtual meetings with our component teams to discuss and direct their planned audit approach, holding virtual meetings with local management and reviewing audit working papers on risk areas. The Senior Statutory Auditor performed these procedures remotely, and held all interactions virtually and no change was made to the extent of our oversight of the components, nor to the extent of the work performed by the components. We held numerous meetings with our component teams, including via video conference, and performed remote reviews of the key workpapers associated with the component teams' audit.

The Group team interacted regularly with the component teams where appropriate during various stages of the audit, including attendance at all closing meetings by video conference, review of key working papers and were responsible for the scope and direction of the audit process. This, together with the additional procedures performed at Group level, gave us appropriate evidence for our opinion on the Group financial statements.

Independent auditor's report to the members of Spirent Communications plc continued

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in our opinion thereon, and we do not provide a separate opinion on these matters.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Inappropriate revenue recognition Refer to the Audit Committee report (pages 77 to 78); accounting policies (pages 133 to 134); and note 3 of the consolidated financial statements (page 138). The Group has reported revenues of $522.4 million (2019 $503.6 million). The Group enters into multi-element contracts comprising software, hardware and post contract support service elements. Such arrangements can be complex or judgemental and can require separate recognition of the different elements of revenue in order to comply with Group accounting policies and IFRS. Furthermore, the impact of external factors on business sentiment and pressure on management to meet certain targets may result in inappropriate recognition of revenue and associated balances as a result of judgement over revenue recognition on transactions completed closer to the year end. This risk is consistent with the prior year.	We performed full and specific scope audit procedures over this risk area in four locations, which covered 93 per cent of Group reported revenue. For the audit of revenue recognition in each full and specific scope audit location: • we performed walkthroughs of significant classes of revenue transactions and assessed the design effectiveness of key controls; • for a sample of transactions in each location, we agreed revenue recognised to sales contracts focusing on the allocation of revenue in contracts with separate performance obligations consisting of hardware, software and support services; • we performed detailed testing of the completeness and valuation of deferred revenue and other associated balance sheet accounts by selecting a sample of transactions included within these balances to ensure they have been recognised in accordance with Group accounting policies and IFRS; • we performed cut-off testing by tracing a sample of revenue transactions close to the year end to third party delivery notes and customer acceptance documentation; • we validated management's approach to determining their best estimate of relative standalone selling prices in accordance with IFRS; • for a sample of transactions, we performed procedures to ensure that the transactions price was allocated to separate performance obligations on an appropriate and consistent basis. This included recalculating revenue allocations, agreeing revenue to cash receipts and, where appropriate, testing whether revenue had been deferred correctly at year end; • we tested a sample of journal entries made to revenue specifically focusing on significant manual or unusual journal entries to revenue to test whether each entry is supported by an appropriate, underlying business rationale, is properly authorised, accounted for correctly and properly recorded in the correct period; and • we also considered the adequacy of the Group's disclosures in respect of the accounting policies for revenue recognition under IFRS 15 as disclosed in notes 2 and 3.	Based on the procedures performed, we concluded that transaction prices have been appropriately allocated to the separate performance obligations in the Group's contracts with customers and that revenue recognised in the period is supported by relevant evidence of delivery and, where applicable, customer acceptance. Overall we concluded that both revenue recognised in the period and deferred revenue have been accounted for appropriately and in line with the Group's accounting policy. We concluded the Group's disclosures in respect of the accounting policies for revenue recognition under IFRS 15 are appropriate.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Recoverability of deferred tax assets Refer to the Audit Committee report (page 78); accounting policies (page 136); and note 26 of the consolidated financial statements (pages 157 to 158). The Group has net deferred tax assets of $21.7 million at 31 December 2020 (2019 $22.4 million). There is a risk that inappropriate recognition of brought forward tax losses and other temporary differences due to the volatility in forecast taxable income may result in incorrect recognition and disclosure of deferred tax assets. Furthermore, there is risk of incorrect application of legislative changes to deferred tax recognition. The risk is consistent with the prior year.	The following procedures on the deferred tax assets were performed centrally by the Group team supported by overseas component teams, including specialists: • we performed walkthroughs of the tax process and assessed the design effectiveness of key controls; • with the assistance of our EY tax specialists, we have evaluated management's rationale for the forecast periods selected in determining the likelihood of the Group generating suitable future profit to support the recognition of deferred tax assets; • we evaluated the historical accuracy of management's forecasting of taxable profits, the integrity of the forecast models and the consistency of the projections with other forecasts made by management and approved by the Board; • with the assistance of our US tax specialists, we assessed the completeness and correctness of management's assessment of the impact of the US Tax legislation and its correct application of the methods to calculate deferred tax assets; • we considered the impact of the restrictions on recognising carry forward losses and assessed the appropriateness of management's assessment that they would be used during the forecast period; and • we considered the accuracy and appropriateness of related disclosures and offsetting of deferred tax balances in the Group financial statements.	We concluded that management's judgements in relation to the extent of recognition of deferred tax assets and related disclosures are appropriate.

Independent auditor's report to the members of Spirent Communications plc continued

Key audit matters continued

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Carrying value of goodwill (Group), and investments in subsidiary undertakings (parent Company) Refer to the Audit Committee report (page 78); accounting policies (page 129); and note 13 of the consolidated financial statements (pages 149 to 151). The Group has goodwill of $157.5 million (2019 $157.1 million) and investments in subsidiary undertakings of £413.2 million (2019 £388.0 million). Given the continuing uncertain political and economic environment, there is a risk that goodwill in the Group financial statements and investments in the parent Company financial statements may be overstated. In particular, we continued to monitor the Connected Devices segment as a result of greater dependency on cash flows from 5G and the inherent uncertainty over timing and quantum due to the current political and economic environment. The risk is consistent with the prior year.	The following procedures on the carrying value of goodwill and investments in subsidiary undertakings were performed centrally by the Group team: • we performed walkthroughs to gain an understanding of management's process and methodology used in preparing their assessment on the carrying value of goodwill and investments in subsidiary undertakings; • with the support of our valuation specialists, we assessed the discount rate used in the impairment models by obtaining the underlying data used in the calculation and benchmarking it against comparable organisations and market data; • we validated the growth rates assumed in the models by comparing them to economic and industry forecasts; • we challenged management on the achievability of the cash flow forecasts, the downside risks relating to continuing uncertain economic and political environment resulting from COVID-19, Brexit and sustained tensions in US/China relations, and we assessed the projected financial information against original forecasts and other market data to assess the robustness of management's forecasting process; • we analysed the historical accuracy of budgets to actual results to determine whether forecast cash flows are reliable based on past experience; • we performed sensitivity analyses by testing key assumptions in the model to recalculate a range of potential outcomes in relation to the size of the headroom between carrying value and fair value; • we have compared the carrying value of the CGUs to the market capitalisation of the Group to ensure no further indicators of potential impairment risk; • we considered the appropriateness of the related disclosures provided in note 13 to the Group financial statements; and • we considered the impact of the post-balance sheet combination of Connected Devices and Lifecycle Service Assurance CGUs in the context of our Goodwill impairment assessment as at 31 December 2020.	We concluded that there is no goodwill impairment as at 31 December 2020. We conclude the increase in headroom in the Connected Devices CGU as a result of improved performance and outlook following increased demand in 5G is considered supportable. We also concluded that there is no impairment required to be recorded with respect to parent Company investments. We concluded the disclosure in note 13 to the Group financial statements is appropriate.

In 2019, our auditor's report included the same key audit matters as in 2020.

Our application of materiality

We apply the concept of materiality in planning and performing the audit, in evaluating the effect of identified misstatements on the audit and in forming our audit opinion.

Materiality

The magnitude of an omission or misstatement that, individually or in the aggregate, could reasonably be expected to influence the economic decisions of the users of the financial statements. Materiality provides a basis for determining the nature and extent of our audit procedures.

We determined materiality for the Group to be $4.9 million (2019 $4.4 million), which is 5 per cent (2019 5 per cent) of profit before tax adjusted for non-recurring items, of $98.9 million (2019 $89.2 million). We consider that profit before tax adjusted for non-recurring items provides us with a consistent year-on-year basis for determining materiality and is the most relevant performance measure to the stakeholders of the entity. Detailed audit procedures are performed on material non-recurring items.

We determined materiality for the parent Company to be £3.4 million (2019 £3.3 million), which is 1 per cent (2019 1 per cent) of net assets. Parent Company materiality is different to Group materiality as it is calculated on a different basis as it is primarily a head office company rather than the trading group.

Starting basis

- Profit before tax $95.8 million (2019 profit before tax $89.6 million)

Adjustments

- Adjusted for non-recurring items:
  - Exceptional costs of $3.1 million (2019 exceptional income of $0.5 million)
  - Acquisition related costs of nil (2019 acquisition related costs of $0.1 million)

Materiality

- Profit before tax adjusted for non-recurring items $98.9 million (basis for materiality) (2019 $89.2 million)
- Materiality of $4.9 million (2019 $4.4 million) (5 per cent of materiality basis)

Management make further adjustments to profit before tax adjusted for non-recurring items (basis for materiality) to arrive at adjusted operating profit, the measure used by the Directors to evaluate the overall performance of the Group. These adjustments include acquired intangible asset amortisation of $0.5 million (2019 $1.2 million), share-based payment expense of $4.2 million (2019 $3.5 million), and net interest income of $0.1 million (2019 $1.0 million). Adjusting for these items gives adjusted operating profit of $103.5 million (2019 $92.9 million).

The $0.5 million increase in materiality is in proportion to the $9.7 million increase of profit before tax adjusted for non-recurring items (2020 $98.9 million, 2019 $89.2 million). That increase is a result of the $10.6 million increase in adjusted operating profit (2020 $103.5 million, 2019 $92.9 million), the $0.7 million reduction in acquired intangible asset amortisation (2020 $0.5 million, 2019 $1.2 million), and the $0.9 million decrease in net finance income (2020 $0.1 million, 2019 $1.0 million) partially offset by a $0.7 million increase in share-based payment expense (2020 $4.2 million, 2019 $3.5 million).

During the course of our audit, we reassessed initial materiality and the only change in final materiality was to reflect the actual reported performance of the Group in the year.

Performance materiality

The application of materiality at the individual account or balance level. It is set at an amount to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality.

On the basis of our risk assessments, together with our assessment of the Group's overall control environment, our judgement was that performance materiality was 75 per cent (2019 75 per cent) of our planning materiality, namely $3.6 million (2019 $3.3 million). We have set performance materiality at this percentage to ensure that total detected and undetected audit differences do not exceed our planning materiality of $4.9 million (2019 $4.4 million) for the financial statements as a whole.

Audit work at component locations for the purpose of obtaining audit coverage over significant financial statement accounts is undertaken based on a percentage of total performance materiality. The performance materiality set for each component is based on the relative scale and risk of the component to the Group as a whole and our assessment of the risk of misstatement at that component. In the current year, the range of performance materiality allocated to components was $0.7 million to $2.3 million (2019 $0.6 million to $2.1 million).

Independent auditor's report to the members of Spirent Communications plc continued

Reporting threshold

An amount below which identified misstatements are considered as being clearly trivial.

We agreed with the Audit Committee that we would report to them all uncorrected audit differences in excess of $0.24 million (2019 $0.22 million), which is set at 5 per cent of planning materiality, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds.

We evaluate any uncorrected misstatements against both the quantitative measures of materiality discussed above and in light of other relevant qualitative considerations in forming our opinion.

Other information

The other information comprises the information included in the Annual Report, including the strategic report (set out on pages 1 to 58), corporate governance and Directors' report (set out on pages 107 to 111), and other information (set out on pages 190 to 196) other than the financial statements and our Auditor's report thereon. The Directors are responsible for the other information contained within the Annual Report.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact.

We have nothing to report in this regard.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic report and the Directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic report and the Directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the Group and the parent Company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic report or the Directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent Company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent Company financial statements and the part of the Directors' remuneration report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Corporate governance statement

The Listing Rules require us to review the Directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the Group and Company's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements or our knowledge obtained during the audit:

- Directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified set out on page 110;
- Directors' explanation as to its assessment of the company's prospects, the period this assessment covers and why the period is appropriate set out on page 110;
- Directors' statement on fair, balanced and understandable set out on page 75;
- Board's confirmation that it has carried out a robust assessment of the emerging and principal risks set out on page 78;
- The section of the Annual Report that describes the review of effectiveness of risk management and internal control systems set out on page 78; and;
- The section describing the work of the Audit Committee set out on page 76.

Responsibilities of Directors

As explained more fully in the Directors' responsibilities statement set out on page 112, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Group and parent Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or the parent Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect irregularities, including fraud. The risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion. The extent to which our procedures are capable of detecting irregularities, including fraud is detailed below.

However, the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the Group and determined that the most significant frameworks that are directly relevant to specific assertions in the financial statements are those that relate to the reporting framework (IFRS, FRS 101, the Companies Act 2006 and the UK Corporate Governance Code) and the relevant tax compliance regulations in the jurisdictions in which the Group operates.
- We understood how Spirent Communications plc is complying with those legal and regulatory frameworks by making enquires of management, internal audit, those responsible for legal and compliance procedures and the Company Secretary. We corroborated our enquires through our review of Board minutes and papers provided to the Audit Committee.
- We assessed the susceptibility of the Group's financial statements to material misstatement, including how fraud might occur, by meeting with management from various parts of the business to understand where it considered there was susceptibility to fraud. We also considered performance targets and their propensity to influence efforts made by management to manage earnings. We considered the programmes and controls that the Group has established to address risks identified, or that otherwise prevent, deter and detect fraud; and how senior management monitors those programmes and controls.

Independent auditor's report to the members of Spirent Communications plc continued

Explanation as to what extent the audit was considered capable of detecting irregularities, including fraud continued

- Based on this understanding we designed our audit procedures to identify non-compliance with such laws and regulations identified in the paragraphs above. Our procedures involved: journal entry testing, with a focus on manual consolidation journals and journals indicating large or unusual transactions based on our understanding of the business; enquiries of legal counsel, Group management, internal audit, and component management. Where the risk was considered to be higher, we performed audit procedures to address the identified fraud risk as referred to in the key audit matters section above.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at https://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Other matters we are required to address

- We were appointed by the Company on 24 March 2020 to audit the financial statements for the year ending 31 December 2020.
- Following the recommendation of the Board we were appointed (as predecessor firm Lindsay, Jamieson & Haldane) by the Group at its Annual General Meeting on 9 May 1950 to audit the financial statements of the Group for the period ending 31 December 1949. Our total uninterrupted period of engagement is 71 years, covering periods from our appointment through to the period ending 31 December 2020.
- The non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the parent Company and we remain independent of the Group and the parent Company in conducting the audit.
- The audit opinion is consistent with the additional report to the Audit Committee explaining the results of our audit.

Use of our report

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Joe Yglesia
(Senior Statutory Auditor)
For and on behalf of Ernst & Young LLP, Statutory Auditor
Reading
11 March 2021

Consolidated income statement

Year to 31 December 2020

	Notes	Year ended 31 December 2020 Adjusted $ million	Year ended 31 December 2020 Adjusting items[1] $ million	Year ended 31 December 2020 Reported $ million	Year ended 31 December 2019 Adjusted $ million	Year ended 31 December 2019 Adjusting items[1] $ million	Year ended 31 December 2019 Reported $ million
Revenue	3	**522.4**	**–**	**522.4**	503.6	–	503.6
Cost of sales		**(139.0)**	**–**	**(139.0)**	(135.0)	–	(135.0)
Gross profit		**383.4**	**–**	**383.4**	368.6	–	368.6
Product development	3	**(103.1)**	**–**	**(103.1)**	(96.5)	–	(96.5)
Selling and marketing		**(123.4)**	**–**	**(123.4)**	(129.2)	–	(129.2)
Administration		**(53.4)**	**–**	**(53.4)**	(50.0)	–	(50.0)
Other items		**–**	**(7.8)**	**(7.8)**	–	(4.3)	(4.3)
Operating profit		**103.5**	**(7.8)**	**95.7**	92.9	(4.3)	88.6
Other items (charged)/credited in arriving at operating profit:							
Exceptional items	5	**–**	**(3.1)**	**(3.1)**	–	0.5	0.5
Acquisition related costs	33	**–**	**–**	**–**	–	(0.1)	(0.1)
Acquired intangible asset amortisation		**–**	**(0.5)**	**(0.5)**	–	(1.2)	(1.2)
Share-based payment	31	**–**	**(4.2)**	**(4.2)**	–	(3.5)	(3.5)
Other items		**–**	**(7.8)**	**(7.8)**	–	(4.3)	(4.3)
Finance income	6	**1.6**	**–**	**1.6**	2.8	–	2.8
Finance costs	7	**(1.5)**	**–**	**(1.5)**	(1.8)	–	(1.8)
Profit before tax	4	**103.6**	**(7.8)**	**95.8**	93.9	(4.3)	89.6
Tax	10	**(14.1)**	**2.7**	**(11.4)**	(12.2)	0.6	(11.6)
Profit for the year attributable to owners of the parent Company		**89.5**	**(5.1)**	**84.4**	81.7	(3.7)	78.0
Earnings per share (cents)	11						
Basic		**14.68**		**13.84**	13.40		12.79
Diluted		**14.53**		**13.71**	13.23		12.63

Note

1. Adjusting items comprise exceptional items, acquisition related costs, amortisation of acquired intangible assets, share-based payment, tax on adjusting items and any over/under provision in respect of prior year tax.

The performance of the Group is assessed using a variety of non-GAAP alternative performance measures which are presented to provide additional financial information that is regularly reviewed by management. Adjusting items are identified and excluded by virtue of their size, nature or incidence as they do not reflect management's evaluation of the underlying trading performance of the Group. The alternative performance measures are presented on pages 192 and 193.

The notes on pages 128 to 166 and pages 188 and 189 form part of these financial statements.

Consolidated statement of comprehensive income

Year to 31 December 2020

	Notes	**2020 $ million**	2019 $ million
Profit for the year attributable to owners of the parent Company		**84.4**	78.0
Other comprehensive income/(loss)			
Items that may subsequently be reclassified to profit or loss:			
– Exchange differences on retranslation of foreign operations		**1.0**	1.9
Items that will not subsequently be reclassified to profit or loss:			
– Re-measurement of the net defined benefit pension asset	9	**(5.3)**	2.7
– Income tax effect of re-measurement of the net defined benefit pension asset	10	**1.0**	(0.5)
– Re-measurement of the deferred compensation liability	9	**(0.3)**	(0.4)
– Income tax effect of re-measurement of the deferred compensation liability	10	**0.1**	0.1
		(4.5)	1.9
Other comprehensive income/(loss)		**(3.5)**	3.8
Total comprehensive income for the year attributable to owners of the parent Company		**80.9**	81.8

The notes on pages 128 to 166 and pages 188 and 189 form part of these financial statements.

Consolidated balance sheet

At 31 December 2020

	Notes	2020 $ million	2019 $ million
Assets			
Non-current assets			
Intangible assets	13	**159.9**	160.3
Property, plant and equipment	14	**25.8**	29.5
Right-of-use assets	15	**23.3**	26.0
Trade and other receivables	19	**6.8**	6.9
Assets recognised from costs to obtain a contract	20	**0.3**	0.3
Defined benefit pension plan surplus	9	**13.0**	11.6
Deferred tax asset	26	**23.7**	22.4
		252.8	257.0
Current assets			
Inventories	18	**22.3**	20.6
Trade and other receivables	19	**132.3**	142.8
Assets recognised from costs to obtain a contract	20	**0.6**	0.5
Other financial assets	19	**0.2**	0.1
Current tax asset		**0.4**	0.5
Cash and cash equivalents	21	**241.2**	183.2
		397.0	347.7
Total assets		**649.8**	604.7
Liabilities			
Current liabilities			
Trade and other payables	22	**(73.6)**	(81.8)
Contract liabilities	24	**(65.1)**	(55.5)
Lease liabilities	25	**(8.2)**	(8.5)
Current tax liability		**(2.1)**	(3.8)
Provisions	27	**(6.2)**	(4.8)
		(155.2)	(154.4)
Non-current liabilities			
Trade and other payables	22	**(1.0)**	(1.0)
Contract liabilities	24	**(18.8)**	(13.6)
Lease liabilities	25	**(20.0)**	(24.5)
Deferred tax liability	26	**(2.0)**	–
Defined benefit pension plan deficit	9	**(6.4)**	(5.5)
Provisions	27	**(3.6)**	(3.4)
		(51.8)	(48.0)
Total liabilities		**(207.0)**	(202.4)
Net assets		**442.8**	402.3
Capital and reserves	29		
Share capital		**27.9**	26.8
Share premium account		**27.6**	26.6
Capital redemption reserve		**18.0**	17.4
Other reserves		**12.5**	15.2
Translation reserve		**11.1**	10.1
Retained earnings		**345.7**	306.2
Total equity attributable to owners of the parent Company		**442.8**	402.3

The notes on pages 128 to 166 and pages 188 and 189 form part of these financial statements.

Signed on behalf of the Board

Paula Bell
Director
11 March 2021

Consolidated statement of changes in equity

	Notes	Share capital	Share premium account	Capital redemption reserve	Other reserves	Translation reserve	Retained earnings	Total equity
		Attributable to the equity holders of the parent Company						$ million
At 1 January 2019		26.0	25.7	16.8	17.5	8.2	257.7	351.9
Profit for the year		–	–	–	–	–	78.0	78.0
Other comprehensive income[1]		–	–	–	–	1.9	1.9	3.8
Total comprehensive income		–	–	–	–	1.9	79.9	81.8
Share-based payment	31	–	–	–	–	–	3.9	3.9
Tax credit on share incentives	10	–	–	–	–	–	1.9	1.9
Equity dividends	12	–	–	–	–	–	(28.6)	(28.6)
Employee Share Ownership Trust	29	–	–	–	–	–	(8.6)	(8.6)
Exchange adjustment		0.8	0.9	0.6	(2.3)	–	–	–
At 1 January 2020		**26.8**	**26.6**	**17.4**	**15.2**	**10.1**	**306.2**	**402.3**
Profit for the year		**–**	**–**	**–**	**–**	**–**	**84.4**	**84.4**
Other comprehensive income/(loss)[2]		**–**	**–**	**–**	**–**	**1.0**	**(4.5)**	**(3.5)**
Total comprehensive income		**–**	**–**	**–**	**–**	**1.0**	**79.9**	**80.9**
Share-based payment	31	**–**	**–**	**–**	**–**	**–**	**4.7**	**4.7**
Tax credit on share incentives	10	**–**	**–**	**–**	**–**	**–**	**0.4**	**0.4**
Equity dividends	12	**–**	**–**	**–**	**–**	**–**	**(33.6)**	**(33.6)**
Employee Share Ownership Trust	29	**–**	**–**	**–**	**–**	**–**	**(11.9)**	**(11.9)**
Exchange adjustment		**1.1**	**1.0**	**0.6**	**(2.7)**	**–**	**–**	**–**
At 31 December 2020		**27.9**	**27.6**	**18.0**	**12.5**	**11.1**	**345.7**	**442.8**

Notes
1. The amount included in other comprehensive income for 2019 of $1.9 million represents re-measurement gains on the net defined benefit pension asset of $2.7 million, net of a tax charge of $0.5 million, and re-measurement losses on the deferred compensation liability of $0.4 million, net of a tax credit of $0.1 million. The amount included in the translation reserve of $1.9 million represents other comprehensive income related to the translation of foreign operations.
2. The amount included in other comprehensive income/(loss) for 2020 of $4.5 million represents re-measurement losses on the net defined benefit pension asset of $5.3 million, net of a tax credit of $1.0 million, and re-measurement losses on the deferred compensation liability of $0.3 million, net of a tax credit of $0.1 million. The amount included in the translation reserve of $1.0 million represents other comprehensive income related to the translation of foreign operations.

The notes on pages 128 to 166 and pages 188 and 189 form part of these financial statements.

Consolidated cash flow statement

Year to 31 December 2020

	Notes	2020 $ million	2019 $ million
Cash flows from operating activities			
Cash flow from operations	32	**132.0**	124.9
Tax paid		**(10.8)**	(5.6)
Net cash inflow from operating activities		**121.2**	119.3
Cash flows from investing activities			
Interest received		**1.5**	2.6
Purchase of intangible assets	13	**(0.5)**	(2.0)
Purchase of property, plant and equipment	14	**(9.5)**	(10.9)
Proceeds from the sale of property, plant and equipment		**1.0**	1.0
Lease payments received from finance leases	15	**0.5**	0.4
Acquisition of business	33	**–**	(1.9)
Net cash used in investing activities		**(7.0)**	(10.8)
Cash flows from financing activities			
Lease liability principal repayments	25	**(10.2)**	(8.6)
Lease liability interest paid	25	**(1.4)**	(1.7)
Dividend paid	12	**(33.6)**	(28.6)
Share purchase into Employee Share Ownership Trust	29	**(11.9)**	(8.6)
Net cash used in financing activities		**(57.1)**	(47.5)
Net increase in cash and cash equivalents		**57.1**	61.0
Cash and cash equivalents at the beginning of the year		**183.2**	121.6
Effect of foreign exchange rate changes		**0.9**	0.6
Cash and cash equivalents at the end of the year	21	**241.2**	183.2

The notes on pages 128 to 166 and pages 188 and 189 form part of these financial statements.

Notes to the consolidated financial statements

1. Corporate information

The Group's consolidated financial statements for the year ended 31 December 2020 were authorised for issue by the Board of Directors on 11 March 2021. Spirent Communications plc is a public limited company incorporated and domiciled in England and Wales (registration number 00470893). The registered address of the Company is Origin One, 108 High Street, Crawley, West Sussex RH10 1BD, United Kingdom.

The Company's Ordinary Shares are traded on the London Stock Exchange.

The Group financial statements have been prepared in accordance with International Accounting Standards in conformity with the requirements of the Companies Act 2006 and International Financial Reporting Standards (IFRS) adopted pursuant to Regulation (EC) No. 1606/2002 as it applies in the European Union.

The Company has elected to prepare the Company financial statements in accordance with UK Accounting Standards. These are presented on pages 167 to 168 and the accounting policies in respect of the Company are set out on pages 169 to 175.

2. Significant accounting policies

Accounting convention

The consolidated financial statements are prepared on a historical cost basis apart from certain financial instruments that have been measured at fair value.

Going concern basis of accounting

In adopting the going concern basis for preparing the consolidated financial statements, the Directors have considered the Group's principal risks and uncertainties as set out on pages 45 to 49, including the potential impact of the COVID-19 pandemic on the Group and any longer-term impact to the global economy. In 2020, the COVID-19 pandemic has not had a significant impact on the Group's trading performance and the Group has continued to operate effectively.

The Directors have also considered sensitivities in respect of potential downside scenarios, including stress testing the latest cash flow projections that cover a period of 12 months from the date of approval of these consolidated financial statements. In these scenarios, the Group has more than sufficient headroom in its available resources.

At 31 December 2020, the Group had cash balances of $241.2 million and external debt only in relation to its lease liabilities.

The Directors have reviewed the detailed financial projections for the period ending 31 December 2021, as well as the business plan and cash flows for the three months ending 31 March 2022. The Directors have also considered the period to the end of 2023 which forms part of the Group's longer term viability assessment. In addition, they have considered the principal risks faced by the Group, the potential impact of COVID-19, the sensitivity analysis and the Group's significant financial headroom and are satisfied that the Group has adequate financial resources to continue in operational existence for the foreseeable future, a period of at least 12 months from the date of approval of this report. Accordingly, the going concern basis of accounting continues to be used in the preparation of the consolidated financial statements.

New accounting standards

There have been no applicable new standards, amendments to standards and interpretations effective from 1 January 2020 that have been applied by the Group which have resulted in a significant impact on its consolidated results or financial position.

Presentation

A new line item, 'Contract liabilities', has been added to the Group's balance sheet in order to present the Group's contract liabilities arising under IFRS 15 'Revenue from Contracts with Customers'. Deferred income, a separate line item in the Group's balance sheet, has been reclassified to 'Contract liabilities' together with the 'Payments received on account' balance from 'Trade and other payables – current'. The presentation of the comparative amounts in the Group's balance sheet has also been amended to reflect this change. The impact of the reclassifications is set out below.

$ million	**Decrease/ (increase) at 31 December 2019**	Decrease/ (increase) at 1 January 2019
Current liabilities		
Deferred income	**53.2**	55.2
Trade and other payables	**2.3**	1.0
Contract liabilities	**(55.5)**	(56.2)
	–	–
Non-current liabilities		
Deferred income	**13.6**	14.4
Contract liabilities	**(13.6)**	(14.4)
	–	–

The related cash flow movement in 2019 was also reclassified using the appropriate corresponding line item within the 'Cash flow from operating activities' category in the Group's consolidated cash flow statement. This reclassification had no impact on the Group's net assets, income statement or net cash flow from operating activities reported in 2019.

2. Significant accounting policies continued

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and its subsidiaries made up to 31 December each year. The financial statements of subsidiaries are prepared for the same reporting year as the parent Company, using consistent accounting policies. A full list of subsidiary undertakings is provided on pages 188 and 189.

Subsidiary undertakings are entities that are directly or indirectly controlled by the Group. The Group controls an entity when it is exposed, or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Results of subsidiaries are consolidated from the date on which control is transferred to the Group and cease to be consolidated from the date on which control is transferred out of the Group.

The separable net assets, including intangible assets of newly acquired subsidiaries, are incorporated into the consolidated financial statements based on their fair values at the effective date of control.

The Group includes a subsidiary that is operated under the management of a Proxy Board. Details of the Proxy Board arrangements and the powers of the proxy holders and Spirent's management are set out in the Corporate Governance section of this Annual Report on page 70. The Directors consider that the Group meets the requirements of IFRS 10 'Consolidated Financial Statements' in respect of control over the entity in question as Spirent maintains the following:

- rights to appoint, reassign or remove members of key management and the ability to appoint proxy holders and change Directors every five years;
- rights to direct the investee to enter into, or veto any changes to, transactions; and
- decision-making rights and rights to direct activities including the ability to change products, territories and customers and the ability to terminate product selling (with notice).

All intra-Group transactions, balances, income and expenses are eliminated on consolidation.

Business combinations and goodwill

A business combination is a transaction or other event in which an acquirer obtains control of one or more businesses. Business combinations are accounted for using the acquisition method.

At acquisition date, the identifiable assets acquired and liabilities assumed, including intangible assets, are measured at their fair values. The cost of an acquisition is measured as the aggregate of the consideration transferred and the amount of any non-controlling interest in the acquiree. Non-controlling interests are measured at the proportionate share of the acquiree's identifiable net assets.

Contingent consideration resulting from business combinations is valued at fair value at the acquisition date as part of the business combination. When the contingent consideration meets the definition of a financial liability, it is subsequently re-measured to fair value at each reporting date, with changes in fair value recognised in profit or loss. The determination of fair value is based on discounted cash flows. The key assumptions take into consideration the probability of meeting each performance target and the discount rate.

Acquisition related costs are expensed and included in other items.

Goodwill arising on the acquisition of subsidiaries, representing the excess of cost over the net fair value of the net assets acquired, is capitalised as an intangible asset. Goodwill is carried at cost less any accumulated impairment losses.

Goodwill is subject to an annual review for impairment. For the purpose of impairment testing, goodwill is allocated to the related cash-generating units monitored by management. Where the recoverable amount of the cash-generating unit is less than its carrying amount, including goodwill, an impairment loss is recognised in the income statement.

Intangible assets

Intangible assets are carried at cost less accumulated amortisation and accumulated impairment losses. Separately identifiable intangible assets such as patent fees, licence fees, trademarks and customer lists and relationships are capitalised on the balance sheet only when the value can be measured reliably, or the intangible asset is purchased as part of the acquisition of a business. Such intangible assets are amortised over their useful economic lives on a straight-line basis. The carrying value of intangible assets is reviewed for impairment if events or changes in circumstances indicate the carrying value may not be recoverable.

Acquired intangible assets, being customer lists, current technology, database, brand names and a non-compete covenant, are amortised on a straight-line basis over their estimated useful lives and the charge is included within other items in the income statement. Licences are amortised over their useful lives or term, and are expensed within cost of sales or selling costs.

The estimated useful lives of intangible assets and the amortisation expiry dates are as follows:

	Useful life	Expiry date
Customer lists	2 to 7 years	2019
Current technology	5 to 7 years	2024
Licences	3 to 5 years	2023

FINANCIAL STATEMENTS

2. Significant accounting policies continued

Product development

Research expenditure is charged to product development in the income statement in the year in which it is incurred. Intangible assets arising on the Group's various product development projects are recognised only if the recognition criteria of IAS 38 'Intangible Assets' are met.

Product development costs are expensed as incurred until the technological feasibility of the product under development has been established. Technological feasibility in Spirent's circumstances occurs when a working model is completed. For software development, technological feasibility is not established until the process of developing the software is complete. After technological feasibility is established, additional costs are capitalised and amortised on a straight-line basis over the estimated useful life.

At 31 December 2020 and 31 December 2019, no amounts have met the recognition criteria.

Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment. Depreciation is not provided on freehold land. Depreciation is provided to write-off the cost, less estimated residual value, of all other assets over their estimated useful lives on a straight-line basis at rates which take into account commercial conditions at their location. Usual asset lives are as follows:

Freehold buildings	50 years
Plant and machinery	3 to 8 years
Fixtures, fittings and equipment	
– Building installations	20 years or lease period if lower
– Fittings and equipment	3 to 8 years
– Motor vehicles	3 to 5 years
– Business systems software	4 years

Business systems software is capitalised as property, plant and equipment as the software is an integral part of the related hardware.

The carrying values of property, plant and equipment are reviewed for impairment if events or changes in circumstances indicate the carrying value may not be recoverable.

Impairment of assets

Intangible assets with finite useful lives and property, plant and equipment and right-of-use assets are tested for impairment at each reporting date where there is an indication that an asset may be impaired. Goodwill and intangible assets with an indefinite useful life are assessed at least annually. When an impairment test is performed, the recoverable amount is assessed by reference to the higher of the net present value of the expected cash flows (value in use) of the relevant cash-generating unit or asset and the fair value less cost of disposal. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Impairment losses are recognised in the income statement in those expense categories consistent with the function of the impaired asset.

Where an impairment loss has been recognised against an asset, it may be reversed in future periods where there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised, but only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, had no impairment loss been recognised in prior years. Such a reversal is recognised in the income statement. This does not apply for goodwill, for which an impairment loss must not be reversed in any circumstances.

Leases

The Group as a lessee

The Group assesses whether a contract is or contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group recognises a right-of-use asset and a corresponding lease liability with respect to all lease agreements in which it is the lessee at the commencement date of the lease (i.e. the date the underlying asset is available for use), except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low-value assets. For these leases, the Group recognises the lease payments as an operating expense within the income statement on a straight-line basis over the period of the lease.

At the commencement date of the lease, the lease liability is initially measured at the present value of lease payments to be made over the lease term, discounted using the rate implicit in the lease. If this rate cannot be readily determined, the Group uses its incremental borrowing rate. Under the modified retrospective transition method, which is the method that the Group adopted on transition to IFRS 16 'Leases' on 1 January 2019, lease liabilities are required to be discounted using the incremental borrowing rate at date of transition. The Group has set the discount rate based upon the local base rate with an additional premium to reflect various factors such as credit risk. This approach enables an appropriate rate to be set for each lease depending on geographic location and lease classification.

2. Significant accounting policies continued

Leases continued

The Group as a lessee continued

The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Group and payments of penalties for terminating a lease, if the lease term reflects the Group exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as an expense in the period on which the event or condition that triggers the payment occurs.

The lease liability is presented as a separate line in the consolidated balance sheet.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method), and by reducing the carrying amount to reflect the lease payments made. It is re-measured when there is a change in future lease payments arising from a change in an index or rate, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a modification. Interest on the lease liability is presented within finance costs in the income statement.

When the lease liability is re-measured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the corresponding lease liability, adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain re-measurements of the lease liability.

The right-of-use assets are presented as a separate line in the consolidated balance sheet.

Lease payments for short-term leases, lease payments for low-value assets and variable lease payments not included in the measurement of the lease liability are classified as cash flows from operating activities within the consolidated cash flow statement. The Group has classified the principal and interest portions of lease payments within financing activities.

The Group as a lessor

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or operating lease.

To classify each lease, the Group makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease.

The Group subleases certain of its buildings where the subleases are classified as finance leases. In these instances, the Group derecognises the right-of-use asset on the head lease at the sublease commencement date and continues to account for the original lease liability in accordance with the lessee accounting model. The Group, as a sublessor, recognises a net investment in the sublease within trade and other receivables in the balance sheet and evaluates it for impairment. The net investment in the sublease is subsequently measured by increasing the carrying amount to reflect interest (using the effective interest method), and by reducing the carrying amount to reflect sublease income received. Interest on the net investment in the sublease is presented within finance income in the income statement.

Cash flows from the principal and interest of the finance lease receivables received are classified as investing activities within the consolidated cash flow statement.

Inventories

Inventories are stated at the lower of cost and estimated net realisable value, after provisions for obsolescence. Cost includes all costs incurred in bringing each product to its present location and condition, being the full manufacturing cost on a first-in, first-out basis, including all attributable overheads based on a normal level of activity.

Provisions

Provisions are recorded when the Group has a present, legal or constructive obligation as a result of a past event, for which it is probable that the Group will be required to settle by an outflow of resources and for which a reliable estimate of the amount of the obligation can be made. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate.

Where the effect of the time value of money is material, the amount of the provision shall be the present value of the expenditures expected to be required to settle the obligation.

2. Significant accounting policies continued

Contingent liabilities

Contingent liabilities are possible obligations whose existence will be confirmed only on the occurrence or non-occurrence of uncertain future events outside the Group's control, or present obligations that are not recognised because it is not probable that a settlement will be required or the value of such a payment cannot be reliably measured. The Group does not recognise contingent liabilities but discloses them.

Foreign currencies

The consolidated financial statements are presented in US Dollars, which is the Group's presentation currency.

Transactions in foreign currencies are initially recorded at the rates ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rates ruling at the balance sheet date. All exchange differences are taken to the consolidated income statement. Non-monetary assets and liabilities denominated in foreign currencies are measured in terms of historical costs using the exchange rate at the date of the initial transaction.

The functional currencies of the Group's operations are principally US Dollar, Pound Sterling or Euro. On consolidation, the assets and liabilities of the Group's foreign operations are translated into the Group's presentation currency at exchange rates ruling at the balance sheet date. The results of foreign operations are translated into US Dollars using average rates for the period. The exchange differences arising on retranslation are classified as a separate component of equity, the translation reserve. Such translation differences are recognised as part of the profit or loss on disposal should an operation be disposed of. The Group has elected to apply the exemption in IFRS 1 'First Time Adoption of International Financial Reporting Standards' which allows the cumulative translation differences for all foreign operations to be deemed to be zero at the date of transition to IFRS, being 1 January 2003.

Financial instruments

Financial assets and liabilities are recognised on the Group's balance sheet when it becomes a party to the contractual provisions of the instrument.

Trade receivables

Trade receivables are non-interest bearing and are stated at original invoiced amount less an appropriate allowance for expected credit losses. At each reporting date, the Group measures the loss allowance at an amount equal to the lifetime expected credit losses.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime expected credit losses at each reporting date. To measure the expected credit losses, the Group has established a provision matrix that is based on shared credit risk characteristics and the days past due based on the expected loss rates.

The provision matrix is initially based on payment profiles of trade receivables over a period of 12 months before 31 December of the prior year and the corresponding historical credit losses experienced within this period. At every reporting date the historical observed default rates are updated. The Group also considers the impact of regional macro-economic factors on the likelihood of future losses.

Trade receivables are written off when there is no reasonable expectation of recovery.

A default on a trade receivable occurs when the debtor fails to make contractual payments when they fall due.

Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at bank and in hand and short-term deposits which have an original maturity of three months or less. For the purposes of the consolidated cash flow statement, cash and cash equivalents consist of cash and cash equivalents as defined above. There are no bank overdrafts.

Also recognised within cash and cash equivalents are shares in money market funds which, due to their first-class credit rating and investment in extremely short-term money market securities, undergo only minor fluctuations and can be readily converted within one day into known amounts of cash.

Trade payables

Trade payables are non-interest bearing and are stated at the original invoiced amount.

Equity instruments

Equity instruments are recorded at the proceeds received, net of direct issue costs. Spirent Communications plc Ordinary Shares held by the Group are classified in equity as treasury shares and are recognised at cost and included as a deduction from retained earnings. Consideration received for the sale of such treasury shares is also recognised in equity.

Derivative financial instruments

The Group uses forward foreign currency exchange contracts to manage exposures arising on receipts and payments in foreign currencies relating to firm commitments.

Forward foreign currency exchange contracts are initially recognised at fair value on the date on which the contract is entered into, and are subsequently re-measured to fair value at each reported balance sheet date. The fair value of forward foreign currency exchange contracts is calculated by reference to current forward exchange rates for contracts with similar maturity profiles. The Group has not adopted the hedge accounting rules. Consequently all gains and losses arising from changes in fair value are taken to the income statement.

2. Significant accounting policies continued

Retirement benefits

The Group operates two funded defined benefit pension plans which are in the United Kingdom, all other pension plans are defined contribution in nature. For the defined contribution plans, the amount charged to the income statement is the employers' contributions paid or payable during the year.

For defined benefit pension plans, full actuarial valuations are carried out every three years using the projected unit credit method, and updates are performed at each balance sheet date. Re-measurement, comprising actuarial gains and losses, the effect of changes to the asset ceiling (if relevant) and the return on plan assets (excluding interest), is reflected immediately in the balance sheet surplus with a charge or credit recognised in other comprehensive income in the period in which they occur. Re-measurement recognised in other comprehensive income will not be reclassified to profit or loss. Past service cost is recognised in profit or loss in the period of plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit pension asset, taking account of any changes in the net defined benefit pension asset during the period as a result of contribution and benefit payments. Defined benefit pension costs are categorised as:

- service cost (including current service cost, past service cost and gains and losses on curtailments or settlements);
- net interest expense or income; and
- re-measurement.

The Group presents the first two components of defined benefit pension costs in profit or loss.

The Group also operates a deferred compensation plan in the United States. The plan has elements of a defined benefit pension retirement obligation and therefore is required to be valued in accordance with IAS 19 'Employee Benefits'. For the deferred compensation plan, the gains or losses on the deemed investments that are attributed to the deferral amount over time are charged or credited to the income statement whereas the re-measurement, comprising actuarial gains or losses, is reflected immediately in the balance sheet liability with a charge or credit in other comprehensive income in the period in which it occurs. Re-measurement recognised in other comprehensive income will not be reclassified to profit or loss.

Revenue

Revenue represents the transfer of promised products or services to customers in an amount that reflects the consideration to which the Group expects to be entitled in exchange for those products or services.

Revenue from product sales of hardware and perpetual software licences is recognised at the point in time when the customer has obtained control of the products sold. This is usually when the products have been delivered in accordance with the contractual terms. In some instances it is not until acceptance has occurred that control of the asset is transferred to the customer. Terms of acceptance are dependent upon the specific contractual arrangement agreed with the customer. If it can be objectively determined that control has been transferred to the customer in accordance with the agreed contract specifications, customer acceptance is a formality that would not affect the determination of when the customer has obtained control of the products. However, if it cannot be objectively determined that the products delivered are in accordance with the agreed-upon contract specifications, revenue would not be recognised until customer acceptance has been granted.

For sales of software licences, the Group determines whether the licence is capable of being distinct and is separately identifiable from other promises in the context of the contract. Revenue from software subscription licences that provide the customer with a right to access the Group's intellectual property throughout the subscription period is recognised over time, throughout the subscription period. Revenue from perpetual software licences that provide the customer with a right to use the Group's intellectual property for an indefinite period of time is recognised at the point in time when the customer can first use and benefit from the software.

For the sale of services, revenue is generally recognised over time with reference to when or as the performance obligations are satisfied by transferring the service to the customer. Revenue from support and maintenance service contracts and software subscription sales is recognised over the period of performance on a straight-line basis.

Revenue from professional services is generally recognised as work progresses in accordance with agreed-upon contractual terms, based on a measure of progress towards complete satisfaction of the performance obligation. Progress is measured using either an output method (e.g. completion of a day, or for fixed price contracts revenue is recognised based on performance completed or contractual milestones reached) or an input method (e.g. actual cost of services provided as a proportion of total cost of services expected to be provided under the contract). Where applicable, the Group elects to use the practical expedient where revenue can be recognised in the amount to which the Group has a right to invoice, only if the Group has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of the Group's performance completed to date. Where the Group's professional services contracts contain terms of acceptance, revenue would not be recognised until customer acceptance had been obtained. Where the professional service has a pre-determined or fixed output deliverable, revenue is recognised at a point in time once the performance obligation has been satisfied and the customer has received the agreed deliverable.

2. Significant accounting policies continued

Revenue continued

The Group accounts for multi-component orders as multiple performance obligations if the following criteria are met:

a) The good or service is capable of being distinct, that is, they are individually readily available and regularly sold separately to customers; and

b) The promise to transfer the good or service is distinct in the context of the contract, that is, they do not require significant integration, customisation or modification with other goods or services in the contract and are not highly interrelated or interdependent of other goods or services in the contract.

For multi-component orders where the elements are accounted for as multiple performance obligations, the transaction price and discount, if any, are allocated proportionally to all performance obligations in the contract. If either of the two criteria above are not met, and where various components in the contract are combined, bundled or pre-assembled into one or more product or equipment units to form a distinct good or service, they will be accounted for as a single performance obligation.

Contracts are sometimes modified to account for changes in customer requirements. Contract modifications are considered to exist when the parties to a contract approve a modification that either creates new, or changes existing enforceable rights and obligations of the parties to the contract. Contract modifications that are for additional goods and services that are distinct from existing performance obligations and are priced at a standalone selling price reflected in additional consideration are accounted for as a separate contract. For contract modifications where the remaining goods or services are not distinct from those already provided, the change is recognised as a cumulative catch-up to revenue. For modifications where the remaining goods or services are distinct from those already provided but are not accounted for as a separate contract, the change is treated as a termination of the existing contract and the creation of a new contract.

Cost of sales

The Group's cost of sales related to the sale of its products includes materials, payments to third party contract manufacturers, royalties and salaries and other expenses related to its manufacturing and supply operations personnel. Cost of sales related to the provision of services includes salaries and other expenses associated with technical support services and the cost of extended maintenance services.

Costs to obtain a contract

The incremental costs of obtaining a contract with a customer are capitalised as an asset if the Group expects to recover them. The Group incurs costs such as sales commissions when it enters into a new contract. Such costs are presented in the consolidated balance sheet as assets recognised from costs to obtain a contract where the related revenue is recognised over time, usually in relation to support and subscription agreements. These assets are amortised on a systematic basis consistent with how the related revenue is recognised. The amortisation is recognised in selling and marketing costs within the income statement.

The Group applies the practical expedient in paragraph 94 of IFRS 15 and recognises incremental costs of obtaining a contract as an expense when incurred if the amortisation period of the asset that the Group would otherwise have recognised is one year or less.

Management is required to determine the recoverability of assets recognised from costs to obtain a contract. At each reporting date, the Group determines whether or not the assets are impaired by comparing the carrying amount of the asset to the remaining amount of consideration that the Group expects to receive less the costs that relate to providing services under the relevant contract. No assets were impaired as at 31 December 2020 or 31 December 2019.

Deferred income

Deferred income is only recognised on non-cancellable contracts that provide unconditional rights to payment from the customer for products and services that the Group has not yet completed providing or that it will provide in the near future.

Revenue from product sales of hardware and perpetual software licences is recognised at the point in time when the customer has obtained control of the products sold. In the instances where the customer has been invoiced and revenue from hardware or perpetual software licences is unable to be recognised, revenue would not be recognised until control has passed, resulting in deferred income.

Support services and software subscription agreements are generally billed at commencement of the support or subscription contract, while revenue is recognised over the period of the support or subscription agreement, resulting in deferred income.

The Group occasionally receives advance payments from customers on account, before products or services are delivered and revenue is recognised, resulting in liabilities.

Deferred income and payments received on account are reported on the consolidated balance sheet within contract liabilities on a contract-by-contract basis at the end of each reporting period.

Government grants

A government grant is recognised in the balance sheet initially within trade and other payables when there is reasonable assurance that it will be received and that the Group will comply with the conditions attached to it. Grants that compensate the Group for expenses incurred are recognised as other operating income on a systematic basis in the same periods in which expenses are incurred.

Employee benefits

When an employee has rendered services to the Group during an accounting period, short-term benefits expected to be paid in exchange for those services are recognised in the same accounting period.

2. Significant accounting policies continued

Share-based payment

The Group operates various equity-settled share-based compensation plans and accounts for these awards in accordance with IFRS 2 'Share-based Payment'.

The fair value of these awards is recognised in the income statement on a straight-line basis over the vesting period together with a corresponding change in equity. The fair value is measured using the Black-Scholes model by reference to the share price, and taking into account the terms and conditions of the award, excluding non-market vesting conditions, at the date the awards were granted. The charge is reassessed at each balance sheet date to reflect the expected and actual levels of vesting, due to achievement or otherwise of non-market conditions. Awards where vesting is conditional upon satisfying a market condition or non-vesting condition are treated as vesting irrespective of whether the market or non-vesting condition has been satisfied.

With effect from 1 January 2019, one-third of the Annual Incentives of the Executive Directors was deferred into shares for a period of three years. This amount is an equity-settled share-based payment transaction within the scope of IFRS 2 and the related expense is charged to the income statement in the same year as the measurement period. This amount has been charged to administration expenses in the income statement and forms part of adjusted operating profit as it reflects part of the underlying trading performance of the Group.

The Group has an employee share trust for the granting of certain share incentives to employees. Shares in the Group held by the employee share trust are treated as treasury shares and presented in the balance sheet as a deduction from equity.

Tax

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the income statement except to the extent that it relates to items in other comprehensive income or equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustments to tax payable for previous years.

Deferred tax is recognised on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements, with the following exceptions:

- where the temporary difference arises from the initial recognition of goodwill (taxable temporary differences only) or of an asset or liability in a transaction that is not a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

A deferred tax asset is recognised only to the extent that it is probable that taxable profits will be available against which the deductible temporary differences, carried forward tax credits or tax losses can be utilised.

Deferred tax assets and liabilities are measured on an undiscounted basis at the tax rates that are expected to apply when the related asset is realised or the liability is settled, based on tax rates and laws enacted or substantively enacted at the balance sheet date.

Dividends paid

The interim dividend is included in the financial statements in the period in which it is paid, and the final dividend and the special dividend are included in the period in which they are approved by the shareholders at an Annual General Meeting.

Adjusting items

Adjusting items are disclosed separately in the income statement where it is necessary to do so due to their nature or amount and to provide further understanding of the Group's financial performance. Adjusting items comprise exceptional items, acquisition related costs, amortisation of acquired intangible assets, share-based payment, the tax effect of these items and any over/under provision of tax in the prior year.

Certain items are classified as exceptional items due to their nature, amount or infrequency. Such presentation is relevant to further understanding of the Group's financial statements. These items are not part of the Group's normal ongoing operations. Costs directly associated with the integration of a business acquisition are included within exceptional items to the extent they are in accordance with the above definition.

Direct transaction costs and fees of potential or actual acquisitions are charged to the income statement in the period in which they are incurred. Such items are presented separately as acquisition related costs and, due to their nature and infrequency, are excluded from the underlying trading performance of the Group.

The Group excludes share-based payment from adjusted operating profit (except for share-based payment relating to the Executive Directors' deferred bonus plan, see above), as the expense can fluctuate based on the size, nature and timing of awards granted, the Group's share price and the subjective assumptions used in the calculation. Additionally, management believes the exclusion of share-based payment also allows for more meaningful comparisons of operating results with peer companies, many of which also exclude the expense from underlying results.

2. Significant accounting policies continued

Critical accounting assumptions and judgements

The preparation of financial statements requires the Group to make estimates and assumptions that affect items reported. Such estimates and assumptions are based on management's best knowledge of current facts, circumstances and future events. Actual results may differ, possibly significantly, from those estimates. The areas requiring a high degree of judgement or where assumptions and estimates are significant to the consolidated financial statements are discussed below.

Estimates

Impairment of goodwill

For the purpose of impairment tests, the goodwill arising from each business combination is allocated to cash-generating units ("CGUs") that are expected to benefit from the combination and which represent the lowest level within the Group at which management monitors goodwill. There have been no changes to the CGUs in the year.

The Group tests annually by CGU whether goodwill has suffered impairment and more frequently when events or circumstances indicate that the current carrying value may not be recoverable. The recoverable amounts of CGUs have been determined based on value in use calculations which require estimates and assumptions to be made in relation to management's expectations of growth in adjusted operating profit before depreciation and amortisation; long-term growth rates; and appropriate discount rates to reflect the risks involved.

In testing the goodwill for impairment, management have considered sensitivities in respect of potential downside scenarios, including the potential impact on the value in use calculations of the COVID-19 pandemic and any longer term impact to the global economy, US/China trade sanctions and technology changes.

Given the level of headroom at 31 December 2020, the Directors believe that no reasonable possible change in any of the key assumptions used, in isolation, would result in an impairment in any of the CGUs. Therefore, no sensitivities have been disclosed in note 13. Notwithstanding this, the goodwill impairment test is inherently based on management's expectations of growth and requires estimates and assumptions to be made. Changing the assumptions selected by management could affect the Group's impairment evaluation and hence reported assets and profits and losses.

Defined benefit pension plans

The pension cost and the defined benefit pension obligation of the Group's defined benefit pension plans are based on a number of selected assumptions; these include the discount rate, inflation rate, salary growth and longevity. Differences arising from actual experience or future changes in assumptions will be reflected in future periods. The effect of changing these assumptions is described in note 9.

At 31 December 2018, the Group estimated an allowance of $4.0 million (£3.1 million) in respect of GMP equalisation, a past service cost charged to exceptional items in the income statement in 2018. In 2020, a further $0.3 million (£0.2 million) in respect of GMP equalisation was charged to the income statement as a past service cost. The data used in the calculation was high level and appropriate for an approximate calculation. The cost of GMP equalisation remains highly uncertain due to legal uncertainty, political uncertainty, historical data which is unavailable at this stage, and future Trustee decisions. The ultimate cost of equalising GMPs will only be known once the Trustees have completed an exercise to equalise benefits, and it could be significantly different to this estimate. The process followed and assumptions used are disclosed in note 9 and note 9 of the Group's 2018 Annual Report.

Recognition of deferred tax assets

The recognition of deferred tax assets is based upon whether it is more likely than not that there will be sufficient and suitable taxable profits in the relevant legal entity or tax group against which to utilise the assets in the future. The extent to which deferred tax assets can be recognised is based on current forecasts and estimates prepared by management. A change to these forecasts and estimates could result in a different recognition outcome. Judgement is required when determining probable future taxable profits, which are estimated using the latest available profit forecasts. Unrecognised deferred tax assets are disclosed in note 26.

Provisions and contingent liabilities

Provisions are estimates and the actual cost and timing of future cash flows are dependent on future events. The Group exercises judgement in recognising provisions and the exposures to contingent liabilities. Judgement is necessary to assess the likelihood that a liability will arise and to quantify the possible amount of any financial settlement. The inherent uncertainty of such matters means that actual amounts of transactions may differ materially from estimates provided. Any difference between the amounts previously recognised and the actual amount is recognised immediately in the consolidated income statement. Provisions are disclosed in note 27. The Group did not have any contingent liabilities at 31 December 2020 or 31 December 2019.

2. Significant accounting policies continued

Critical accounting assumptions and judgements continued

Judgements

Revenue recognition

The transaction price is allocated to each performance obligation on a relative standalone selling price basis. Where there are no observable prices, the Group generally determines the standalone selling prices of individual elements based on standalone internal list prices which are then subject to discount.

To determine the appropriate revenue recognition for contracts containing multiple elements or complex solutions that include both products and services, we evaluate whether the contract should be accounted for as a single or multiple performance obligation. This evaluation requires significant judgement and impacts the amount of revenue allocated to each performance obligation, which can effect the amount of revenue recognised and deferred income on the balance sheet.

The factors the Group considers when making this judgement are as follows:

- Whether the elements of a multi-component order have a unique part number as evidenced in our product life-cycle management process;
- Whether the elements of a multi-component order have a standalone selling price as evidenced in our internal price list;
- Whether the elements of a multi-component order are regularly sold separately to a range of customers, based on historic information;
- Whether the customer can benefit from the elements of a multi-component order on their own or with resources that are readily available to the customer, based on technical input from our product managers;
- Whether the elements of a multi-component order require significant integration, modification or customisation with other elements of the multi-component contract, based on historic information and technical input from our product managers; and
- Whether the elements of a multi-component order are significantly affected by one or more of the other elements of the multi-component contract and whether there is a significant two-way dependency, based on technical input from our product managers.

For professional services revenue recognised over time, a single method of measuring progress is selected and used for each performance obligation. The selection of the method to measure progress towards completion requires judgement and is based on the nature of the services to be provided. The selected method is applied consistently to similar contracts in similar circumstances. This judgement impacts revenue recognised over time and the amount of deferred income on the balance sheet.

In instances where the receipt of the consideration does not match the timing of the transfer of products or services because the customer has paid in advance, the Group evaluates whether the difference between the amount of promised consideration and the cash selling price of the promised products or services is significant. The Group has determined any difference arising is not significant and therefore a financing component does not exist. This evaluation requires judgement.

Leases

The Group has set the discount rate based upon the local base rate with an additional premium to reflect various factors such as credit risk. This approach requires judgement and impacts the amount recognised as a lease liability and corresponding right-of-use asset, and therefore the amount of depreciation on the right-of-use asset and interest on the lease liability that are charged to the income statement.

The Group exercises judgement in determining whether it is reasonably certain that a building lease extension or termination option will be exercised. This will take into account the length of time remaining before the option or extension is exercisable, current trading, future trading forecasts and the level and type of future capital investment expected to be made. The Group assesses at lease commencement whether it is reasonably certain to exercise the extension options. The Group reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant change in circumstances within its control. This judgement impacts the carrying amounts of right-of-use assets and lease liabilities.

Applicable new standards and interpretations not applied

The IASB and IFRIC have issued the following standards and interpretations with an effective date for the Group after the date of these financial statements:

International Accounting Standards (IAS/IFRS)		Effective for annual periods beginning on or after
IFRS 3	Reference to the Conceptual Framework (Amendments to IFRS 3)	1 January 2022
IAS 37	Onerous Contracts – Costs of Fulfilling a Contract (Amendments to IAS 37)	1 January 2022
Annual Improvements to IFRS Standards 2018–2020		1 January 2022
IAS 1	Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)	1 January 2023

The Directors do not anticipate that the adoption of these standards and interpretations will have a material impact on the Group's financial statements in the period of initial application.

Notes to the consolidated financial statements continued

3. Operating segments

The Group's organisational structure is based on differences in the products and services offered by each segment and information regularly reviewed by the Group's Chief Executive Officer, its chief operating decision maker, is presented on this basis. The Group's operating segments follow this structure.

The Group's reportable operating segments are Networks & Security, Lifecycle Service Assurance and Connected Devices. The Group evaluates adjusted operating profit before exceptional items, acquisition related costs, acquired intangible asset amortisation and share-based payment. Finance income and finance costs are not allocated to the reportable segments. Corporate is not an operating segment and costs are separately reported and not allocated to the reportable segments. Information on segment assets and segment liabilities is not regularly provided to the Group's Chief Executive Officer and is therefore not disclosed below. There is no aggregation of operating segments.

In early 2021, some organisational changes were made to build an even stronger foundation for scale – breaking down barriers, better enabling solution selling and focusing on leading edge technology. To accelerate the momentum built in 2020, the Group is combining the Connected Devices operating segment into the Lifecycle Service Assurance operating segment effective 1 January 2021. This change will enable a more integrated set of user experience assurance solutions and solve bigger problems for customers. Going forward, Lifecycle Service Assurance and Connected Devices will be reviewed and managed as one segment. The Group's revised reported operating segments will be Networks & Security and Lifecycle Service Assurance.

The Group disaggregates revenue from contracts with customers by nature of products and services and primary geographical markets as this best depicts how the nature, amount, timing and uncertainty of the Group's revenue and cash flows are affected by economic factors.

						2020 $ million
	Notes	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	Total
Revenue						
Nature of products and services						
Sale of hardware and software		261.4	81.9	35.2	–	378.5
Maintenance and support services		53.3	45.8	44.8	–	143.9
		314.7	127.7	80.0	–	522.4
Primary geographical markets						
America		143.9	89.5	42.8	–	276.2
Asia Pacific		132.0	23.6	33.6	–	189.2
Europe, Middle East and Africa		38.8	14.6	3.6	–	57.0
		314.7	127.7	80.0	–	522.4
Inter-segment revenue is eliminated.						
Profit before tax						
Total reportable segment profit before exceptional items		65.3	32.9	14.5	(9.2)	103.5
Exceptional items	5	(0.8)	(0.7)	(0.2)	(1.4)	(3.1)
Total reportable segment profit		64.5	32.2	14.3	(10.6)	100.4
Unallocated amounts:						
– Acquired intangible asset amortisation						(0.5)
– Share-based payment	31					(4.2)
Operating profit						95.7
Finance income	6					1.6
Finance costs	7					(1.5)
Profit before tax						95.8
Other information						
Product development		59.4	29.8	13.9	–	103.1
Intangible asset amortisation – other		–	–	0.9	–	0.9
Depreciation of property, plant and equipment	14	7.7	2.3	2.0	0.2	12.2
Depreciation of right-of-use assets	15	5.1	1.8	1.2	0.3	8.4

3. Operating segments continued

	Notes	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	2019 $ million Total
Revenue						
Nature of products and services						
Sale of hardware and software		272.0	67.8	32.6	–	372.4
Maintenance and support services		47.9	43.4	39.9	–	131.2
		319.9	111.2	72.5	–	503.6
Primary geographical markets						
Americas		141.0	85.5	39.6	–	266.1
Asia Pacific		143.3	15.2	29.3	–	187.8
Europe, Middle East and Africa		35.6	10.5	3.6	–	49.7
		319.9	111.2	72.5	–	503.6

Inter-segment revenue is eliminated.

	Notes	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	Total
Profit before tax						
Total reportable segment profit before exceptional items		73.9	18.1	9.5	(8.6)	92.9
Exceptional items	5	(1.1)	(0.4)	(0.3)	2.3	0.5
Total reportable segment profit		72.8	17.7	9.2	(6.3)	93.4
Unallocated amounts:						
– Acquisition related costs	33					(0.1)
– Acquired intangible asset amortisation						(1.2)
– Share-based payment	31					(3.5)
Operating profit						88.6
Finance income	6					2.8
Finance costs	7					(1.8)
Profit before tax						89.6
Other information						
Product development		56.0	27.6	12.9	–	96.5
Intangible asset amortisation – other		–	–	0.9	–	0.9
Depreciation of property, plant and equipment	14	9.2	2.7	2.7	0.1	14.7
Depreciation of right-of-use assets	15	4.4	1.7	1.1	0.3	7.5

All of the Group's revenue arose from contracts with customers.

Generally, revenue from the sale of hardware and software is recognised at a point in time and revenue from maintenance and support services is recognised over time.

Europe, Middle East and Africa includes United Kingdom revenue of $8.7 million (2019 $8.2 million).

Americas includes United States revenue of $262.6 million (2019 $252.4 million).

Asia Pacific includes China revenue of $106.1 million (2019 $114.1 million).

Revenues are attributed to regions and countries based on customer location.

No one customer accounted for 10 per cent or more of total Group revenue in either 2020 or 2019.

3. Operating segments continued

	2020 $ million	2019 $ million
Non-current assets[1]		
Americas	190.0	196.9
Asia Pacific	7.9	7.4
Europe, Middle East and Africa	11.1	11.5
	209.0	215.8

Note
1. Non-current assets excludes trade and other receivables, assets recognised from costs to obtain a contract, defined benefit pension plan surplus and deferred tax asset.

Europe, Middle East and Africa includes United Kingdom non-current assets of $6.5 million (2019 $6.9 million).

Americas includes United States non-current assets of $175.7 million (2019 $182.4 million).

4. Profit before tax

The following items have been charged in arriving at profit before tax:

	Notes	2020 $ million	2019 $ million
Employee benefit costs	8	232.6	219.9
Costs of inventories recognised as an expense		82.6	81.6
Write-down of inventories to net realisable value	18	1.6	1.6
Amortisation of intangible assets	13	1.4	2.1
Depreciation of property, plant and equipment	14	12.2	14.7
Depreciation of right-of-use assets	15	8.4	7.5
Amortisation of assets recognised from costs to obtain a contract	20	0.5	0.5
Expenses relating to short-term leases and leases of low-value assets	25	0.3	0.3
Product development costs		103.1	96.5
Net foreign exchange loss		0.6	0.6

Services provided to all of the operations of the Group by the auditor, Ernst & Young LLP, and its associates:

	2020 $ million	2019 $ million
Audit services		
Group audit fee	1.2	1.1

A description of the work of the Audit Committee is set out in the Audit Committee report on pages 75 to 81 and includes an explanation of how auditor objectivity and independence is safeguarded when non-audit services are provided by the auditor.

5. Exceptional items

	2020 $ million	2019 $ million
CEO strategic review	3.1	1.8
French Customs refund	–	(2.3)
	3.1	(0.5)

In 2019, the Group incurred $1.8 million of costs associated with a strategic review, instigated by Spirent's new CEO, involving a number of initiatives designed to evolve the strategic direction of Spirent to maximise marketing opportunities by creating a more agile, customer-focused organisation. These included a strategic focus on building recurring revenue streams over time, such as services; a strengthened leadership team and development of our sales and marketing structure to drive improved effectiveness to exploit our leading technologies. This review has concluded in 2020 with a further $3.1 million being incurred. This charge comprised employee severance costs of $1.7 million (2019 $1.1 million) recruitment costs of $0.2 million (2019 $0.3 million) and consulting costs of $1.2 million (2019 $0.4 million).

In 2019, the Group received a refund amounting to $2.3 million following a successful claim for reimbursement of VAT paid on imports with respect to a compliance dispute with Direction Générale des Douanes et Droits Indirects (French Customs) concerning the valuation and classification of imports into France which commenced in 2011. Refer to note 27 for further information.

5. Exceptional items continued

The tax effect of exceptional items is a credit of $0.6 million (2019 $0.2 million charge). There will be a total net cash outflow of $3.1 million in respect of exceptional items charged in 2020, $2.6 million of which was paid in 2020 (2019 $0.5 million inflow with $1.0 million received in 2019). The cash outflow in 2020 in respect of exceptional items charged in 2019 was $0.5 million (2019 $6.5 million).

The total cash outflow in respect of exceptional items is reported within cash flows from operating activities in the consolidated cash flow statement.

6. Finance income

	Note	**2020 $ million**	2019 $ million
Bank interest receivable		**1.4**	2.7
Net defined benefit pension plan interest	9	**0.2**	0.1
		1.6	2.8

7. Finance costs

	Notes	**2020 $ million**	2019 $ million
Lease liability interest	25	**1.4**	1.7
Unwind of discount on provisions	27	**0.1**	0.1
		1.5	1.8

8. Employees

The average number of people employed by the Group during the year was:

	2020 Number	2019 Number
Manufacturing	**332**	330
Product development	**471**	460
Selling and marketing	**475**	475
Administration	**206**	200
	1,484	1,465

Employee benefit costs were:

	Note	**2020 $ million**	2019 $ million
Remuneration		**203.8**	192.4
Social security costs		**15.6**	16.3
Pension and other related costs		**8.5**	7.3
Expense of share-based payment	31	**4.7**	3.9
		232.6	219.9

Please refer to the Report on Directors' Remuneration on pages 82 to 106 and note 34 for disclosures relating to the emoluments, share incentives and pensions of the Directors.

9. Pensions

Defined benefit plans

i) Characteristics and risks associated with the Plans

The Group sponsors two funded defined benefit pension plans in the United Kingdom: the Spirent Communications plc Staff Pension & Life Assurance Plan ("Staff Plan") and the Spirent Communications plc Retirement Cash & Life Assurance Plan ("Cash Plan"). These plans are funded and have full UK HM Revenue & Customs ("HMRC") tax-exempt approval. Both schemes are administered by a Trustee board which is comprised of representatives from the employer, member nominated Trustees and an independent Trustee. The Trustee board operates in accordance with the Trust Deed and Rules of each Plan and acts in the interests of all of its members.

- The Staff Plan is the Group's most significant plan, and it provides its members with retirement benefits based on their final salary and length of service. The Staff Plan is closed to new entrants.
- The Cash Plan is primarily a defined contribution arrangement, although there are some legacy defined benefits ("Old Section") that have been valued for the purpose of these accounts in accordance with IAS 19 'Employee Benefits'. Members who left service before 1992 are entitled to a cash lump sum on retirement that is based on their salary and length of service. Members of the Old Section are entitled to defined contribution benefits, but with an underpin based on salary and length of service. The Cash Plan is closed to new entrants.

There is also a UK unfunded plan, which consists of a contractual obligation for the Group to top up certain former employees' benefits whose salaries exceeded the statutory earnings cap.

As with the vast majority of similar arrangements in the United Kingdom, the Group ultimately underwrites the risks relating to the defined benefit plans. These risks include investment risks and demographic risks, such as the chance of members living longer than expected.

The Plans hold a significant proportion of their assets in equity. Strong future equity returns would be expected to reduce the Group's future cash contributions (and vice versa).

Expected contributions to the defined benefit plans in 2021 are $7.1 million (£5.3 million). This includes the contributions agreed with the funded plans' Trustees in accordance with UK legislation. The latest triennial actuarial valuation dated 31 March 2018 indicated a deficit of £22.5 million, calculated on a technical provisions basis using more prudent assumptions than the accounting valuation, particularly in relation to discount rate, inflation and demographic. Therefore, the Group has agreed to pay $6.7 million (£5.0 million) per annum into the Staff Plan, increasing in line with CPI, through to June 2023 (or earlier if self-sufficiency is reached) in order to clear the funding deficit. Additionally, the Group will fund the plan by an amount equal to 10 per cent of any special dividend paid amounting to $30 million or over during the period.

If the contributions currently agreed are insufficient to pay the benefits due, the Group will need to make further contributions.

The Group also operates an unfunded deferred compensation plan for employees in the United States. The plan enables participating employees to defer a portion of their salary and invest it in deemed investments, which are used to measure the gains or losses that are attributed to the deferral account over time. The plan has elements of a defined benefit pension retirement obligation and therefore is required to be valued in accordance with IAS 19.

GMP equalisation

In October 2018, the High Court ruled on the Lloyds Bank GMP inequality case. In response to this, an allowance of $4.0 million (£3.1 million) was included on the Group's balance sheet at 31 December 2018 to make provision for the estimated costs arising from the judgement. This past service cost was charged to exceptional items in the income statement in 2018 and related to the Staff Plan. There was no impact on the Cash Plan.

Over the period to 31 December 2020, the Trustees and the Group have not taken any formal decisions over the process, nor have they received updated assessments of the potential costs of the judgement. The calculation of the allowance as a proportion of the liabilities included within the IAS 19 figures are therefore unchanged. As a result of changes in market conditions, the allowance is now $4.8 million (£3.5 million).

On 20 November 2020, the High Court handed down a further judgement, stating that pension schemes should pay uplifts in respect of members who had transferred benefits out in the past (back to 17 May 1990), where those benefits were not equalised in line with the 2018 judgement.

The potential costs of these uplifts is uncertain, as the Trustees do not hold data on members who transferred their benefits out of the Staff Plan many years ago, and in any case may not be able to contact them. Furthermore, the data required to calculate the uplift is not generally available. Given this, an estimate of the potential costs of $0.3 million (£0.2 million) has been calculated and charged to the income statement in 2020 as a past service cost, consistent with the treatment in 2018.

Further information on the GMP equalisation, including the key estimates and considerations used in the calculation, are disclosed in note 2 and also in the Group's 2018 Annual Report.

9. Pensions continued

Defined benefit plans continued

ii) Amounts in the financial statements

The assets and liabilities on the balance sheet are as follows:

	2020 $ million	2019 $ million
Schemes in net asset position		
UK defined benefit pension plan – Staff Plan	11.2	10.3
UK defined benefit pension plan – Cash Plan	1.8	1.3
	13.0	11.6
Schemes in net liability position		
UK unfunded plan	(0.7)	(0.7)
US deferred compensation plan	(5.7)	(4.8)
	(6.4)	(5.5)
Net pension plan surplus on the balance sheet	6.6	6.1

a) The assets and liabilities in each plan

	2020 $ million	2019 $ million
Staff Plan		
Quoted		
– Equities	62.7	67.4
– Government bonds	5.1	5.9
– Corporate bonds	8.6	4.9
Unquoted		
– LDI funds	58.8	45.4
– Cash benchmarked bonds	137.7	100.9
– Hedge funds	–	26.3
– Insured annuities	2.7	2.6
– Property	5.1	1.5
– Cash and other	35.5	25.3
Fair value of plan assets	316.2	280.2
Present value of defined benefit pension plan obligations	(305.0)	(269.9)
Surplus in the plan	11.2	10.3
Cash Plan		
Quoted		
– Equities	5.6	5.0
– Government bonds	4.1	3.7
Unquoted		
– Insured annuities	0.1	0.1
– Cash and other	2.1	2.1
Fair value of plan assets	11.9	10.9
Present value of defined benefit pension plan obligations	(10.1)	(9.6)
Surplus in the plan	1.8	1.3
Total net surplus recognised	13.0	11.6
Unfunded plan		
Present value of unfunded obligations	(0.7)	(0.7)
Deferred compensation plan		
Present value of deferred compensation obligations	(5.7)	(4.8)
Net pension plan surplus on the balance sheet	6.6	6.1

Approximately two-thirds of the Staff Plan's assets are held in a combination of LDI funds, cash benchmarked bonds and hedge funds. The objective of this allocation is to hedge against the plan's liabilities, provide protection against inflation risk and to provide a level of investment returns in all market scenarios.

9. Pensions continued

Defined benefit plans continued

ii) Amounts in the financial statements continued

These funds have a wide investment remit and as such the investments of the funds may or may not be listed on recognised exchanges and markets and will be without restriction as to geographical, industrial or sectoral exposure. These funds may take both long and short positions and may utilise a broad range of derivatives. The funds' investments may include sub-investment grade securities, corporate debt securities, gilts, sale and repurchase agreements, loans, and emerging markets debt and currencies.

The plans are prohibited from investing in Spirent's own financial instruments.

The fair values of the quoted equity and debt instruments are determined based on quoted market prices in active markets whereas the fair values of the other assets are not. Unquoted investments are included at values provided by the fund managers and are generally valued using recent market data and external sources, with a hierarchy that follows the principles of IFRS 13 'Fair Value Measurement'.

The Group has determined that it has an unconditional right to refund of surplus assets if the schemes are run off until the last member dies, on which basis IFRIC 14 does not cause any change in the balance sheet disclosures before tax.

For the purposes of the following disclosures the Staff Plan and Cash Plan have been combined as the Cash Plan is immaterial to these financial statements.

b) Analysis of the amounts charged to the income statement

	2020 $ million	2019 $ million
Plan administration expenses	0.4	0.6
Current service cost	0.1	0.1
Past service cost	0.3	–
Amount charged to operating costs	0.8	0.7
Net interest on the net defined benefit pension surplus	(0.2)	(0.1)
Net charge to the income statement	0.6	0.6

c) Analysis of amount recognised directly in the statement of comprehensive income

	2020 $ million	2019 $ million
Re-measurement gain on plans' assets	25.3	25.8
Actuarial gain arising from experience	1.7	0.3
Actuarial (loss)/gain arising from the demographic assumptions	(0.8)	2.9
Actuarial loss arising from changes in financial assumptions	(31.5)	(26.3)
Re-measurement of the net defined benefit pension surplus	(5.3)	2.7

d) Movements in the present value of funded defined benefit obligations

	2020 $ million	2019 $ million
At 1 January	279.5	251.7
Current service cost	0.1	0.1
Past service cost	0.3	–
Interest cost	5.6	6.9
Benefit payments	(13.1)	(11.4)
Actuarial gain arising from experience	(1.7)	(0.3)
Actuarial loss/(gain) arising from the demographic assumptions	0.8	(2.9)
Actuarial loss arising from changes in financial assumptions	31.5	26.3
Exchange adjustment	12.1	9.1
Present value of funded defined benefit pension plans' obligations	315.1	279.5

9. Pensions continued

Defined benefit plans continued

ii) Amounts in the financial statements continued

e) Movements in the fair value of plans' assets

	2020 $ million	2019 $ million
At 1 January	**291.1**	254.2
Interest income on plans' assets	**5.8**	7.0
Employer contributions	**6.7**	6.6
Benefit payments	**(13.1)**	(11.4)
Plan administration expenses	**(0.4)**	(0.6)
Re-measurement gain on plans' assets	**25.3**	25.8
Exchange adjustment	**12.7**	9.5
Fair value of plans' assets	**328.1**	291.1

f) The key financial assumptions

The assumptions used for both plans using a weighted average were as follows:

	2020 %	2019 %
Inflation – RPI	**3.0**	3.0
Inflation – CPI	**2.2**	2.2
Rate of increase in pensionable salaries	**2.2**	2.2
Rate of increase for pensions in payment pre-2001 service	**3.5**	3.6
Rate of increase for pensions in payment 2001 to 5 April 2005 service	**2.9**	2.9
Rate of increase for pensions post-5 April 2005 service	**2.1**	2.0
Rate of increase in deferred pensions	**2.2**	2.2
Rate used to discount plan liabilities	**1.3**	2.1

The mortality assumptions are based on standard mortality tables which allow for future mortality improvements. The assumptions are such that a member currently aged 65 (2019 aged 65) will live on average for a further 22.2 years (2019 22.1 years) if they are male and for a further 24.2 years (2019 24.1 years) if they are female. For a member who retires in 2040 (2019 in 2039) at age 65 (2019 age 65), the assumptions are that they will live on average for a further 23.5 years (2019 23.4 years) after retirement if they are male and for a further 25.7 years (2019 25.6 years) after retirement if they are female.

iii) Amount, timing and uncertainty of future cash flows

The approximate impact to past service liabilities of these changes to the main assumptions, which are considered reasonably possible, is as follows:

- Reducing the discount rate by 0.1 per cent per annum would increase past service liabilities by $4.6 million (2019 $3.8 million).
- Increasing RPI inflation by 0.1 per cent would increase the plans' liabilities by $1.8 million (2019 $1.4 million).
- Increasing the life expectancy of a member by one year (by modifying the standard mortality tables using an appropriate scaling factor) would increase past service liabilities by $17.6 million (2019 $13.5 million).

There will also be an impact on the future service cost but given the small active population in these plans this is likely to be insignificant. The sensitivity analysis may not be representative of the actual change as the changes in assumptions may not occur in isolation.

The liability has the following duration and maturity:

	2020	2019
Weighted average duration of the defined benefit obligation (years)	**15**	14
Maturity analysis of benefit payments (non-discounted amounts) $ million		
Maturity ≤ 1 year	**11.4**	10.8
Maturity > 1 ≤ 5 years	**47.8**	45.6
Maturity > 5 ≤ 10 years	**63.5**	61.7
Maturity > 10 ≤ 20 years	**114.3**	114.3
Maturity > 20 ≤ 30 years	**79.4**	81.7
Maturity > 30 years	**57.2**	63.0

9. Pensions continued

Deferred compensation plan

At 31 December 2020, the deferred compensation plan deficit amounted to $5.7 million (2019 $4.8 million).

During the year, $0.6 million was charged to the income statement (2019 $0.9 million) and a re-measurement loss of $0.3 million (2019 $0.4 million) was recognised directly in the statement of other comprehensive income. The key financial assumptions include a discount rate used to discount plan liabilities of 2.1 per cent (2019 2.9 per cent) and an expected investment yield of 6.4 per cent (2019 6.4 per cent). There is no material impact in 2020 or 2019 of changing each of the key assumptions by 0.1 per cent, in isolation.

Defined contribution plans

United Kingdom

The Group contributes towards defined contribution pension plans for employees in the United Kingdom. Employer contributions into these plans for 2020 were $1.1 million (2019 $1.0 million).

United States

The Group maintains a defined contribution pension plan for employees of its United States subsidiaries. This plan, also known as a 401(k) Plan, allows employees to defer a percentage of their salary for retirement. In aggregate, the Group's contributions to the US plan totalled $4.3 million for 2020 (2019 $4.0 million). There were no defined benefit plans in the United States in 2020 or 2019.

Other jurisdictions

Outside the United Kingdom and the United States, employees are provided with pension arrangements determined in accordance with approved local practice and regulations. These arrangements are defined contribution plans. Total employer contributions for 2020 in respect of these plans amounted to $1.4 million (2019 $1.3 million).

Total employer contributions to defined contribution plans were $6.8 million (2019 $6.3 million).

Directors' pension arrangements

The pension arrangements of the Executive Directors are described in detail in the Report on Directors' Remuneration on pages 82 to 106.

10. Tax

	2020 $ million	2019 $ million
Tax charge in the income statement		
Current income tax		
UK tax	**1.7**	0.3
Foreign tax	**10.2**	9.2
Amounts (overprovided)/underprovided in prior years	**(0.6)**	0.3
Total current income tax charge	**11.3**	9.8
Deferred tax		
Recognition of deferred tax assets	**(0.2)**	(1.5)
Reversal of temporary differences	**0.9**	3.5
Adjustments in respect of prior years	**(0.6)**	(0.2)
Total deferred tax charge	**0.1**	1.8
Tax charge in the income statement	**11.4**	11.6

The tax charge for the year ended 31 December 2020 was $11.4 million (2019 $11.6 million). This was after a prior year tax credit of $1.2 million and a tax credit on the adjusting items of $1.5 million (2019 prior year charge of $0.1 million and tax credit on adjusting items of $0.7 million). Excluding the prior year and tax charge on adjusting items, the effective tax rate was 13.6 per cent (2019 13.0 per cent).

Going forward it is anticipated that Spirent's effective tax rate will be maintained at around 14-15 per cent, subject to changes in tax legislation.

Tax relating to items (credited)/charged to other comprehensive income or equity:

	2020 $ million	2019 $ million
Deferred tax on share incentives	**0.5**	(1.3)
Current tax on share incentives	**(0.9)**	(0.6)
Tax credit on share incentives	**(0.4)**	(1.9)
Deferred tax charge on defined benefit pension plan	**–**	0.5
Current tax credit on defined benefit pension plan	**(1.0)**	–
Deferred tax credit on deferred compensation plan	**(0.1)**	(0.1)

10. Tax continued

Reconciliation of the total tax charge

The tax charge in the income statement for the year is lower than the standard rate of corporation tax in the UK of 19.0 per cent (2019 19.0 per cent). The differences are reconciled below:

	Year ended 31 December 2020		
	Adjusted $ million	Adjusting $ million	Reported $ million
Accounting profit before tax	**103.6**	**(7.8)**	**95.8**
Accounting profit multiplied by the UK standard rate of corporation tax of 19.0 per cent	**19.7**	**(1.5)**	**18.2**
Differences in overseas rates	**2.2**	**–**	**2.2**
Non-taxable income	**(1.1)**	**–**	**(1.1)**
Recognition of temporary differences previously not recognised for deferred tax	**(0.2)**	**–**	**(0.2)**
Utilisation of temporary differences not previously recognised	**(1.0)**	**–**	**(1.0)**
UK and US Research and Experimental tax credit	**(2.1)**	**–**	**(2.1)**
Withholding tax	**1.1**	**–**	**1.1**
Hong Kong income tax credit	**(0.8)**	**–**	**(0.8)**
Permanent differences	**(3.7)**	**–**	**(3.7)**
Tax overprovided in prior years	**–**	**(1.2)**	**(1.2)**
Total tax charge reported in the income statement	**14.1**	**(2.7)**	**11.4**

	Year ended 31 December 2019		
	Adjusted $ million	Adjusting $ million	Reported $ million
Accounting profit before tax	93.9	(4.3)	89.6
Accounting profit multiplied by the UK standard rate of corporation tax of 19.0 per cent	17.8	(0.8)	17.0
Differences in overseas rates	3.4	–	3.4
Non-taxable income	(0.8)	–	(0.8)
Recognition of temporary differences previously not recognised for deferred tax	(1.5)	–	(1.5)
Utilisation of temporary differences not previously recognised	(2.0)	–	(2.0)
UK and US Research and Experimental tax credit	(2.1)	–	(2.1)
Withholding tax	0.9	–	0.9
Hong Kong income tax credit	(0.7)	–	(0.7)
Permanent differences	(2.8)	0.1	(2.7)
Tax underprovided in prior years	–	0.1	0.1
Total tax charge reported in the income statement	12.2	(0.6)	11.6

Included in the above reconciliation are the following items: Research and Experimental tax credits of $2.1 million (2019 $2.1 million); non-taxable income of $1.1 million (2019 $0.8 million), most of which relates to offshore income in the rest of the world; and permanent differences of $3.7 million (2019 $2.7 million) largely relating to the UK Patent Box deduction and the US foreign-derived intangible income deduction; and recognition of deferred tax assets in the US of $0.6 million (2019 $1.7 million) and deferred tax liabilities in the UK of $0.3 million (2019 $0.2 million) and derecognition of deferred tax assets in the rest of the world of $0.1 million (2019 nil).

The Group's tax rate is sensitive to the geographic mix of profits and reflects a combination of higher statutory tax rates in certain jurisdictions, and other regions with significantly lower statutory tax rates. Regional statutory tax rates range from a high of 32 per cent to a low of 15 per cent. The UK Patent Box deduction benefit of $2.2 million (2019 $1.8 million), US foreign-derived intangible income deduction of $1.6 million (2019 $1.3 million), Research and Experimental credits of $2.1 million (2019 $2.1 million) and other tax credits of $1.0 million (2019 $0.9 million) realised in Hong Kong bring down the rate but items such as state taxes and withholding tax increase the tax rate.

11. Earnings per share

Basic

Earnings per share is calculated by dividing the profit for the year attributable to owners of the parent Company by the weighted average number of Ordinary Shares outstanding during the year.

Diluted

Diluted earnings per share is calculated by dividing the profit for the year attributable to owners of the parent Company by the weighted average number of Ordinary Shares outstanding during the year plus the weighted average number of Ordinary Shares that would be issued on the conversion of all dilutive potential Ordinary Shares into Ordinary Shares.

	2020 $ million	2019 $ million
Profit for the year attributable to owners of the parent Company	**84.4**	78.0

	Number million	Number million
Weighted average number of Ordinary Shares in issue – basic	**609.7**	609.9
Dilutive potential of employee share incentives	**6.1**	7.5
Weighted average number of Ordinary Shares in issue – diluted	**615.8**	617.4

	Cents	Cents
Earnings per share		
Basic	**13.84**	12.79
Diluted	**13.71**	12.63

Adjusted

The Group is disclosing adjusted earnings per share attributable to owners of the parent Company in order to provide a measure to enable period-on-period comparisons to be made of its performance. The following items are excluded from adjusted earnings:

- exceptional items;
- acquisition related costs;
- acquired intangible asset amortisation;
- share-based payment;
- tax effect on the above items; and
- prior year tax (adjustments made to provisions in respect of prior years).

A reconciliation is provided below:

		2020		2019	
	Notes	$ million	EPS (cents)	$ million	EPS (cents)
Profit for the year attributable to owners of the parent Company		**84.4**	**13.84**	78.0	12.79
Exceptional items charge/(credit)	5	**3.1**		(0.5)	
Acquisition related costs	33	**–**		0.1	
Acquired intangible asset amortisation		**0.5**		1.2	
Share-based payment	31	**4.2**		3.5	
Tax effect on the above items	10	**(1.5)**		(0.7)	
Prior year tax (credit)/charge	10	**(1.2)**		0.1	
Adjusted basic		**89.5**	**14.68**	81.7	13.40
Adjusted diluted			**14.53**		13.23

There were no Ordinary Share transactions that occurred after 31 December that would have significantly changed the number of Ordinary Shares or potential Ordinary Shares outstanding at the period end if those transactions had occurred before the end of the reporting period in either year.

12. Dividends paid and proposed

	2020 $ million	2019 $ million
Declared and paid in the year		
Equity dividend on Ordinary Shares		
Final dividend 2019 of 3.45 cents (2.70 pence) per Ordinary Share (2018 2.73 cents (2.08 pence))	**20.6**	16.7
Interim dividend 2020 of 2.17 cents (1.67 pence) per Ordinary Share (2019 1.94 cents (1.59 pence))	**13.0**	11.9
	33.6	28.6
Proposed for approval at AGM (not recognised as a liability at 31 December)		
Equity dividend on Ordinary Shares		
Final dividend 2020 of 3.87 cents (2.78 pence) per Ordinary Share (2019 3.45 cents (2.70 pence))	**23.5**	20.6
Special dividend 2020 of 7.50 cents (5.40 pence) per Ordinary Share (2019 nil)	**45.6**	–
	69.1	20.6

The Directors are proposing a final dividend in respect of the financial year ended 31 December 2020 of 3.87 cents per Ordinary Share (2.78 pence) (2019 3.45 cents (2.70 pence)), which will absorb an estimated $23.5 million of shareholders' funds (2019 $20.6 million). The Directors are also proposing a special dividend of 7.50 cents per Ordinary Share (5.40 pence) (2019 nil), which will absorb an estimated $45.6 million of shareholders' funds (2019 nil). The final dividend and special dividend will be paid on 30 April 2021 to Ordinary shareholders who are on the Register of Members at close of business on 19 March 2021. Payment will be made to ADR holders on 7 May 2021. No liability is recorded in the financial statements in respect of these dividends.

Dividends are determined in US Dollars and paid in Pound Sterling. The exchange rate for determining the amount of the final dividend and special dividend to be paid for 2020 was $1.39: £1 (2019 $1.28: £1).

13. Intangible assets

$ million

	Note	Goodwill	Customer list	Current technology	Other	Licences	Total
Cost, net of accumulated amortisation and impairment losses							
At 1 January 2019		155.7	0.6	0.9	–	0.8	158.0
Acquisitions	33	0.9	–	1.0	–	–	1.9
Additions		–	–	–	–	2.0	2.0
Amortisation for the year		–	(0.6)	(0.6)	–	(0.9)	(2.1)
Exchange adjustment		0.5	–	–	–	–	0.5
At 1 January 2020		**157.1**	**–**	**1.3**	**–**	**1.9**	**160.3**
Additions		**–**	**–**	**–**	**–**	**0.5**	**0.5**
Amortisation for the year		**–**	**–**	**(0.5)**	**–**	**(0.9)**	**(1.4)**
Exchange adjustment		**0.4**	**–**	**0.1**	**–**	**–**	**0.5**
At 31 December 2020		**157.5**	**–**	**0.9**	**–**	**1.5**	**159.9**
At 31 December 2019							
Cost (gross carrying amount)		595.3	16.9	37.2	5.9	13.9	669.2
Amortisation and accumulated impairment losses		(438.2)	(16.9)	(35.9)	(5.9)	(12.0)	(508.9)
Net carrying amount		157.1	–	1.3	–	1.9	160.3
At 31 December 2020							
Cost (gross carrying amount)		**596.2**	**16.9**	**37.4**	**5.9**	**14.4**	**670.8**
Amortisation and accumulated impairment losses		**(438.7)**	**(16.9)**	**(36.5)**	**(5.9)**	**(12.9)**	**(510.9)**
Net carrying amount		**157.5**	**–**	**0.9**	**–**	**1.5**	**159.9**

Goodwill is allocated at acquisition to the cash-generating units (CGUs) that are expected to benefit from that business combination.

The Group identifies CGUs at the lowest level at which cash flows are largely independent of other cash flows.

13. Intangible assets continued

Goodwill has been allocated to three CGUs, which align with the reportable operating segments, as follows:

	2020 $ million	2019 $ million
Networks & Security	**73.8**	73.4
Lifecycle Service Assurance	**37.6**	37.6
Connected Devices	**46.1**	46.1
	157.5	157.1

Annual impairment test

The Group has an annual impairment testing date of 30 November. The key assumptions used in the value in use calculations were:

- revenue growth rates;
- gross margin;
- operating expenses;
- discount rate; and
- growth rate used to extrapolate cash flows beyond the five-year period covered by management's projections.

The cash flows are derived from the most recent financial budgets for the next financial year, as approved by management, and the Group's three-year strategic plan. Cash flows in years four and five are extrapolated based on long range plans. Cash flows in subsequent years have been extrapolated using a steady 2.5 per cent for all CGUs (2019 2.5 per cent for all CGUs), which management estimates to be the approximate average long-term growth rate for the industries in which these units operate. Fundamentally, this long-term growth is based on a proxy for global long-term inflation taking into consideration more developed and developing markets. The growth rates used in the value in use calculations are set at the same level for each CGU as all the CGUs operate within similar markets which share the same growth drivers and characteristics. The discount rates incorporate the specific risks relating to each CGU.

With effect from 1 January 2021, the Connected Devices operating segment has been combined with the Lifecycle Service Assurance operating segment. The Group's revised reported operating segments are Networks & Security and Lifecycle Service Assurance (see note 3 for further details). The latest management approved budget and strategic plans have been prepared on an existing segment basis and therefore are available for Lifecycle Service Assurance and Connected Devices separately. Given this, there is no impact of the change in operating segments on the CGUs or goodwill impairment test in 2020. With effect from 1 January 2021, the CGUs will change to align with the reported operating segments and the goodwill attributed to Connected Devices will be combined with the Lifecycle Service Assurance goodwill.

The discount rate applied to the cash flows is based on the weighted average cost of capital of comparable companies by taking the risk free rate for 30-year government bonds and making an adjustment to reflect the increased risk of investing in equities. In making this adjustment, the inputs required are the equity market risk premium, beta, and the risk adjustment applied to reflect the systematic risk of Spirent and the specific CGUs, taking into account factors such as size and the territories in which each CGU operates.

The cash flows have been discounted using the following pre-tax discount rates:

	2020 %	2019 %
Networks & Security	**11.8**	13.8
Lifecycle Service Assurance	**12.1**	13.5
Connected Devices	**11.5**	13.1

For Spirent the key factor in relation to the cash flow forecasts is the ability to forecast revenue. All CGUs operate in the data technology market and generate a high gross profit (gross margin); consequently changes in revenue can have a significant impact on the operating profit and cash flows. Revenue growth rates used in the projections are based on management's estimate of growth in the markets served and take into account historical levels of growth, expected future developments in products and technology, industry forecasts and macro-economic conditions in the territories in which the CGUs operate. Gross margin and operating expenses are based on historical values adjusted for the effect of revenue growth, changes in product mix, expectations of investment and cost reduction actions committed prior to the impairment testing date.

At Networks & Security, Cloud and IP is expected to maintain its leadership position in high-speed Ethernet, and this together with optimised 400G volumes, growth in network virtualisation and emerging technologies, is expected to drive earnings. Further growth in Networks & Security is expected at Positioning as the business benefits from the needs of developers and integrators of positioning, navigation and timing devices and of applications such as connected and autonomous vehicles. Management expects that the security business will benefit in the longer term from the launch of data breach assessment, and also the move to a subscription based model together with expansion in the Cloud-native security market. Cybersecurity is expected to benefit from synergies with Positioning and continued expansion in complementary solutions with Cloud and IP.

13. Intangible assets continued

Annual impairment test continued

Management expects revenue growth in the forecast period at Lifecycle Service Assurance from the delivery of a leading active assurance platform for 5G and next-generation service assurance, as well as the automation of critical test activities and leverage of existing product offerings. The Lumos legacy business is continuing to drop in the near term and is being replaced by growth in new Ethernet products supported by investment in product development, particularly in virtualisation, automation and 5G. The individual business units in Lifecycle Service Assurance are expected to work together to deliver the three-year plan to meet changes in customer needs and the competitive landscape.

Revenue is expected to grow at Connected Devices, which will be combined with Lifecycle Service Assurance from 1 January 2021, driven by device lab test 5G expansion, network emulator partnerships and managed solutions live network test growth. It is expected that the segmental change will accelerate and simplify the ability to offer 5G E2E test beds and enable a more integrated set of user experience assurance solutions. Management expects gross margin improvement as a result of product mix shifting to more software solutions and services. Operating expenses are expected to increase at a slower rate than revenue, increasing operating margins.

The recoverable amount of each CGU was calculated on a value in use basis and was in excess of its carrying value. Consequently, no impairment has been recognised.

Sensitivity to changes in key assumptions

The Directors believe that no reasonable possible change in any of the key assumptions used, in isolation, would cause the value in use of the Networks & Security, Lifecycle Service Assurance or Connected Devices CGUs to fall below the carrying value.

Other intangible assets

There was no impairment charge in respect of the other intangible assets in either 2020 or 2019.

14. Property, plant and equipment

				$ million
	Land and buildings	Plant and machinery	Fixtures, fittings and equipment	Total
Cost, net of accumulated depreciation and accumulated impairment				
At 1 January 2019	10.6	16.0	8.0	34.6
Additions – owned assets	1.3	7.6	2.0	10.9
Disposals	–	(1.2)	–	(1.2)
Inter-class transfers	0.1	–	(0.1)	–
Depreciation charge for the year	(2.5)	(8.5)	(3.7)	(14.7)
Exchange adjustment	–	–	(0.1)	(0.1)
At 1 January 2020	**9.5**	**13.9**	**6.1**	**29.5**
Additions – owned assets	**0.2**	**7.4**	**1.9**	**9.5**
Disposals	**–**	**(1.1)**	**–**	**(1.1)**
Depreciation charge for the year	**(2.4)**	**(7.2)**	**(2.6)**	**(12.2)**
Exchange adjustment	**–**	**0.1**	**–**	**0.1**
At 31 December 2020	**7.3**	**13.1**	**5.4**	**25.8**
At 31 December 2019				
Cost	23.7	79.8	42.9	146.4
Accumulated depreciation and accumulated impairment	(14.2)	(65.9)	(36.8)	(116.9)
Net carrying amount	9.5	13.9	6.1	29.5
At 31 December 2020				
Cost	**24.0**	**85.0**	**44.7**	**153.7**
Accumulated depreciation and accumulated impairment	**(16.7)**	**(71.9)**	**(39.3)**	**(127.9)**
Net carrying amount	**7.3**	**13.1**	**5.4**	**25.8**

15. Leases

Right-of-use assets (Group as a lessee)

	Land and buildings	Motor vehicles	Total
			$ million
Cost, net of accumulated depreciation and accumulated impairment			
At 1 January 2019	30.9	–	30.9
Additions	4.5	0.3	4.8
Derecognition	(2.6)	–	(2.6)
Re-measurement	0.4	–	0.4
Depreciation charge for the year	(7.5)	–	(7.5)
At 1 January 2020	**25.7**	**0.3**	**26.0**
Additions	**3.8**	**0.1**	**3.9**
Re-measurement	**1.5**	**–**	**1.5**
Depreciation charge for the year	**(8.3)**	**(0.1)**	**(8.4)**
Exchange adjustment	**0.3**	**–**	**0.3**
At 31 December 2020	**23.0**	**0.3**	**23.3**
At 31 December 2019			
Cost	68.6	0.3	68.9
Accumulated depreciation and accumulated impairment	(42.9)	–	(42.9)
Net carrying amount	25.7	0.3	26.0
At 31 December 2020			
Cost	**71.5**	**0.4**	**71.9**
Accumulated depreciation and accumulated impairment	**(48.5)**	**(0.1)**	**(48.6)**
Net carrying amount	**23.0**	**0.3**	**23.3**

In 2019, the Group entered into a sublease on an office building that it leases. This resulted in a derecognition of right-of-use assets amounting to a net book value of $2.6 million (cost of $4.3 million and accumulated depreciation of $1.7 million).

The related lease liabilities are disclosed in note 25.

Finance lease receivables (Group as a lessor)

The Group subleases an office building that it leased in 2015. The Group has classified the sublease as a finance lease, because the sublease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset to the sub lessee.

The following table sets out a maturity analysis of lease receivables, showing the undiscounted lease payments to be received after the reporting date.

	2020 $ million	2019 $ million
Maturity analysis – contractual undiscounted cash flows		
Less than one year	**0.6**	0.6
One to two years	**0.6**	0.6
Two to three years	**0.6**	0.6
Three to four years	**0.1**	0.6
Four to five years	**–**	0.1
Total undiscounted lease payments receivable	**1.9**	2.5
Unearned finance income	**–**	(0.1)
Net investment in the lease	**1.9**	2.4

During the year, $0.5 million (2019 $0.4 million) was received in respect of finance leases.

The net investment in the lease has been included within trade and other receivables (note 19), as follows:

	2020 $ million	2019 $ million
Current	**0.6**	0.5
Non-current	**1.3**	1.9
	1.9	2.4

16. Capital commitments

The Group had capital commitments in relation to additions of property, plant and equipment of $1.0 million at 31 December 2020 (31 December 2019 $0.9 million).

17. Subsidiaries

A list of subsidiaries, including the name, country of incorporation and proportion of ownership interest is given on pages 188 and 189 of these financial statements.

18. Inventories

	2020 $ million	2019 $ million
Raw materials	4.9	4.8
Work in progress	1.0	1.2
Finished goods	16.4	14.6
	22.3	20.6

An expense of $1.6 million (2019 $1.6 million) has been charged to the income statement in the year for inventory write-downs. There were no reversals of prior period inventory write-downs (2019 nil).

No inventories are carried at fair value less costs to sell (2019 nil).

19. Trade and other receivables

	2020 $ million	2019 $ million
Non-current		
Other receivables	**6.0**	5.7
Prepayments	**0.8**	1.2
	6.8	6.9
Current		
Trade receivables	**118.4**	128.7
Other receivables	**4.9**	4.5
Prepayments	**9.0**	9.6
	132.3	142.8
	139.1	149.7

The trade receivables are stated net of an allowance for expected credit losses. The movement in the allowance was as follows:

	2020 $ million	2019 $ million
At 1 January	**1.4**	0.9
Charge for the year	**1.8**	0.9
Released in the year	**(0.5)**	(0.4)
At 31 December	**2.7**	1.4

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

$1.3 million (2019 $1.9 million) of the non-current other receivables balance relates to the net investment in the lease (note 15). The majority of the remaining balance relates to corporate-owned life insurance.

The Group has no significant concentration of credit risk attributable to its trade receivables as the exposure is spread over a large number of customers.

Other financial assets – current

	2020 $ million	2019 $ million
Other financial assets	**0.2**	0.1

Other financial assets comprises forward foreign currency exchange contracts.

20. Assets recognised from costs to obtain a contract

	2020 $ million	2019 $ million
Non-current	**0.3**	0.3
Current	**0.6**	0.5
	0.9	0.8

These assets relate to capitalised incremental costs to obtain a contract, being sales commissions, arising on contracts with customers of over one year in length.

During the year, amortisation of $0.5 million was charged to the income statement (2019 $0.5 million).

No assets were impaired or derecognised during the current year or prior year.

21. Cash and cash equivalents

	2020 $ million	2019 $ million
Cash at bank	**95.7**	103.9
Short-term bank deposits	**145.5**	79.3
	241.2	183.2

Cash at bank earns interest at floating interest rates. Of the total cash and cash equivalents balance, $145.5 million (2019 $79.3 million) is callable at notice of three months or less at the date of investment.

Short-term bank deposits are made for varying periods of between one day and three months depending on the cash requirements of the Group and earn interest at the short-term deposit rates appropriate for the term of the deposit and currency. Short-term bank deposits includes $32.0 million (2019 $26.3 million) in respect of shares in money market funds.

At the end of 2020, the currency split of cash and cash equivalents was US Dollar 86 per cent (2019 78 per cent), Pound Sterling 6 per cent (2019 11 per cent) and other currencies 8 per cent (2019 11 per cent).

For the purposes of the cash flow statement, cash and cash equivalents comprise the above amounts.

22. Trade and other payables – current

	Note	2020 $ million	2019 $ million
Current			
Trade payables		**9.4**	24.6
Other taxes and social security costs		**5.6**	4.6
Other payables		**0.8**	1.5
Accruals		**56.2**	49.3
Government grants	23	**1.6**	1.8
		73.6	81.8
Non-current			
Other payables		**0.8**	0.8
Government grants	23	**0.2**	0.2
		1.0	1.0
		74.6	82.8

Trade payables are non-interest bearing and are normally settled on 30- to 60-day terms. Other payables are non-interest bearing.

The Directors consider that the carrying amount of trade payables approximates their fair value.

23. Government grants

The following government grants are included within trade and other payables:

	2020 $ million	2019 $ million
At 1 January	**2.0**	2.3
Received during the year	**0.5**	0.3
Released to the income statement	**(0.7)**	(0.6)
At 31 December	**1.8**	2.0

	2020 $ million	2019 $ million
Current	**1.6**	1.8
Non-current	**0.2**	0.2
	1.8	2.0

Government grants have been received to accelerate and support research and development in the vulnerability of global navigation satellite systems and other high technology projects.

24. Contract balances

The following table provides information about receivables and contract liabilities from contracts with customers. The Group does not have any contract assets.

	Note	2020 $ million	2019 $ million	2018 $ million
Trade receivables	19	**118.4**	128.7	123.4
Contract liabilities				
Current				
Payments received on account		**2.4**	2.3	1.0
Deferred income		**62.7**	53.2	55.2
		65.1	55.5	56.2
Non-current				
Deferred income		**18.8**	13.6	14.4
Total contract liabilities		**83.9**	69.1	70.6
Revenue recognised in the period from amounts included in contract liabilities at the beginning of the period		**55.5**	56.2	65.5

There was no revenue recognised in 2020, 2019, or 2018 from performance obligations satisfied in previous periods.

The timing of revenue recognition, invoicing and cash collections results in trade receivables, deferred income and advance customer payments received on account on the balance sheet.

The increase in deferred income in 2020 is due to the year-on-year increase in support contracts which are typically invoiced in advance.

The Group receives payments from customers based on a billing schedule, as established in the contract. Trade receivables are recognised when the right to consideration becomes unconditional. Contract liabilities are recognised as revenue as (or when) the Group performs under the contract.

The Group also recognises incremental costs incurred to obtain a contract as an asset if it expects to recover those costs. Such costs are presented in the balance sheet as assets recognised from costs to obtain a contract and disclosed in note 20.

Expected realisation of remaining performance obligations at year end

The Group applies the practical expedient in paragraph 121 of IFRS 15 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.

24. Contract balances continued

Expected realisation of remaining performance obligations at year end continued

For contracts that exceed one year, deferred income that relates to unsatisfied or partially satisfied performance obligations at year end is expected to be recognised as revenue in the future as follows:

	2020 $ million	2019 $ million
Within one year	15.5	18.3
Greater than one year	18.8	10.3
	34.3	28.6

The above information represents the revenue the Group will recognise when it satisfies the remaining performance obligations in the contracts. The amounts presented do not include orders for which neither party has performed.

Revenue from the sale of hardware and software generally arises from contracts less than one year in length. Consequently, the above amounts predominantly relate to the sale of maintenance and support services.

Virtually all of the revenue will be recognised within three years.

The Group provides standard warranties on its products and services. The nature of these warranties is considered to provide customers with assurance that the related product or service will function as intended in accordance with the agreed specification, and does not contain or imply any additional service obligation to the customer. Warranty obligations are estimated and recognised as liabilities based on the probable outflow of resources.

25. Lease liabilities

Total lease liabilities included in the balance sheet at 31 December:

$ million	Land and buildings	Motor vehicles	Total
At 1 January 2019	36.7	–	36.7
Additions	4.1	0.3	4.4
Re-measurement	0.4	–	0.4
Repayments	(10.3)	–	(10.3)
Interest	1.7	–	1.7
Exchange adjustment	0.1	–	0.1
At 1 January 2020	**32.7**	**0.3**	**33.0**
Additions	**3.6**	**0.1**	**3.7**
Re-measurement	**1.5**	**–**	**1.5**
Repayments	**(11.5)**	**(0.1)**	**(11.6)**
Interest	**1.4**	**–**	**1.4**
Exchange adjustment	**0.2**	**–**	**0.2**
At 31 December 2020	**27.9**	**0.3**	**28.2**

	2020 $ million	2019 $ million
Current	8.2	8.5
Non-current	20.0	24.5
	28.2	33.0

$1.8 million (2019 $2.2 million) of the lease liability included in the balance sheet relates to a building the Group subleases; see note 15 for further details.

	2020 $ million	2019 $ million
Maturity analysis – contractual undiscounted cash flows		
Less than one year	9.2	9.9
One to five years	17.6	24.5
More than five years	3.9	1.9
Total undiscounted lease liabilities at 31 December	30.7	36.3

25. Lease liabilities continued

	Note	2020 $ million	2019 $ million
Amounts recognised in the income statement			
Interest on lease liabilities	7	**1.4**	1.7
Expenses relating to short-term leases		**0.1**	0.1
Expenses relating to leases of low-value assets, excluding leases of short-term low-value assets		**0.2**	0.2
Amounts recognised in the cash flow statement			
Lease liability principal repayment		**10.2**	8.6
Lease liability interest paid		**1.4**	1.7

Cash payments of $0.3 million (2019 $0.3 million) relating to short-term leases and leases of low-value assets are classified within cash flows from operating activities in the consolidated cash flow statement.

Extension options

Some leases of buildings contain extension options exercisable by the Group before the end of the non-cancellable contract period. Where practicable, the Group seeks to include extension options in new leases to provide operational flexibility. The extension options held are exercisable only by the Group and not the lessors. The Group assesses at lease commencement whether it is reasonably certain to exercise the extension options. The Group reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant change in circumstances within its control.

	2020 $ million		2019 $ million	
	Lease liabilities recognised (discounted)	**Potential future lease payments not included in lease liabilities (discounted)**	Lease liabilities recognised (discounted)	Potential future lease payments not included in lease liabilities (discounted)
Buildings	**4.4**	**20.7**	5.7	19.2

26. Deferred tax

The movements in the deferred tax assets/(liabilities) are as follows:

	Note	Temporary differences	Tax losses	Tax credits	UK pension plans	Total $ million
At 1 January 2019		16.7	4.8	1.9	(0.4)	23.0
(Credited)/charged in the year	10	(2.4)	–	1.8	(1.2)	(1.8)
Deferred tax on defined benefit pension plan	10	–	–	–	(0.5)	(0.5)
Deferred tax on deferred compensation plan	10	0.1	–	–	–	0.1
Deferred tax on share incentives recognised in equity	10	1.3	–	–	–	1.3
Exchange adjustment		0.2	0.1	–	–	0.3
At 1 January 2020		**15.9**	**4.9**	**3.7**	**(2.1)**	**22.4**
Charged/(credited) in the year	10	**1.9**	**(1.6)**	**(0.2)**	**(0.2)**	**(0.1)**
Deferred tax on deferred compensation plan	10	**0.1**	**–**	**–**	**–**	**0.1**
Deferred tax on share incentives recognised in equity	10	**(0.5)**	**–**	**–**	**–**	**(0.5)**
Exchange adjustment		**(0.1)**	**–**	**–**	**(0.1)**	**(0.2)**
At 31 December 2020		**17.3**	**3.3**	**3.5**	**(2.4)**	**21.7**
Amounts on the balance sheet:						
At 31 December 2019						
Deferred tax asset		16.3	4.9	3.7	–	24.9
Deferred tax liability		(0.4)	–	–	(2.1)	(2.5)
		15.9	4.9	3.7	(2.1)	22.4
At 31 December 2020						
Deferred tax asset		**17.3**	**2.9**	**3.5**	**–**	**23.7**
Deferred tax liability		**–**	**0.4**	**–**	**(2.4)**	**(2.0)**
		17.3	**3.3**	**3.5**	**(2.4)**	**21.7**

26. Deferred tax continued

In 2019, the deferred tax asset and liability were offset on the balance sheet as they related to income taxes raised by the same authority on the same taxable entity.

A net deferred tax asset of $21.7 million has been recognised at 31 December 2020 (2019 $22.4 million). $20.0 million is in the United States (2019 $18.5 million), $1.5 million is in France (2019 $1.8 million), $2.2 million is in the rest of the world (2019 $2.2 million), offset by a net liability of $2.0 million in the United Kingdom (2019 $0.1 million net liability).

The deferred tax asset includes $2.9 million (2019 $3.2 million) in respect of the tax deduction which may be available on the future exercise of share incentives, $6.0 million (2019 $4.5 million) in respect of the future tax deduction on provisions and $6.2 million (2019 $4.8 million) in respect of the future tax deduction on the deferral of compensation. These amounts are presented within temporary differences.

The Group has tax losses arising in the United Kingdom of $37.0 million (2019 $36.9 million) and at the State level in the United States of $2.6 million (2019 $2.6 million), which are available for offset against suitable future taxable profits. The United States tax losses can be carried forward until 2035. Additionally, there are short-term timing differences in the United Kingdom of $2.7 million (2019 nil), the rest of the world of $6.7 million (2019 $4.8 million), Scientific Research and Experimental qualifying expenditure in Canada of $6.0 million (2019 $6.7 million) and tax credits at the State level in the United States and the rest of the world of $3.7 million and $1.3 million, respectively (2019 $4.8 million and $1.3 million). A deferred tax asset has not been recognised in respect of these items as their future recovery is uncertain.

The Group has capital losses carried forward of $1,124.9 million (2019 $1,086.8 million) for which no deferred tax asset has been recognised on the balance sheet. This change is due to foreign exchange movements. These capital losses have no expiry date.

The temporary difference associated with investments in the Group's subsidiaries for which a deferred tax liability has not been recognised in the periods presented are $266.0 million in aggregate (2019 $244.9 million). The Group does not expect a significant amount of the undistributed profits to be distributed in the foreseeable future but has recognised a deferred tax liability of $0.5 million (2019 $0.2 million) on the expected distribution of $2.6 million (2019 $3.3 million) of earnings from its China subsidiary, $3.3 million of earnings from its India subsidiary, $0.1 million from its Taiwan subsidiary and $0.2 million from its Korea subsidiary.

Changes in tax rates

Following the enactment of the United Kingdom Finance Act of 2020, the main corporation tax rate reduction to 17 per cent from April 2020 was cancelled and was set to remain at 19 per cent from 1 April 2020. As such, the United Kingdom temporary differences have been recognised at the rate at which the temporary differences are expected to unwind. In line with these rate changes, deferred tax assets and liabilities have been based on a rate of 19 per cent.

The UK Budget 2021 announcements on 3 March 2021 included measures to support economic recovery as a result of the ongoing COVID-19 pandemic. These included an increase to the UK corporation tax rate to 25 per cent, which is due to be effective from 1 April 2023. These changes were not substantively enacted at the balance sheet date and hence have not been reflected in the measurement of deferred tax balances at the period end. If the Group's UK deferred tax balances at the period end were remeasured at 25 per cent this would result in a deferred tax charge of $0.4 million.

27. Provisions

$ million

	Lease provisions	Restructuring provisions	Other provisions	Total
At 1 January 2019	3.0	–	10.4	13.4
Charged in the year	0.1	1.3	0.9	2.3
Asset retirement obligation	0.4	–	–	0.4
Released in the year	–	–	(0.3)	(0.3)
Utilised in the year	–	(0.9)	(6.5)	(7.4)
Unwind of discount	0.1	–	–	0.1
Exchange difference	–	–	(0.3)	(0.3)
At 1 January 2020	**3.6**	**0.4**	**4.2**	**8.2**
Charged in the year	**0.1**	**1.3**	**1.1**	**2.5**
Asset retirement obligation	**0.2**	**–**	**–**	**0.2**
Released in the year	**(0.1)**	**–**	**(0.1)**	**(0.2)**
Utilised in the year	**(0.3)**	**(0.9)**	**(0.1)**	**(1.3)**
Unwind of discount	**0.1**	**–**	**–**	**0.1**
Exchange difference	**0.1**	**–**	**0.2**	**0.3**
At 31 December 2020	**3.7**	**0.8**	**5.3**	**9.8**

27. Provisions continued

	2020 $ million	2019 $ million
Current	6.2	4.8
Non-current	3.6	3.4
	9.8	8.2

The lease provisions are for the continuing obligations under leases in respect of property dilapidation and reinstatement provisions. Where material, lease obligations are discounted. The Group expects these provisions to be utilised over one to ten years.

Other provisions comprise environmental provisions related to property disposed of, provisions relating to legal claims and a provision relating to a Notice of Recovery received from French Customs, discussed below. The Group expects these provisions to be utilised in less than one year.

In 2018, the Group made a provision for $8.9 million following the receipt of a Notice of Recovery from the Direction Générale des Douanes et Droits Indirects (French Customs) in relation to the valuation and classification of duty on certain imports into France. This dispute commenced with enquiries in 2011. During the period in question, Spirent adopted a duty tariff based on World Customs Organization guidelines which conflicted with European Union regulation. In 2019, the Group paid $6.5 million in relation to this claim, of which $2.3 million was later recovered (note 5).

The import regulations changed on 1 January 2017 and no liability exists after that date. Spirent has provided for the liability up until the date of the change, which encompasses the period covered by the Notice of Recovery. The amount of the remaining provision includes uncertainties with regard not only to the legitimacy of the basis of the claim made by the French authorities, but also in relation to the period in question, the appropriate tariff classification, the recoverability of import VAT, and the population and valuation of goods potentially subject to duty.

The Group strongly refutes the basis of the claim paid under the Notice of Recovery and has reserved the right to challenge that basis in the courts at a future date.

28. Financial instruments and financial risk management

The main purpose of the Group's financial instruments, other than trade and receivables, trade and other payables, contractual provisions and lease liabilities, is to fund the Group's liquidity requirements.

The Group's financial assets and liabilities are as follows:

	Measurement category under IFRS 9	Notes	2020 $ million	2019 $ million
Non-current trade and other receivables[1]	Financial assets at amortised cost	19	6.0	5.7
Cash and cash equivalents	Financial assets at amortised cost	21	241.2	183.2
Current trade and other receivables	Financial assets at amortised cost	19	123.3	133.2
Current other financial assets[2]	Derivatives designated at FVTPL	19	0.2	0.1
Financial assets			370.7	322.2
Non-current other payables excluding government grants	Financial liabilities at amortised cost	22	0.8	0.8
Current trade payables, other payables and accruals	Financial liabilities at amortised cost	22	66.4	75.4
Lease liabilities, current and non-current	Financial liabilities at amortised cost	25	28.2	33.0
Contractual provisions	Financial liabilities at amortised cost	27	3.7	3.6
Financial liabilities			99.1	112.8

Notes
1. Includes $3.6 million (2019 $3.0 million) in relation to corporate owned life insurance that is designated as financial assets at fair value through profit or loss.
2. Relates to forward foreign currency exchange contracts.

The Group enters into derivative transactions, forward foreign currency exchange contracts, for the management of the Group's foreign currency exposures when deemed appropriate.

The key objective of the Group's treasury department is to manage the financial risks of the business and to ensure that sufficient liquidity is available to the Group. All treasury activity operates within a formal control framework. The Board has approved treasury policies and guidelines and periodically reviews treasury activities. Additionally, it is the Group's policy that speculative treasury transactions are expressly forbidden.

28. Financial instruments and financial risk management continued

a) Market risk

The main types of market risk that affect the Group are interest rate risk and exchange rate risk.

Interest rate risk

The Group has external debt in relation to its lease liabilities (note 25) but has limited exposure to interest rate risk as the incremental borrowing rate used to discount these lease liabilities is fixed at the lease commencement date. The Group's excess funds are principally held in the United Kingdom and the United States and invested in on-demand or short-term bank deposits. It therefore has some exposure to interest rate risk arising on changes in Pound Sterling and US Dollar interest rates.

Cash and cash equivalents and forward foreign currency exchange contracts are the Group's financial instruments which are exposed to interest rate risk.

Short-term bank deposits and forward foreign currency exchange contracts mature within three months. The financial instruments bear the following interest rates:

		2020		2019	
	Note	**Effective interest rate %**	**$ million**	Effective interest rate %	$ million
Floating rate					
Cash at bank	21		**95.7**		103.9
Fixed rate					
Fixed deposits	21	**0.37**	**145.5**	2.03	79.3

Interest rates on financial instruments classified as fixed rate are fixed until the maturity of the instrument. All fixed rate deposits mature within three months after which date they will be exposed to floating rates of interest.

Interest receivable for the year (note 6) was $1.4 million (2019 $2.7 million) and is under the effective interest method.

The other financial instruments of the Group that are not included in the above table are non-interest bearing and are therefore not subject to interest rate risk.

A movement of 25 basis points in interest rates based on levels of investment at 31 December 2020 would increase or reduce interest income and equity by $0.4 million (2019 $0.3 million).

Exchange rate risk

Currency exposures arise from trading transactions undertaken by the Group in foreign currencies and on the translation of the operating results and net assets of overseas subsidiaries.

The Group has the majority of its operations in the United States and presents its consolidated financial statements in US Dollars. The parent Company's functional currency is Pound Sterling and its share capital is denominated in Pound Sterling; the Group also has operations in Europe and Asia and therefore its results and assets and liabilities are affected on translation by movements in exchange rates in relation to the US Dollar. The Group does not enter into instruments to hedge the translation exposure of the operating results or net assets of its overseas subsidiaries since these are considered accounting and not cash exposures.

The Group undertakes transactions denominated in foreign currencies; consequently exposures to exchange rate fluctuations arise. Exchange rate exposures are managed within approved policy parameters using forward foreign currency exchange contracts.

The main exposures arise in relation to the retranslation of foreign operations to US Dollar, on non-local currency denominated transactions and on non-local currency denominated cash balances. These exposures predominantly arise on Pound Sterling, Euro and Chinese Yuan transactions and balances. A 10 per cent appreciation or depreciation of these currencies against the US Dollar would decrease or increase profit before tax based on the activity in the period and balances at the reporting date as follows; Pound Sterling $3.9 million, Euro $0.5 million and Chinese Yuan $1.4 million (2019 Pound Sterling $1.9 million, Euro $0.1 million and Chinese Yuan $0.5 million).

b) Credit risk

Investment counterparties are subject to pre-approval by the Board with pre-approved limits set for each bank to avoid any concentrations of credit risk.

The maximum credit exposure at the balance sheet date under financial instruments in relation to cash and bank deposits is equal to the carrying value of $241.2 million (2019 $183.2 million).

Trade receivables, which generally have 30- to 90-day terms, are carried at original invoice amount less an allowance for expected credit losses. Trade receivable exposures are managed in the business units where they arise.

28. Financial instruments and financial risk management continued

b) Credit risk continued

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. Therefore, the Group does not track changes in credit risk, but instead recognises a loss allowance based on lifetime expected credit loss at each reporting date. To measure the expected credit losses, the Group has established a provision matrix that is based on shared credit risk characteristics and the days past due based on the expected loss rates.

The provision matrix is initially based on payment profiles of trade receivables over a period of 12 months before 31 December 2019 and the corresponding historical credit losses experienced within this period. At every reporting date the historical observed default rates are updated. The Group also considers the impact of regional macro-economic factors on the likelihood of future losses.

The Group has no significant concentration of credit risk attributable to its trade receivables as the exposure is spread over a large number of customers with no one customer accounting for more than 10 per cent of total Group revenue. The maximum credit exposure at the balance sheet date in relation to trade receivables is equal to the carrying value of $118.4 million (2019 $128.7 million). The credit risk relating to trade receivables has increased from the prior year due to macro-economic factors and the COVID-19 pandemic.

The composition of trade receivables at 31 December is as follows:

	2020 $ million	2019 $ million
Neither impaired nor past due	104.1	115.3
Past due but not impaired:		
– Less than 30 days overdue	9.1	8.6
– 30 to 60 days	2.9	3.6
– Over 60 days	2.3	1.2
Trade receivables	**118.4**	128.7

The Group closely monitors amounts due from customers and performs activities such as credit checks and reviews of payment history and has put in place appropriate credit approval limits. Based on these procedures, management assessed the quality of those receivables that are past due but not impaired as low risk.

The receivables' provision is based on expected credit losses. The movement on the provision during the year is given in note 19. The value of impaired trade receivables is $2.7 million (2019 $1.4 million). For all other financial assets, the maximum exposure to credit risk is represented by the carrying amount.

c) Liquidity risk

The Group's objective is to ensure that there are sufficient sources of funding to meet projected requirements. Its operations are financed through cash and cash equivalents held centrally and cash generated from operations.

At 31 December 2020, the Group had cash and cash equivalents of $241.2 million (2019 $183.2 million), of which $95.7 million (2019 $103.9 million) is available on demand and $145.5 million matures within three months (2019 $79.3 million matures within three months).

During 2020, the Group generated $121.2 million of cash from operating activities (2019 $119.3 million) and considers that, with current cash resources, debt only in relation to its lease liabilities and positive cash flow from its operating activities, it has adequate resources available to it to remain in operational existence for the foreseeable future.

The Group has entered into forward foreign currency exchange contracts at 31 December, all of which mature within three months. The gross settlement amounts of these contracts are as follows:

	2020 $ million	2019 $ million
Sale of US Dollars against Pound Sterling	14.1	6.8

The Group has external debt in relation to its lease liabilities (note 25) but is otherwise debt free and does not have loans payable. Financial liabilities are trade and other payables, the majority of which are due to be settled within one year, and contractual provisions (note 27).

The Group does not have any other material financial contractual commitments.

d) Fair value of financial instruments

The carrying value of all financial assets and liabilities is a reasonable approximation of fair value.

Derivative financial instruments are stated at fair value although the amounts at 31 December 2020 and 2019 were immaterial.

Corporate owned life insurance is stated at fair value and is at Level 1 in the fair value hierarchy as the valuation of the linked investments is based on quoted prices in active markets.

28. Financial instruments and financial risk management continued

e) Capital management

The primary objective of the Group's capital management is to support its business and maximise shareholder value. The Group's capital is its total shareholders' funds.

The Group manages its capital structure and intends to maintain a cash positive balance sheet over the medium to long term. This should allow the Group to maintain a strong capital position in the face of business risks, trading fluctuations and working capital demands.

Spirent's policy on the payment of dividends to shareholders is to maintain a progressive dividend policy. To the extent the Group has excess cash, it will consider returning such cash to shareholders.

29. Equity

a) Issued share capital

Issued and fully paid Ordinary Shares of 3¹⁄₃ pence each:

	Number of Ordinary Shares[1] million	$ million
At 1 January 2019	611.7	26.0
Exchange adjustment		0.8
At 1 January 2020	**611.7**	**26.8**
Exchange adjustment		**1.1**
At 31 December 2020	**611.7**	**27.9**

Note
1. Includes shares held in the Employee Share Ownership Trust and Spirent Sharesave Trust.

b) Equity and reserves

The nature and purpose of each reserve within equity is as follows:

- Share premium account: this reserve records the consideration premium for shares issued at a value that exceeds their nominal value.
- Capital redemption reserve: this reserve arises in relation to share capital cancellation.
- Other reserves: share capital, share premium account and capital redemption reserve are translated into US Dollars at the rates of exchange at the balance sheet date and the resulting exchange differences are included in other reserves.
- Translation reserve: this reserve is used to record exchange differences arising from the translation of the financial statements of foreign subsidiaries.

Investment in own Ordinary Shares

During the year, 4.1 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of $11.9 million, and 2.8 million shares were transferred from the Employee Share Ownership Trust to satisfy options exercised under the Spirent employee share plans (2019 4.0 million shares purchased and placed at cost of $8.6 million, and 3.0 million shares transferred).

At 31 December 2020, the Employee Share Ownership Trust held 2.9 million Ordinary Shares (2019 1.6 million Ordinary Shares) to satisfy awards under various share incentive plans. At 31 December 2020, the Spirent Sharesave Trust held 0.5 million Ordinary Shares (2019 0.5 million Ordinary Shares) to satisfy awards made to United Kingdom based employees under an all-employee share scheme. The market value of own Ordinary Shares held in trust, being in total 3.4 million Ordinary Shares (2019 2.1 million Ordinary Shares), at 31 December 2020 was $12.3 million (2019 $6.9 million).

Both the Employee Share Ownership Trust and the Spirent Sharesave Trust are an extension of the parent Company.

30. Employee share plans

Movements in share incentives over a two-year period ending on 31 December 2020 are shown below:

	2005 Employee Incentive Plan[1]		Spirent Long-Term Incentive Plan[2]	
	Number of share incentives million	Weighted average exercise price pence	Number of share incentives million	Weighted average exercise price pence
Incentives outstanding at 31 December 2018	0.8	89	8.3	–
Exercised	(0.4)	89	(2.9)	–
Granted	–	–	3.8	–
Forfeited	–	–	(0.4)	–
Incentives outstanding at 31 December 2019	**0.4**	**89**	**8.8**	**–**
Exercised	**(0.1)**	**89**	**(2.8)**	**–**
Granted	**–**	**–**	**2.4**	**–**
Forfeited	**–**	**–**	**(0.6)**	**–**
Incentives outstanding at 31 December 2020	**0.3**	**89**	**7.8**	**–**
Incentives exercisable				
At 31 December 2019	0.4	89	–	–
At 31 December 2020	**0.3**	**89**	**–**	**–**

Notes

1. Figures for the 2005 Employee Incentive Plan include share options, stock appreciation rights and Performance Shares in aggregate. No exercise price is payable on the vesting of a Performance Share.
2. Figures for the Spirent Long-Term Incentive Plan include restricted stock and Performance Shares in aggregate. No exercise price is payable on the vesting of a Performance Share.

The weighted average share price at exercise date was 237 pence (2019 158 pence).

The following information relates to outstanding share incentives at 31 December 2020:

			2020			2019		
Share plan	Exercise period (as at 31 December)	Exercise price pence	**Weighted average exercise price pence**	**Number of share incentives outstanding million**	**Weighted average remaining contractual life years**	Weighted average exercise price pence	Number of share incentives outstanding million	Weighted average remaining contractual life years
2005 Employee Incentive Plan	23.03.18 – 23.03.25	89	**89**	**0.3**	**4.2**	89	0.4	5.2
Spirent Long-Term Incentive Plan	05.05.21– 15.12.23	–	**–**	**7.8**	**2.1**	–	8.8	1.4
				8.1			9.2	

Discretionary plans

Spirent Long-Term Incentive Plan (LTIP)

Under the LTIP, awards of shares are granted to Executive Directors and certain employees. The release of these shares is conditional upon continued employment and for some awards achievement of certain performance targets measured over a three-year period.

Further information on the performance conditions for LTIP share incentives is set out in the Report on Directors' Remuneration.

2005 Employee Incentive Plan (EIP)

The EIP closed for new awards following the 2016 AGM and was replaced by the Spirent Long-Term Incentive Plan. Awards granted under the EIP expire on the tenth anniversary of their grant unless they have previously lapsed or been exercised.

30. Employee share plans continued

All-employee plans

UK Employee Share Purchase Plan (UK ESPP)

The UK ESPP, which is an HMRC-approved share incentive plan, is available to all UK employees and operates in conjunction with a trust, which holds the shares on behalf of participants.

US Employee Stock Purchase Plan (US ESPP)

The US ESPP enables the Company to grant eligible US employees the right to acquire Ordinary Shares in the Company using the proceeds of a savings contract.

Global All Employee Share Purchase Plan (GAESPP)

The GAESPP enables the Company to invite employees in countries other than the United States or United Kingdom to acquire Ordinary Shares in the Company on market using deductions from payroll and currently operates in Canada, Hong Kong, France and Germany.

31. Share-based payment

	2020 $ million	2019 $ million
Charged to adjusting items		
Spirent Long-Term Incentive Plan	4.2	3.5
Charged to administration expenses		
Executive deferred bonus plan	0.5	0.4
	4.7	3.9

All schemes are equity-settled.

In 2020, $0.5 million (2019 $0.4 million), being one-third of the Executive Directors' Annual Incentive, has been deferred into shares for an additional period of three years. This amount has been charged to administration expenses in the income statement and is included within adjusted operating profit as it reflects part of the underlying trading performance of the Group.

2.4 million share incentives were granted during 2020 (2019 3.8 million). The fair value of share incentives has been estimated as at the date of grant using the Black-Scholes model. The following table gives the assumptions made in arriving at the share-based payment charge and the fair value:

	2020	2019
Weighted average share price (pence)	250.0	163.1
Weighted average exercise price (pence)	0.0	0.0
Weighted average fair value (pence)	218.3	141.1
Expected volatility (%)	43.5–45.9	31.6–32.8
Option life (years):		
– Performance Shares	3.0	3.0
– Options and SARs	10.0	10.0
Risk free rate (%)	(0.10)–0.47	0.48–0.72
Dividend yield (%)	1.8–2.0	2.5–3.0

The expected volatility was determined by calculating the historical volatility of the Company's share price over the previous two years which management considers to be the period which is likely to be most representative of future volatility. The risk free rate is calculated by reference to UK government bonds.

32. Reconciliation of profit before tax to cash generated from operations

	2020 $ million	2019 $ million
Profit before tax	**95.8**	89.6
Adjustments for:		
Finance income	**(1.6)**	(2.8)
Finance costs	**1.5**	1.8
Intangible asset amortisation	**1.4**	2.1
Depreciation of property, plant and equipment	**12.2**	14.7
Depreciation of right-of-use assets	**8.4**	7.5
Loss on the disposal of property, plant and equipment	**0.1**	0.2
Share-based payment	**4.7**	3.9
Changes in working capital:		
(Increase)/decrease in inventories	**(1.5)**	7.0
Decrease/(increase) in receivables	**10.7**	(4.4)
(Decrease)/increase in payables	**(9.0)**	17.3
Increase/(decrease) in contract liabilities	**13.7**	(1.6)
Increase/(decrease) in provisions	**1.0**	(5.4)
Defined benefit pension plan employer contributions net of plan administration expenses paid by the plan and past service cost	**(6.0)**	(5.9)
Deferred compensation plan	**0.6**	0.9
Cash flow from operations	**132.0**	124.9

33. Business combinations

There were no business combinations in 2020.

On 31 May 2019, Spirent acquired a key business from Integrated Navigation Systems Limited (INS), a company based in United Kingdom, for cash consideration of $1.9 million. The acquired business is reported within the Group's Networks & Security operating segment.

INS develops and supplies the Group with a system for recording GNSS and Wi-Fi signals. The business acquisition enabled Spirent to streamline its supply chain process and improve gross margin on this product line.

From the date of acquisition to 31 December 2019, the acquired business did not contribute any revenue but contributed $0.4 million of profit before tax, as a result of lower cost of sales, to the result of the Group before charging $0.1 million of acquisition related costs and $0.1 million of acquired intangible asset amortisation. If the combination had occurred at the beginning of the financial year, there would not have been any revenue, and $1.0 million of profit before tax, as a result of lower cost of sales, would have been included in the Group result, before charging $0.1 million of acquisition related costs and $0.2 million of acquired intangible asset amortisation.

The fair value of the identifiable net assets acquired is set out below:

			2019 $ million
	Book value	Fair value adjustment	Fair value
Intangible assets	1.0	–	1.0
Inventory	0.1	(0.1)	–
Total identifiable net assets	1.1	(0.1)	1.0
Goodwill			0.9
Consideration			1.9

The intangible assets acquired represent current technology and have been assigned a provisional useful life of five years.

The inventory acquired on acquisition amounting to $0.1 million was written down to a fair value of nil.

The goodwill arising of $0.9 million consisted largely of the synergies and economies of scale expected from the combination together with intangible assets not qualifying for separate recognition such as workforce in place. The goodwill recognised is expected to be partly deductible for income tax purposes.

Acquisition related costs were $0.1 million and were expensed to other items within the income statement.

34. Related party transactions

Transactions between the Company and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

Remuneration of key management personnel

The remuneration of the Directors, who are the key management personnel of the Group, is set out below in aggregate for each of the categories specified in IAS 24 'Related Party Disclosures':

	2020 $000	2019 $000
Short-term employee benefits	**3,288.3**	3,540.9
Share-based payment	**1,644.9**	1,982.7
	4,933.2	5,523.6

No Director received compensation for loss of office (2019 $nil).

There were gains of $1,534,324 (2019 $2,010,731) on the exercise of options by key management personnel in 2020.

For further details refer to the Report on Directors' Remuneration on pages 82 to 106.

35. Events after the balance sheet date

On 4 March 2021, Spirent acquired 100 per cent of the issued share capital of octoScope, Inc (octoScope), a company based in the United States for an initial cash consideration of $55 million, subject to customary purchase price adjustments. Contingent consideration of up to $18 million is payable based on revenue growth targets for 2021 and 2022 and retention of key staff. The transaction was funded by surplus cash in the Group.

octoScope provides market-leading accurate, repeatable and automated wireless test solutions and methodologies to the wireless industry. Its test solutions leverage patented technology to provide automated Wi-Fi and 5G testing in emulated real-world environments, including the Wi-Fi 6 and 6E technologies.

octoScope will be incorporated into our Lifecycle Service Assurance operating segment along with our emerging Wi-Fi revenue stream currently residing in our high-speed Ethernet business within the Networks & Security operating segment.

Given the proximity to the approval of the consolidated financial statements, the acquisition accounting has not yet been completed.

Parent Company balance sheet

At 31 December 2020

	Notes	2020 £ million	2019 £ million
Fixed assets			
Intangible assets	4	**3.7**	3.8
Tangible assets	5	**1.4**	1.4
Right-of-use assets	6	**2.1**	2.4
Investments	7	**413.2**	388.0
		420.4	395.6
Current assets			
Stocks	8	**4.5**	3.9
Debtors: amounts falling due within one year	9	**19.5**	20.6
Debtors: amounts falling due after more than one year	3,9	**9.5**	8.8
Cash at bank and in hand		**12.3**	16.4
		45.8	49.7
Creditors: amounts falling due within one year	10	**(115.9)**	(102.2)
Net current liabilities		**(70.1)**	(52.5)
Total assets less current liabilities		**350.3**	343.1
Creditors: amounts falling due after more than one year	11	**(3.1)**	(2.9)
Defined benefit pension plan deficit	3	**(0.5)**	(0.5)
Deferred tax liabilities	15	**(1.4)**	(0.3)
Net assets		**345.3**	339.4
Capital and reserves	17		
Called up share capital		**20.4**	20.4
Share premium account		**20.2**	20.2
Capital redemption reserve		**13.1**	13.1
Profit and loss account		**291.6**	285.7
Shareholders' funds – equity		**345.3**	339.4

The Company has taken advantage of the exemption under Section 408 of the Companies Act 2006 from presenting its own profit and loss account. In 2020, the profit for the year amounted to £41.5 million (2019 £54.3 million).

The notes on pages 169 to 187 form part of these financial statements.

Signed on behalf of the Board

Paula Bell
Director
11 March 2021

Parent Company statement of changes in equity

	Notes	Called up share capital	Share premium account	Capital redemption reserve	Profit and loss account	Total equity
		Attributable to the equity holders of the parent Company				£ million
At 1 January 2019		20.4	20.2	13.1	255.8	309.5
Profit for the year		–	–	–	54.3	54.3
Other comprehensive income[1]		–	–	–	1.7	1.7
Total comprehensive income		–	–	–	56.0	56.0
Share-based payment		–	–	–	2.7	2.7
Tax credit on share incentives		–	–	–	0.3	0.3
Employee Share Ownership Trust	17	–	–	–	(6.7)	(6.7)
Equity dividends	16	–	–	–	(22.4)	(22.4)
At 1 January 2020		**20.4**	**20.2**	**13.1**	**285.7**	**339.4**
Profit for the year		**–**	**–**	**–**	**41.5**	**41.5**
Other comprehensive loss[2]		**–**	**–**	**–**	**(3.3)**	**(3.3)**
Total comprehensive income		**–**	**–**	**–**	**38.2**	**38.2**
Share-based payment		**–**	**–**	**–**	**3.6**	**3.6**
Tax charge on share incentives		**–**	**–**	**–**	**(0.1)**	**(0.1)**
Employee Share Ownership Trust	17	**–**	**–**	**–**	**(9.2)**	**(9.2)**
Equity dividends	16	**–**	**–**	**–**	**(26.6)**	**(26.6)**
At 31 December 2020		**20.4**	**20.2**	**13.1**	**291.6**	**345.3**

Notes
1. The amount included in other comprehensive income for 2019 of £1.7 million represents re-measurement gains on the net defined benefit pension asset of £2.1 million, net of a tax charge of £0.4 million.
2. The amount included in other comprehensive loss for 2020 of £3.3 million represents re-measurement losses on the net defined benefit pension asset of £4.1 million, net of a tax credit of £0.8 million.

The notes on pages 169 to 187 form part of these financial statements.

Notes to the parent Company financial statements

1. Significant accounting policies

Corporate information

Spirent Communications plc (the Company) is a public limited company incorporated and domiciled in England and Wales (registration number 00470893). The registered address of the Company is Origin One, 108 High Street, Crawley, West Sussex RH10 1BD, United Kingdom.

Basis of accounting

The financial statements have been prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including Financial Reporting Standard 101 'Reduced Disclosure Framework' (FRS 101) and the Companies Act 2006.

In preparing these financial statements, the Company has set out below the FRS 101 disclosure exemptions that have been taken in respect of the following disclosures:

- a cash flow statement and related notes;
- comparative period reconciliations for share capital, tangible assets and intangible assets;
- disclosures in respect of transactions with wholly owned subsidiaries;
- disclosures in respect of capital management;
- the effects of new but not yet effective IFRS; and
- disclosures in respect of the compensation of key management personnel.

As the consolidated financial statements include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 available in respect of the following disclosures:

- IFRS 2 'Share-based payment' in respect of Group-settled share-based payments;
- certain disclosures required by IAS 36 'Impairment of Assets' in respect of the impairment of goodwill and indefinite life intangible assets; and
- the disclosures required by IFRS 7 'Financial Instruments Disclosures' and IFRS 13 'Fair Value Measurement' regarding financial instrument disclosures have not been provided apart from those which are relevant for the financial instruments which are held at fair value.

As the Company is included in the consolidated financial statements, made up to 31 December each year, it is not required to present a separate profit and loss account as provided by Section 408 of the Companies Act 2006. Information on fees for non-audit services in respect of the parent Company accounts have not been disclosed as the Company prepares Group accounts which disclose information on fees for non-audit services on a consolidated basis.

Accounting convention

The financial statements are prepared on a historical cost basis apart from certain financial instruments that have been measured at fair value.

Going concern basis of accounting

In adopting the going concern basis for preparing the financial statements, the Directors have considered the Company's principal risks and uncertainties as set out on pages 45 to 49, including the potential impact of the COVID-19 pandemic on the Company and any longer-term impact to the global economy. In 2020, the COVID-19 pandemic has not had a significant impact on the Company's trading performance and the Company has continued to operate effectively.

The Directors have also considered sensitivities in respect of potential downside scenarios, including stress testing the latest cash flow projections that cover a period of 12 months from the date of these financial statements. In these scenarios, the Company has more than sufficient headroom in its available resources.

The Directors have reviewed the detailed financial projections for a period of 12 months from the date of this report and the business plans for the 2022 and 2023 financial years. They have also considered the principal risks faced by the Company, the potential impact of COVID-19, the sensitivity analysis and the Company's significant financial headroom and are satisfied that the Company has adequate financial resources to continue in operational existence for the foreseeable future, a period of at least 12 months from the date of this report. Accordingly, the going concern basis of accounting continues to be used in the preparation of the financial statements.

New accounting standards

There have been no applicable new standards, amendments to standards and interpretations effective from 1 January 2020 that have been applied by the Company which have resulted in a significant impact on its results or financial position.

Presentation

A new line item, 'Contract liabilities', has been added in the Company's creditors notes in order to present the Company's contract liabilities arising under IFRS 15 'Revenue from Contracts with Customers'. Deferred income, a separate line item in the Company's creditors notes, has been reclassified to 'Contract liabilities' together with the 'Payments received on account' balance from 'Accruals'. The presentation of the comparative amounts in the Company's creditors notes has also been amended to reflect this change. The impact of the reclassifications is set out below.

1. Significant accounting policies continued

Presentation continued

£ million	Decrease/ (increase) at 31 December 2019	Decrease/ (increase) at 1 January 2019
Creditors: amounts falling due within one year		
Deferred income	**3.2**	4.4
Accruals	**0.4**	0.1
Contract liabilities	**(3.6)**	(4.5)
	–	–
Creditors: amounts falling due after more than one year		
Deferred income	**0.8**	0.9
Contract liabilities	**(0.8)**	(0.9)
	–	–

The reclassification had no impact on the Company's net assets or profit for the year reported in 2019.

Business combinations and goodwill

A business combination is a transaction or other event in which an acquirer obtains control of one or more businesses. Business combinations are accounted for using the acquisition method.

At acquisition date, the identifiable assets acquired and liabilities assumed, including intangible assets, are measured at their fair values. The cost of an acquisition is measured as the aggregate of the consideration transferred and the amount of any non-controlling interest in the acquiree.

Goodwill arising on the acquisition of a business, representing the excess of cost over the net fair value of the net assets acquired, is capitalised as an intangible asset. Goodwill is carried at cost less any accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to the related cash-generating units monitored by management. Where the recoverable amount of the cash-generating unit is less than its carrying amount, including goodwill, an impairment loss is recognised in the profit and loss account.

The UK Companies Act requires goodwill to be reduced by provisions for amortisation on a systematic basis over a period chosen by the Directors, its useful economic life. However, under IFRS 3 'Business Combinations' goodwill is not amortised. Consequently the Company does not amortise goodwill, but reviews it for impairment on an annual basis or whenever there are indicators of impairment. The Company is therefore invoking a 'true and fair view override' to overcome the prohibition on the non-amortisation of goodwill in the Companies Act.

Had the Company amortised goodwill a period of 20 years would have been chosen as the useful life for goodwill. There would have been an impact of £0.1 million (2019 nil) to profit in the year had goodwill been amortised.

Intangible assets

Intangible assets are carried at cost less accumulated amortisation and accumulated impairment losses. Separately identifiable intangible assets such as current technology are capitalised on the balance sheet only when the value can be measured reliably, or the intangible asset is purchased as part of the acquisition of a business. Such intangible assets are amortised over their useful economic lives on a straight-line basis. The carrying value of intangible assets is reviewed for impairment if events or changes in circumstances indicate the carrying value may not be recoverable. Acquired intangible assets, being current technology, are amortised on a straight-line basis over their estimated useful lives and the charge is included within the profit and loss account.

The estimated useful life of the current technology intangible asset is five years and the expiry date is 2024.

Product development

Research expenditure is recorded as a product development cost in the year in which it is incurred. Intangible assets arising on the Company's various product development projects are recognised only if the recognition criteria of IAS 38 'Intangible Assets' are met.

Product development costs are expensed as incurred until the technological feasibility of the product under development has been established. Technological feasibility in Spirent's circumstances occurs when a working model is completed. For software development, technological feasibility is not established until the process of developing the software is complete. After technological feasibility is established, additional costs are capitalised and amortised on a straight-line basis over the estimated useful life.

At 31 December 2020 and 31 December 2019, no amounts have met the recognition criteria.

1. Significant accounting policies continued

Tangible assets

Tangible assets are stated at cost less accumulated depreciation and accumulated impairment. Depreciation is not provided on freehold land. Depreciation is provided to write-off the cost less estimated residual value of all other assets, over their estimated useful lives, on a straight-line basis at rates which take into account commercial conditions at their location. Usual asset lives are as follows:

Freehold buildings	50 years
Plant and machinery	3 to 8 years
Fixtures, fittings and equipment:	
– Building installations	20 years or lease period if lower
– Fittings and equipment	3 to 8 years
– Motor vehicles	3 to 5 years
– Business systems software	4 years

Business systems software is capitalised as tangible assets as the software is an integral part of the related hardware.

The carrying values of tangible assets are reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable.

Impairment of assets

Intangible assets with finite useful lives and tangible assets and right-of-use assets are tested for impairment at each reporting date where there is an indication that an asset may be impaired. Goodwill with an indefinite useful life is assessed at least annually. When an impairment test is performed, the recoverable amount is assessed by reference to the higher of the net present value of the expected cash flows (value in use) of the relevant cash-generating unit or asset and the fair value less cost of disposal. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Impairment losses are recognised in the profit and loss account in those expense categories consistent with the function of the impaired asset.

Where an impairment loss has been recognised against an asset, it may be reversed in future periods where there has been a change in the estimates used to determine the asset's recoverable amount since the last impairment loss was recognised, but only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, had no impairment loss been recognised in prior years. Such a reversal is recognised in the profit and loss account. This does not apply for goodwill, for which an impairment loss must not be reversed in any circumstances.

Investments

Investments in subsidiaries are stated at cost and reviewed for impairment if there are indications that the carrying value may not be recoverable.

Leases

The Company assesses whether a contract is or contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company recognises a right-of-use asset and a corresponding lease liability with respect to all lease agreements in which it is the lessee at the commencement date of the lease (i.e. the date the underlying asset is available for use), except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low-value assets. For these leases, the Company recognises the lease payments within the profit and loss account on a straight-line basis over the period of the lease.

At the commencement date of the lease, the lease liability is initially measured at the present value of lease payments to be made over the lease term, discounted using the rate implicit in the lease. If this rate cannot be readily determined, the Company uses its incremental borrowing rate. Under the modified retrospective transition method, which is the method the Company adopted on transition to IFRS 16 'Leases' on 1 January 2019, lease liabilities are required to be discounted using the incremental borrowing rate at date of transition. The Company has set the discount rate based upon the local base rate with an additional premium to reflect various factors such as credit risk.

The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable, variable lease payments that depend on an index or rate, and amounts expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and payments of penalties for terminating a lease, if the lease term reflects the Company exercising the option to terminate. The variable lease payments that do not depend on an index or a rate are recognised as an expense in the period on which the event or condition that triggers the payment occurs.

The lease liability is presented within creditors in the balance sheet.

The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method), and by reducing the carrying amount to reflect the lease payments made. It is re-measured when there is a change in future lease payments arising from a change in an index or rate, or if the Company changes its assessment of whether it will exercise a purchase, extension or termination option.

1. Significant accounting policies continued

Leases continued

When the lease liability is re-measured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the corresponding lease liability, adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The right-of-use assets are presented as a separate line in the balance sheet.

Stocks

Stocks are valued at the lower of cost and estimated net realisable value, after provisions for obsolescence. Cost includes all costs in bringing each product to its present location and condition, being the full manufacturing cost on a first-in, first-out basis, including all attributable overheads based on a normal level of activity.

Provisions

Provisions are recorded when the Company has a present, legal or constructive obligation as a result of a past event, for which it is probable that it will be required to settle by an outflow of resources and for which a reliable estimate of the amount of the obligation can be made. Provisions are reviewed at each balance sheet date and adjusted to reflect the current best estimate.

Where the effect of the time value of money is material, the amount of the provision shall be the present value of the expenditures expected to be required to settle the obligation.

Foreign currencies

The financial statements are presented in Pound Sterling, which is the Company's functional and presentation currency.

Transactions in foreign currencies are initially recorded at the rates ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rates ruling at the balance sheet date. All exchange gains and losses are taken to the profit and loss account.

Financial instruments

Financial assets and liabilities are recognised on the Company's balance sheet when it becomes a party to the contractual provisions of the instrument.

Trade debtors

Trade debtors are non-interest bearing and are stated at original invoiced amount less an appropriate allowance for expected credit losses. At each reporting date, the Company measures the loss allowance at an amount equal to the lifetime expected credit losses.

The Company applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade debtors. Therefore, the Company does not track changes in credit risk, but instead recognises a loss allowance based on lifetime expected credit losses at each reporting date. To measure the expected credit losses, the Company has established a provision matrix that is based on shared credit risk characteristics and the days past due based on the expected loss rates.

The provision matrix is initially based on payment profiles of trade debtors over a period of 12 months before 31 December of the prior year and the corresponding historical credit losses experienced within this period. At every reporting date the historical observed default rates are updated. The Company also considers the impact of regional macro-economic factors on the likelihood of future losses.

Trade debtors are written off when there is no reasonable expectation of recovery.

A default on a trade debtor occurs when the debtor fails to make contractual payments when they fall due.

Cash at bank and in hand

Cash at bank and in hand in the balance sheet comprise cash at bank and in hand and short-term deposits which have an original maturity of three months or less. There are no bank overdrafts.

Trade creditors

Trade creditors are non-interest bearing and are stated at the original invoiced amount.

Loans and borrowings

Loans and borrowings are recognised initially at fair value less attributable transaction costs. Subsequent to initial recognition, loans and borrowings are stated at amortised cost using the effective interest method, and in respect of financial assets, less any impairment losses.

Impairment losses are based on lifetime expected credit losses.

Equity instruments

Equity instruments are recorded at the proceeds received, net of direct issue costs. Spirent Communications plc Ordinary Shares held by the Company are classified in equity as treasury shares and are recognised at cost and included as a deduction from the profit and loss account reserve. Consideration received for the sale of such treasury shares is also recognised in equity.

1. Significant accounting policies continued

Derivative financial instruments

The Company uses forward foreign currency exchange contracts to manage exposures arising on receipts and payments in foreign currencies relating to firm commitments.

Forward foreign currency exchange contracts are initially recognised at fair value on the date on which the contract is entered into, and are subsequently re-measured to fair value at each reported balance sheet date. The fair value of forward foreign currency exchange contracts is calculated by reference to current forward exchange rates for contracts with similar maturity profiles. The Company has not adopted the hedge accounting rules. Consequently all gains and losses arising from changes in fair value are taken to the profit and loss account.

Pensions

The Company operates two funded defined benefit pension plans. All other pension plans are defined contribution in nature where the amount charged to the profit and loss account is the employer's contributions paid or payable during the year.

For defined benefit pension plans, full actuarial valuations are carried out every three years using the projected unit credit method, and updates are performed at each balance sheet date. Re-measurement, comprising actuarial gains and losses, the effect of changes to the asset ceiling (if relevant) and the return on plan assets (excluding interest), is reflected immediately in the balance sheet surplus with a charge or credit recognised in other comprehensive income in the period in which they occur. Re-measurement recognised in other comprehensive income will not be reclassified to profit or loss. Past service cost is recognised in profit or loss in the period of plan amendment. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit pension asset, taking account of any changes in the net defined benefit pension asset during the period as a result of contribution and benefit payments. Defined benefit pension costs are categorised as:

- service cost (including current service cost, past service cost and gains and losses on curtailments or settlements);
- net interest expense or income; and
- re-measurement.

The Company presents the first two components of defined benefit pension costs in profit or loss.

Revenue

Revenue represents the transfer of promised products or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those products or services.

Revenue from product sales of hardware and perpetual software licences is recognised at the point in time when the customer has obtained control of the products sold. This is usually when the products have been delivered in accordance with the contractual terms. In some instances it is not until acceptance has occurred that control of the asset is transferred to the customer. Terms of acceptance are dependent upon the specific contractual arrangement agreed with the customer. If it can be objectively determined that control has been transferred to the customer in accordance with the agreed contract specifications, customer acceptance is a formality that would not affect the determination of when the customer has obtained control of the products. However, if it cannot be objectively determined that the products delivered are in accordance with the agreed-upon contract specifications, revenue would not be recognised until customer acceptance has been granted.

For sales of software licences, the Company determines whether the licence is capable of being distinct and is separately identifiable from other promises in the context of the contract. Revenue from software subscription licences that provide the customer with a right to access the Company's intellectual property throughout the subscription period is recognised over time, throughout the subscription period. Revenue from perpetual software licences that provide the customer with a right to use the Company's intellectual property for an indefinite period of time is recognised at the point in time when the customer can first use and benefit from the software.

For the sale of services, revenue is generally recognised over time with reference to when or as the performance obligations are satisfied by transferring the service to the customer. Revenue from support and maintenance service contracts and software subscription sales is recognised over the period of performance on a straight-line basis.

Revenue from professional services is generally recognised as work progresses in accordance with agreed-upon contractual terms, based on a measure of progress towards complete satisfaction of the performance obligation. Progress is measured using either an output method (e.g. completion of a day, or for fixed price contracts revenue is recognised based on performance completed or contractual milestones reached) or an input method (e.g. actual cost of services provided as a proportion of total cost of services expected to be provided under the contract). Where applicable, the Company elects to use the practical expedient where revenue can be recognised in the amount to which the Company has a right to invoice, only if the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer of the Company's performance completed to date. Where the Company's professional services contracts contain terms of acceptance, and revenue would not be recognised until customer acceptance had been obtained. Where the professional service has a pre-determined or fixed output deliverable, revenue is recognised at a point in time once the performance obligation has been satisfied and the customer has received the agreed deliverable.

1. Significant accounting policies continued

Revenue continued

The Company accounts for multi-component orders as multiple performance obligations if the following criteria are met:

a) The good or service is capable of being distinct, that is, they are individually readily available and regularly sold separately to customers; and

b) The promise to transfer the good or service is distinct in the context of the contract, that is, they do not require significant integration, customisation or modification with other goods or services in the contract and are not highly interrelated or interdependent of other goods or services in the contract.

For multi-component orders where the elements are accounted for as multiple performance obligations, the transaction price and discount, if any, are allocated proportionally to all performance obligations in the contract. If either of the two criteria above are not met, and where various components in the contract are combined, bundled or pre-assembled into one or more product or equipment units to form a distinct good or service, they will be accounted for as a single performance obligation.

Contracts are sometimes modified to account for changes in customer requirements. Contract modifications are considered to exist when the parties to a contract approve a modification that either creates new or changes existing enforceable rights and obligations of the parties to the contract. Contract modifications that are for additional goods and services that are distinct from existing performance obligations and are priced at a standalone selling price reflected in additional consideration are accounted for as a separate contract. For contract modifications where the remaining goods or services are not distinct from those already provided, the change is recognised as a cumulative catch-up to revenue. For modifications where the remaining goods or services are distinct from those already provided but are not accounted for as a separate contract, the change is treated as a termination of the existing contract and the creation of a new contract.

Cost of sales

The Company's cost of sales related to the sale of its products includes materials, payments to third party contract manufacturers, royalties and salaries and other expenses related to its manufacturing and supply operations personnel. Cost of sales related to the provision of services includes salaries and other expenses associated with technical support services and the cost of extended maintenance services.

Costs to obtain a contract

The incremental costs of obtaining a contract with a customer are capitalised as an asset if the Company expects to recover them. The Company incurs costs such as sales commissions when it enters into a new contract. Such costs are presented within debtors in the balance sheet as assets recognised from costs to obtain a contract where the related revenue is recognised over time, usually in relation to support and subscription agreements. These assets are amortised on a systematic basis consistent with how the related revenue is recognised.

The Company applies the practical expedient in paragraph 94 of IFRS 15 and recognises incremental costs of obtaining a contract as an expense when incurred if the amortisation period of the asset that the Company would otherwise have recognised is one year or less.

Management is required to determine the recoverability of assets recognised from costs to obtain a contract. At each reporting date, the Company determines whether or not the assets are impaired by comparing the carrying amount of the asset to the remaining amount of consideration that the Company expects to receive less the costs that relate to providing services under the relevant contract. No assets were impaired as at 31 December 2020 or 31 December 2019.

Deferred income

Deferred income is only recognised on non-cancellable contracts that provide unconditional rights to payment from the customer for products and services that the Company has not yet completed providing or that it will provide in the near future.

Revenue from product sales of hardware and perpetual software licences is recognised at the point in time when the customer has obtained control of the products sold. In the instances where the customer has been invoiced and revenue from hardware or perpetual software licences is unable to be recognised, revenue would not be recognised until control has passed, resulting in deferred income.

Support services and software subscription agreements are generally billed at commencement of the support or subscription contract, while revenue is recognised over the period of the support or subscription agreement, resulting in deferred income.

The Company occasionally receives advance payments from customers on account, before products or services are delivered and revenue is recognised, resulting in liabilities. Deferred income and payments received on account are reported as contract liabilities within creditors on the balance sheet on a contract-by-contract basis at the end of each reporting period.

Government grants

A government grant is recognised in the balance sheet initially within creditors when there is reasonable assurance that it will be received and that the Company will comply with the conditions attached to it. Grants that compensate the Company for expenses incurred are recognised as other operating income on a systematic basis in the same periods in which expenses are incurred.

Employee benefits

When an employee has rendered service to the Company during an accounting period, short-term benefits expected to be paid in exchange for that service are recognised in the same accounting period.

1. Significant accounting policies continued

Share-based payment

The Company operates various equity-settled share-based compensation plans and accounts for these awards in accordance with IFRS 2 'Share-based Payment'.

The fair value of these awards is recognised in the profit and loss account (or as an addition to the cost of investment in the subsidiary in which the relevant employees work) on a straight-line basis over the vesting period together with a corresponding change in equity. The fair value is measured using the Black-Scholes model by reference to the share price, and taking into account the terms and conditions of the award, excluding non-market vesting conditions, at the date the awards were granted. The charge is reassessed at each balance sheet date to reflect the expected and actual levels of vesting, due to achievement or otherwise of non-market conditions. Awards where vesting is conditional upon satisfying a market condition or non-vesting condition are treated as vesting irrespective of whether the market or non-vesting condition has been satisfied.

The Company has an employee share trust for the granting of certain share incentives to employees. Shares in the Company held by the employee share trust are treated as treasury shares and presented in the balance sheet as a deduction from equity.

Tax

Income tax on the profit or loss for the year comprises current and deferred tax. Income tax is recognised in the profit and loss account except to the extent that it relates to items in other comprehensive income or equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustments to tax payable for previous years.

Deferred tax is recognised on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements, with the following exceptions:

- where the temporary difference arises from the initial recognition of goodwill (taxable temporary differences only) or of an asset or liability in a transaction that is not a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

A deferred tax asset is recognised only to the extent that it is probable that taxable profits will be available against which the deductible temporary differences, carried forward tax credits or tax losses can be utilised.

Deferred tax assets and liabilities are measured on an undiscounted basis at the tax rates that are expected to apply when the related asset is realised or the liability is settled, based on tax rates and laws enacted or substantively enacted at the balance sheet date.

Dividends paid

The interim dividend is included in the financial statements in the period in which it is paid, and the final dividend and special dividend in the period in which it is approved by the shareholders at an Annual General Meeting.

Critical accounting assumptions and judgements

The preparation of financial statements requires the Company to make estimates and assumptions that affect items reported. Such estimates and assumptions are based on management's best knowledge of current facts, circumstances and future events. Actual results may differ, possibly significantly, from those estimates. The areas requiring a high degree of judgement or where assumptions and estimates are significant to the parent Company financial statements are revenue recognition, defined benefit pension plans (note 3), leases (note 14) and recognition of deferred tax assets (note 15). Please refer to note 2 of Notes to the consolidated financial statements on pages 136 to 137 for detailed disclosures.

2. Employees

Please refer to the Report on Directors' Remuneration on pages 82 to 106 and note 34 of Notes to the consolidated financial statements on page 166 for disclosures relating to the emoluments, share incentives and long-term incentive interests and pensions of the Directors.

The average number of people employed by the Company during the year was:

	2020 Number	2019 Number
Manufacturing	**44**	40
Product development	**62**	54
Selling and marketing	**55**	52
Administration	**35**	32
	196	178

FINANCIAL STATEMENTS

2. Employees continued

Employee benefit costs were:

	2020 £ million	2019 £ million
Remuneration	16.4	14.5
Social security costs	2.1	1.9
Pension and other related costs	2.1	1.8
Expense of share-based payment	0.7	0.7
	21.3	18.9

3. Pensions

Defined benefit plans

i) Characteristics and risks associated with the Plans

The Company sponsors two funded defined benefit pension plans in the United Kingdom: the Spirent Communications plc Staff Pension & Life Assurance Plan ("Staff Plan") and the Spirent Communications plc Retirement Cash & Life Assurance Plan ("Cash Plan"). These plans are funded and have full UK HM Revenue & Customs ("HMRC") tax-exempt approval. Both schemes are administered by a Trustee board which is comprised of representatives from the employer, member nominated Trustees and an independent Trustee. The Trustee board operates in accordance with the Trust Deed and Rules of each Plan and acts in the interests of all of its members.

- The Staff Plan is the Company's most significant plan. It provides its members with retirement benefits based on their final salary and length of service. The Staff Plan is closed to new entrants.
- The Cash Plan is primarily a defined contribution arrangement, although there are some legacy defined benefits ("Old Section") that have been valued for the purpose of these accounts in accordance with IAS 19 'Employee Benefits'. Members who left service before 1992 are entitled to a cash lump sum on retirement that is based on their salary and length of service. Members of the Old Section are entitled to defined contribution benefits, but with an underpin based on salary and length of service. The cash plan is closed to new entrants.

There is also a UK unfunded plan, which consists of a contractual obligation for the Company to top up certain former employees' benefits whose salaries exceeded the statutory earnings cap.

As with the vast majority of similar arrangements in the United Kingdom, the Company ultimately underwrites the risks relating to the defined benefit plans. These risks include investment risks and demographic risks, such as the chance of members living longer than expected.

The plans hold a significant proportion of their assets in equity. Strong future equity returns would be expected to reduce the Company's future cash contributions (and vice versa).

Expected contributions to the defined benefit plans in 2021 are £5.3 million. This includes the contributions agreed with the funded plans' Trustees in accordance with UK legislation. The latest triennial actuarial valuation dated 31 March 2018 indicated a deficit of £22.5 million, calculated on a technical provision basis using more prudent assumptions than the accounting valuation, particularly in relation to discount rate, inflation and demographic. Therefore, the Company has agreed to pay £5.0 million per annum into the Staff Plan, increasing in line with CPI, through to June 2023 (or earlier if self-sufficiency is reached) in order to clear the funding deficit. Additionally, the Company will fund the plan by an amount equal to 10 per cent of any special dividend paid amounting to $30 million or over during the period.

If the contributions currently agreed are insufficient to pay the benefits due, the Company will need to make further contributions.

GMP equalisation

In October 2018, the High Court ruled on the Lloyds Bank GMP inequality case. In response to this, an allowance of £3.1 million was included on the Company's balance sheet at 31 December 2018 to make provision for the estimated costs arising from the judgement. This past service cost was charged to exceptional items in the profit and loss account in 2018 and related to the Staff Plan. There was no impact on the Cash Plan.

Over the period to 31 December 2020, the Trustees and the Company have not taken any formal decisions over the process, nor have they received updated assessments of the potential costs of the judgement. The calculation of the allowance as a proportion of the liabilities included within the IAS 19 figures are therefore unchanged. As a result of changes in market conditions, the allowance is now £3.5 million.

On 20 November 2020, the High Court handed down a further judgement, stating that pension schemes should pay uplifts in respect of members who had transferred benefits out in the past (back to 17 May 1990), where those benefits were not equalised in line with the 2018 judgement.

3. Pensions continued

Defined benefit plans continued

i) Characteristics and risks associated with the Plans continued

The potential costs of these uplifts is uncertain, as the Trustees do not hold data on members who transferred their benefits out of the Staff Plan many years ago, and in any case may not be able to contact them. Furthermore, the data required to calculate the uplift is not generally available. Given this, an estimate of the potential costs of £0.2 million has been calculated and charged to the profit and loss account in 2020 as a past service cost, consistent with the treatment in 2018.

Further information on the GMP equalisation, including the key estimates and considerations used in the calculations is disclosed in note 2 in the consolidated financial statements and also in the Company's 2018 Annual Report.

ii) Amounts in the financial statements

The assets and liabilities on the balance sheet are as follows:

	2020 £ million	2019 £ million
Schemes in net asset position		
UK defined benefit pension plan – Staff Plan	8.2	7.8
UK defined benefit pension plan – Cash Plan	1.3	1.0
	9.5	8.8
Schemes in net liability position		
UK unfunded plan	(0.5)	(0.5)
Net pension plan surplus on the balance sheet	9.0	8.3

a) The assets and liabilities in each plan

	2020 £ million	2019 £ million
Staff Plan		
Quoted		
– Equities	45.9	51.2
– Government bonds	3.7	4.5
– Corporate bonds	6.3	3.7
Unquoted		
– LDI funds	43.0	34.5
– Cash benchmarked bonds	100.8	76.6
– Hedge funds	–	20.0
– Insured annuities	2.0	2.0
– Property	3.7	1.1
– Cash and other	26.0	19.2
Fair value of plan assets	231.4	212.8
Present value of defined benefit pension plan obligations	(223.2)	(205.0)
Surplus in the plan	8.2	7.8
Cash Plan		
Quoted		
– Equities	4.1	3.8
– Government bonds	3.0	2.8
Unquoted		
– Insured annuities	0.1	0.1
– Cash and other	1.5	1.6
Fair value of plan assets	8.7	8.3
Present value of defined benefit pension plan obligations	(7.4)	(7.3)
Surplus in the plan	1.3	1.0
Total net surplus recognised	9.5	8.8
Unfunded plan		
Present value of unfunded obligations	(0.5)	(0.5)
Net pension plan surplus on the balance sheet	9.0	8.3

3. Pensions continued
Defined benefit plans continued
ii) Amounts in the financial statements continued
a) The assets and liabilities in each plan continued

Approximately two-thirds of the Staff Plan's assets are held in a combination of LDI funds, cash benchmarked bonds and hedge funds. The objective of this allocation is to hedge against the plan's liabilities, provide protection against inflation risk and to provide a level of investment returns in all market scenarios.

These funds have a wide investment remit and as such the investments of the funds may or may not be listed on recognised exchanges and markets and will be without restriction as to geographical, industrial or sectoral exposure. These funds may take both long and short positions and may utilise a broad range of derivatives. The funds' investments may include sub-investment grade securities, corporate debt securities, gilts, sale and repurchase agreements, loans, and emerging markets debt and currencies.

The plans are prohibited from investing in Spirent's own financial instruments.

The fair values of the quoted equity and debt instruments are determined based on quoted market prices in active markets whereas the fair values of the other assets are not. Unquoted investments are included at values provided by the fund managers and are generally valued using recent market data and external sources, with a hierarchy that follows the principles of IFRS 13 'Fair Value Measurement'.

The Company has determined that it has an unconditional right to refund of surplus assets if the schemes are run off until the last member dies, on which basis IFRIC 14 does not cause any change in the balance sheet disclosures before tax.

For the purposes of the following disclosures, the Staff Plan and Cash Plan have been combined as the Cash Plan is immaterial to these financial statements.

b) Analysis of the amounts charged to the profit and loss account

	2020 £ million	2019 £ million
Plan administration expenses	0.3	0.5
Current service cost	0.1	0.1
Past service cost	0.2	–
Amount charged to operating costs	0.6	0.6
Net interest on the net defined benefit pension surplus	(0.2)	(0.1)
Net charge to the profit and loss account	0.4	0.5

c) Analysis of the amount recognised directly in the statement of comprehensive income

	2020 £ million	2019 £ million
Re-measurement gain on plans' assets	19.7	20.2
Actuarial gain arising from experience	1.3	0.2
Actuarial (loss)/gain arising from the demographic assumptions	(0.6)	2.3
Actuarial loss arising from changes in financial assumptions	(24.5)	(20.6)
Re-measurement of the net defined benefit pension surplus	(4.1)	2.1

d) Movements in the present value of funded defined benefit obligations

	2020 £ million	2019 £ million
At 1 January	212.3	197.6
Current service cost	0.1	0.1
Past service cost	0.2	–
Interest cost	4.4	5.4
Benefit payments	(10.2)	(8.9)
Actuarial gain arising from experience	(1.3)	(0.2)
Actuarial loss/(gain) arising from the demographic assumptions	0.6	(2.3)
Actuarial loss arising from changes in financial assumptions	24.5	20.6
Present value of funded defined benefit pension plans' obligations	230.6	212.3

3. Pensions continued

Defined benefit plans continued

ii) Amounts in the financial statements continued

e) Movements in the fair value of plans' assets

	2020 £ million	2019 £ million
At 1 January	221.1	199.6
Interest income on plans' assets	4.6	5.5
Employer contributions	5.2	5.2
Benefit payments	(10.2)	(8.9)
Plan administration expenses	(0.3)	(0.5)
Re-measurement gain on plans' assets	19.7	20.2
Fair value of plans' assets	**240.1**	221.1

f) The key financial assumptions

The assumptions used for both plans using a weighted average were as follows:

	2020 %	2019 %
Inflation – RPI	3.0	3.0
Inflation – CPI	2.2	2.2
Rate of increase in pensionable salaries	2.2	2.2
Rate of increase for pensions in payment pre-2001 service	3.5	3.6
Rate of increase for pensions in payment 2001 to 5 April 2005 service	2.9	2.9
Rate of increase for pensions post-5 April 2005 service	2.1	2.0
Rate of increase in deferred pensions	2.2	2.2
Rate used to discount plan liabilities	1.3	2.1

The mortality assumptions are based on standard mortality tables which allow for future mortality improvements. The assumptions are such that a member currently aged 65 (2019 aged 65) will live on average for a further 22.2 years (2019 22.1 years) if they are a male and for a further 24.2 years (2019 24.1 years) if they are female. For a member who retires in 2040 (2019 in 2039) at age 65 (2019 aged 65) the assumptions are that they will live on average for a further 23.5 years (2019 23.4 years) after retirement if they are male and for a further 25.7 years (2019 25.6 years) after retirement if they are female.

iii) Amount, timing and uncertainty of future cash flows

The approximate impact to past service liabilities of these changes to the main assumptions, which are considered reasonably possible, is as follows:

- Reducing the discount rate by 0.1 per cent per annum would increase past service liabilities by £3.4 million (2019 £3.0 million).
- Increasing RPI inflation by 0.1 per cent would increase the plans' liabilities by £1.3 million (2019 £1.1 million).
- Increasing the life expectancy of a member by one year (by modifying the standard mortality tables using an appropriate scaling factor) would increase past service liabilities by £12.9 million (2019 £10.6 million).

There will also be an impact on the future service cost but given the small active population in these plans this is likely to be insignificant. The sensitivity analysis may not be representative of the actual change as the changes in assumptions may not occur in isolation.

The liability has the following duration and maturity.

	2020	2019
Weighted average duration of the defined benefit obligation (years)	15	14
Maturity analysis of benefit payments (non-discounted amounts) £ million		
Maturity ≤ 1 year	8.3	8.2
Maturity > 1 ≤ 5 years	35.0	34.6
Maturity > 5 ≤ 10 years	46.5	46.9
Maturity > 10 ≤ 20 years	83.7	86.8
Maturity > 20 ≤ 30 years	58.1	62.0
Maturity > 30 years	41.9	47.8

Defined contribution plans

The Company contributes to defined contribution pension plans for employees. Employer contributions for 2020 were £0.9 million (2019 £0.7 million).

4. Intangible assets

	Goodwill	Current technology	Total
			£ million
Cost			
1 January and 31 December 2020	**7.5**	**0.8**	**8.3**
Accumulated amortisation and impairment losses			
At 1 January 2020	**4.4**	**0.1**	**4.5**
Amortisation for the year	**–**	**0.1**	**0.1**
At 31 December 2020	**4.4**	**0.2**	**4.6**
Net book value at 31 December 2019	3.1	0.7	3.8
Net book value at 31 December 2020	**3.1**	**0.6**	**3.7**

The carrying value of goodwill has been tested by reference to the value in use of the Networks & Security CGU as identified in the consolidated financial statements, please refer to note 13 of Notes to the consolidated financial statements on pages 149 to 151 for detailed disclosures. No impairment of goodwill was required.

The goodwill arose on the acquisition of the Positioning business and on the acquisition of Integrated Navigation Systems Limited in 2019 (note 19), both within the Networks & Security CGU.

5. Tangible assets

	Freehold land and buildings	Plant and machinery	Fixtures, fittings and equipment	Total
				£ million
Cost				
At 1 January 2020	**0.7**	**4.4**	**1.6**	**6.7**
Additions	**–**	**0.4**	**0.1**	**0.5**
Disposals	**–**	**(0.2)**	**–**	**(0.2)**
At 31 December 2020	**0.7**	**4.6**	**1.7**	**7.0**
Accumulated depreciation and impairment				
At 1 January 2020	**0.3**	**3.7**	**1.3**	**5.3**
Depreciation charge for the year	**–**	**0.3**	**0.2**	**0.5**
Disposals	**–**	**(0.2)**	**–**	**(0.2)**
At 31 December 2020	**0.3**	**3.8**	**1.5**	**5.6**
Net book value at 31 December 2019	0.4	0.7	0.3	1.4
Net book value at 31 December 2020	**0.4**	**0.8**	**0.2**	**1.4**

6. Right-of-use assets

The Company leases office buildings.

	Land and buildings £ million
Cost, net of accumulated depreciation and accumulated impairment	
At 1 January 2019	0.2
Additions	2.5
Depreciation charge for the year	(0.3)
At 1 January 2020	**2.4**
Depreciation charge for the year	**(0.3)**
At 31 December 2020	**2.1**
At 31 December 2019	
Cost	2.8
Accumulated depreciation and accumulated impairment	(0.4)
Net carrying amount	2.4
At 31 December 2020	
Cost	**2.5**
Accumulated depreciation and accumulated impairment	**(0.4)**
Net carrying amount	**2.1**

The related lease liabilities are disclosed in note 14. The reduction in cost in 2020 is due to a disposal of an office building held at nil net carrying amount.

7. Investments

	Shares in subsidiaries	Loans to subsidiaries	Total
			£ million
Cost			
At 1 January 2020	**1,131.7**	**3.7**	**1,135.4**
Additions	**22.3**	**–**	**22.3**
Loans waived	**–**	**(0.8)**	**(0.8)**
Share-based payment	**2.9**	**–**	**2.9**
At 31 December 2020	**1,156.9**	**2.9**	**1,159.8**
Amounts provided			
At 1 January 2020	**743.7**	**3.7**	**747.4**
Loans waived	**–**	**(0.8)**	**(0.8)**
At 31 December 2020	**743.7**	**2.9**	**746.6**
Net book value at 31 December 2019	388.0	–	388.0
Net book value at 31 December 2020	**413.2**	**–**	**413.2**

The recoverability of the carrying value of investments in subsidiaries has been assessed by reference to value in use.

During the year, capital contributions of £22.3 million (2019 £19.4 million) were paid to subsidiaries, loans of £0.8 million (2019 no loans waived) from Inclex No 1 Limited were waived and capital contributions were made to its subsidiaries in relation to share-based payment of £2.9 million (2019 £2.0 million).

8. Stocks

	2020 £ million	2019 £ million
Work in progress	**0.4**	0.7
Finished goods	**4.1**	3.2
	4.5	3.9

There were no stock write-downs recognised in the period (2019 nil) and there were no reversals of prior period stock write-downs (2019 nil).

No stock is carried at fair value less costs to sell (2019 nil).

9. Debtors

	Note	**2020 £ million**	2019 £ million
Due within one year			
Trade debtors		**5.9**	5.2
Owed by subsidiaries		**12.0**	13.7
Other debtors		**0.5**	0.2
Prepayments		**0.6**	0.4
Current tax asset		**0.4**	1.0
Assets recognised from costs to obtain a contract		**0.1**	0.1
		19.5	20.6
Due after one year			
Defined benefit pension plan surplus	3	**9.5**	8.8

The Directors consider that the carrying amount of trade and other debtors approximates their fair value.

The Company has no significant concentration of credit risk attributable to its trade debtors as the exposure is spread over a large number of customers.

Assets recognised from costs to obtain a contract relate to capitalised incremental costs to obtain a contract, being sales commissions arising on contracts with customers of more than one year in length. No assets were impaired or derecognised during the current year or prior year.

10. Creditors: amounts falling due within one year

	Notes	2020 £ million	2019 £ million
Trade creditors		**1.5**	2.3
Owed to subsidiaries		**103.4**	90.4
Accruals[1]		**5.4**	4.7
Contract liabilities[1]	12	**4.4**	3.6
Government grants	13	**0.4**	0.7
Lease liabilities	14	**0.2**	0.1
Other taxes and social security costs		**0.6**	0.4
		115.9	102.2

Note
1. Accruals in 2019 included £0.4 million relating to contract liabilities which has been reclassified from accruals to contract liabilities; see note 1 for further details.

Trade creditors are non-interest bearing and are normally settled on 30- to 60-day terms. Other creditors are non-interest bearing.

The Directors consider that the carrying amount of trade creditors approximates their fair value.

11. Creditors: amounts falling due after more than one year

	Notes	2020 £ million	2019 £ million
Contract liabilities	12	**1.1**	0.8
Government grants	13	**0.2**	0.1
Lease liabilities	14	**1.8**	2.0
		3.1	2.9

12. Contract balances

The following table provides information about debtors and contract liabilities from contracts with customers. The Company does not have any contract assets.

	Notes	2020 £ million	2019 £ million	2018 £ million
Trade debtors	9	**5.9**	5.2	7.0
Contract liabilities				
Current				
Payments received on account		**0.2**	0.4	0.1
Deferred income		**4.2**	3.2	4.4
	10	**4.4**	3.6	4.5
Non-current				
Deferred income	11	**1.1**	0.8	0.9
Total contract liabilities		**5.5**	4.4	5.4
Revenue recognised in the period from amounts included in contract liabilities at the beginning of the period		**3.6**	4.5	5.8

There was no revenue recognised in 2020, 2019 or 2018 from performance obligations satisfied in previous periods.

The timing of revenue recognition, invoicing and cash collections results in trade debtors, payments received on account and deferred income on the balance sheet.

The Company receives payments from customers based on a billing schedule, as established in the contract. Trade debtors are recognised when the right to consideration becomes unconditional. Contract liabilities are recognised as revenue as (or when) the Company performs under the contract.

The Company also recognises incremental costs incurred to obtain a contract as an asset if it expects to recover those costs. Such costs are presented within debtors in the balance sheet as assets recognised from costs to obtain a contract and disclosed in note 9.

12. Contract balances continued

Expected realisation of remaining performance obligations at year end

The Company applies the practical expedient in paragraph 121 of IFRS 15 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.

For contracts that exceed one year, deferred income that relates to unsatisfied or partially satisfied performance obligations at year end is expected to be recognised as revenue in the future as follows:

	2020 £ million	2019 £ million
Within 1 year	1.6	1.0
Greater than 1 year	1.1	0.8
	2.7	1.8

The above information represents the revenue the Company will recognise when it satisfies the remaining performance obligations in the contracts. The amounts presented do not include orders for which neither party has performed.

Revenue from the sale of hardware and software generally arises from contracts less than one year in length. Consequently, the above amounts predominantly relate to the sale of maintenance and support services.

Virtually all of the revenue will be recognised within three years.

The Company provides standard warranties on its products and services. The nature of these warranties is considered to provide customers with assurance that the related product or service will function as intended in accordance with the agreed specification, and does not contain or imply any additional service obligation to the customer. Warranty obligations are estimated and recognised as liabilities based on the probable outflow of resources.

13. Government grants

The following government grants are included within creditors:

	2020 £ million	2019 £ million
At 1 January	0.8	1.1
Received during the year	0.3	0.1
Released to the profit and loss account	(0.5)	(0.4)
At 31 December	0.6	0.8

	Notes	2020 £ million	2019 £ million
Current	10	0.4	0.7
Non-current	11	0.2	0.1
		0.6	0.8

Government grants have been received to accelerate and support research and development in the vulnerability of global navigation satellite systems.

14. Lease liabilities

Total lease liabilities included in the balance sheet at 31 December:

	Buildings £ million
At 1 January 2019	0.3
Additions	2.0
Repayments	(0.2)
At 1 January 2020	2.1
Repayments	(0.2)
Interest	0.1
At 31 December 2020	2.0

Notes to the parent Company financial statements continued

14. Lease liabilities continued

	Notes	2020 £ million	2019 £ million
Current	10	**0.2**	0.1
Non-current	11	**1.8**	2.0
		2.0	2.1

	2020 £ million	2019 £ million
Maturity analysis – contractual undiscounted cash flows		
Less than one year	**0.3**	0.1
One to five years	**1.0**	1.1
More than five years	**1.0**	1.2
Total undiscounted lease liabilities at 31 December	**2.3**	2.4

In 2020, the total cash outflow for leases was £0.2 million (2019 £0.2 million).

	2020 £ million	2019 £ million
Amounts recognised in the profit and loss account		
Interest on lease liabilities	**0.1**	–

Extension options

Some leases of buildings contain extension options exercisable by the Company before the end of the non-cancellable contract period. Where practicable, the Company seeks to include extension options in new leases to provide operational flexibility. The extension options held are exercisable only by the Company and not the lessors. The Company assesses at lease commencement whether it is reasonably certain to exercise the extension options. The Company reassesses whether it is reasonably certain to exercise the options if there is a significant event or significant change in circumstances within its control.

	2020	2019
	Lease liabilities recognised (discounted) £ million	Lease liabilities recognised (discounted) £ million
Buildings	**1.0**	1.4

15. Deferred tax

The movements in the deferred tax (liability)/asset are as follows:

	Temporary differences	Tax losses	UK pension plans	Credits	Total
					£ million
At 1 January 2019	0.2	1.3	(0.3)	0.1	1.3
Charged in the year	0.2	(0.6)	–	0.1	(0.3)
Deferred tax on defined benefit pension plan	–	–	(1.3)	–	(1.3)
At 1 January 2020	**0.4**	**0.7**	**(1.6)**	**0.2**	**(0.3)**
Charged in the year	**(0.4)**	**(0.4)**	**–**	**(0.2)**	**(1.0)**
Deferred tax on defined benefit pension plan	**–**	**–**	**(0.1)**	**–**	**(0.1)**
At 31 December 2020	**–**	**0.3**	**(1.7)**	**–**	**(1.4)**

In 2020 and 2019, the deferred tax liability and asset have been offset on the balance sheet as they related to income taxes raised by the same authority on the same taxable entity.

The Company has tax losses of £23.9 million (2019 £23.9 million) and short term timing differences of £0.4 million (2019 £0.4 million) that are available for offset against suitable future taxable profits.

A deferred tax asset has not been recognised in respect of these losses as their future recovery is uncertain. These losses can be carried forward indefinitely.

The Company also has capital losses carried forward of £823.3 million (2019 £823.3 million) for which no deferred tax asset has been recognised on the balance sheet. These capital losses have no expiry date.

16. Dividends

	2020 £ million	2019 £ million
Declared and paid in the year		
Equity dividend on Ordinary Shares		
Final dividend 2019 of 2.70 pence per Ordinary Share (2018 2.08 pence)	**16.5**	12.7
Interim dividend 2020 of 1.67 pence per Ordinary Share (2019 1.59 pence)	**10.1**	9.7
	26.6	22.4
Proposed for approval at AGM (not recognised as a liability at 31 December)		
Equity dividend on Ordinary Shares		
Final dividend 2020 of 2.78 pence per Ordinary Share (2019 2.70 pence)	**16.9**	16.5
Special dividend 2020 of 5.40 pence per Ordinary share (2019 nil)	**32.9**	–
	49.8	16.5

The Directors are proposing a final dividend in respect of the financial year ended 31 December 2020 of 2.78 pence per Ordinary Share (2019 2.70 pence), which will absorb an estimated £16.9 million of shareholders' funds (2019 £16.5 million). The Directors are also proposing a special dividend of 5.40 pence per Ordinary Share (2019 nil), which will absorb an estimated £32.9 million of shareholders' funds (2019 nil). The final dividend and special dividend will be paid on 30 April 2021 to Ordinary shareholders who are on the Register of Members at close of business on 19 March 2021. Payment will be made to ADR holders on 7 May 2021. No liability is recorded in the financial statements in respect of these dividends.

Dividends are determined in US Dollars and paid in Pound Sterling. The exchange rate for determining the amount of the final dividend to be paid for 2020 was $1.39: £1 (2019 $1.28: £1).

Notes to the parent Company financial statements continued

17. Capital and reserves

Changes during the year in the issued Ordinary Share capital were as follows:

	Number of Ordinary Shares[1] million	£ million
Issued and fully paid Ordinary Shares of 3 1/3 pence each at 1 January 2020 and 31 December 2020	**611.7**	**20.4**

Note
1. Includes shares held in the Employee Share Ownership Trust and Spirent Sharesave Trust.

Please refer to note 29 of the Notes to the consolidated financial statements on page 162 for disclosures relating to the nature and purpose of each reserve within equity.

Investment in own Ordinary Shares

During the year, 4.1 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of £9.2 million and 2.8 million shares were also transferred from the Employee Share Ownership Trust to satisfy options exercised under the Spirent employee share plans (2019 4.0 million shares purchased and placed at cost of £6.7 million, and 3.0 million shares transferred).

At 31 December 2020, the Employee Share Ownership Trust held 2.9 million Ordinary Shares (2019 1.6 million Ordinary Shares) to satisfy awards under various share incentive plans. At 31 December 2020, the Spirent Sharesave Trust held 0.5 million Ordinary Shares (2019 0.5 million Ordinary Shares) to satisfy awards made to United Kingdom-based employees under an all-employee share scheme. The market value of own Ordinary Shares held in trust, being in total 3.4 million Ordinary Shares (2019 2.1 million Ordinary Shares), at 31 December 2020 was £9.0 million (2019 £5.2 million).

Both the Employee Share Ownership Trust and the Spirent Sharesave Trust are an extension of the Company.

Employee share plans

The Company operates a number of employee share incentive plans which are described in note 30 of Notes to the consolidated financial statements.

The share incentives over Ordinary Shares under these plans that have been granted and remain outstanding at 31 December 2020, held by employees of the Company are as follows:

			2020			2019		
Share plan	Exercise period (as at 31 December)	Exercise price pence	**Weighted average exercise price pence**	**Number of share incentives outstanding million**	**Weighted average remaining contractual life years**	Weighted average exercise price pence	Number of share incentives outstanding million	Weighted average remaining contractual life years
2005 Employee Incentive Plan[1]	23.03.18–12.05.20	89	**–**	**–**	**–**	89	–	5.2
Spirent Long-Term Incentive Plan[2]	22.05.21–15.12.23	–	**–**	**2.2**	**1.9**	–	2.8	1.4
				2.2			2.8	

Notes
1. Figures for the 2005 Employee Incentive Plan include share options, stock appreciation rights and Performance Shares in aggregate. No exercise price is payable on the vesting of a Performance Share.
2. Figures for the Spirent Long-Term Incentive Plan include restricted stock and Performance Shares in aggregate. No exercise price is payable on the vesting of a Performance Share.

The weighted average share price at exercise date was 235 pence (2019 159 pence).

18. Subsidiaries

A list of subsidiaries, including the name, country of incorporation, registered office address and proportion of ownership interest is given on pages 188 and 189 of this Annual Report.

19. Business combinations

There were no business combinations in 2020.

On 31 May 2019, Spirent acquired a key business from Integrated Navigation Systems Limited (INS), a company based in United Kingdom, for cash consideration of £1.5 million.

INS develops and supplies the Company with a system for recording GNSS and Wi-Fi signals. The business acquisition enabled Spirent to streamline its supply chain process and improve gross margin on this product line.

From the date of acquisition to 31 December 2019, the acquired business did not contribute any revenue but contributed £0.3 million of profit before tax, as a result of lower cost of sales, to the result of the Company before charging £0.1 million of acquisition related costs and £0.1 million of acquired intangible asset amortisation. If the combination had occurred at the beginning of the financial year, there would not have been any revenue, and £0.8 million of profit before tax, as a result of lower cost of sales, would have been included in the Company result, before charging £0.1 million of acquisition related costs and £0.1 million of acquired intangible asset amortisation.

The fair value of the identifiable net assets acquired is set out below:

			2019 £ million
	Book value	Fair value adjustment	Fair value
Intangible assets	0.8	–	0.8
Stocks	0.1	(0.1)	–
Total identifiable net assets	0.9	(0.1)	0.8
Goodwill			0.7
Consideration			1.5

The intangible assets acquired represent current technology and have been assigned a provisional useful life of five years.

The stock acquired on acquisition amounting to £0.1 million was written down to a fair value of nil.

The goodwill arising of £0.7 million consisted largely of the synergies and economies of scale expected from the combination together with intangible assets not qualifying for separate recognition such as workforce in place. The goodwill recognised is expected to be partly deductible for income tax purposes.

Acquisition related costs were £0.1 million and were expensed to the profit and loss account.

20. Events after the balance sheet date

On 4 March 2021, a wholly owned subsidiary of the Company acquired 100 per cent of the issued share capital of octoScope, Inc. Please refer to note 35 of Notes to the consolidated financial statements on page 166 for detailed disclosures.

Full list of subsidiary undertakings

A full list of subsidiaries of Spirent Communications plc at 31 December 2020 is set out below. The country of incorporation and the effective percentage of equity owned (if less than 100 per cent) is also detailed below. Unless otherwise noted, the share capital comprises Ordinary Shares which are indirectly held by Spirent Communications plc.

Company Name	Registered in	Registered office address	Notes
Spirent Communications of Ottawa Limited	Canada	100 King Street West, 41st Floor, 1 First Canadian Place, Toronto, Ontario, M5X 1B2	
Spirent Communications Technology (Beijing) Limited	China	Suite 1302, Shining Tower, No 35 Xue Yuan Road, Haidian District, Beijing 100083	Held directly
Bowthorpe Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Cambridge Analytical Group Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Earlynow Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	
Inclex No 1 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 2 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 3 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 4 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 5 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 6 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 7 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Inclex No 8 Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
PG International Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Shipbrick Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	54.55 per cent held directly, 45.45 per cent held indirectly
Spirent Capital Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Financial Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Holdings Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Investment Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Sharesave Trust Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	Held directly
Spirent Systems Limited	England	Origin One, 108 High Street, Crawley, West Sussex RH10 1BD	100 per cent 'A' shares held indirectly, 100 per cent 'B' shares held directly

Company Name	Registered in	Registered office address	Notes
Spirent Communications SAS	France	Gaia, 9 Parc Ariane, Boulevard des Chenes, 78280 Guyancourt	Held directly
Spirent Communications GmbH	Germany	Leopoldstrasse 252a, 80807 Munich	
Spirent Technologies GmbH	Germany	Michaelkirchstr 17/18, 10179 Berlin	
Spirent (Overseas) Limited	Guernsey	Suite 6, Provident House, Havilland Street, St Peter Port GY1 2QE	
Spirent Communications (Asia) Limited	Hong Kong	Suites 1603-05, 16th Floor, 625 King's Road, North Point	
Spirent Communications (India) Pvt Limited	India	9th Flr Umiya Business Bay Tower, 1 Cessna Business Park, Marathahalli-Sarjapur Ring Road, Kadubeesanahalli, Bangalore 560103 Karnataka	
Spirent Communications Japan KK	Japan	4th Floor Kyodotsushin Kaikan, 2-2-5, Toranomon, Minato-ku, Tokyo 105-0001	
Spirent Communications Singapore Pte Limited	Singapore	101 Thomson Road, #30-01 United Square, Singapore 307591	
Spirent Communications Korea Inc	South Korea	(Seocho-dong, Boutique Monaco) R/M 1609, 397 Seochodaero, Seocho-gu, Seoul 06616	
Spirent Communications Taiwan Limited	Taiwan	10F, No 66, Sec 1, Neihu Road, NeiHu District, Taipei City 11493	
Netcom Systems Holdings Corporation	US (Delaware)	1209 Orange Street, Wilmington, Delaware 19801	
Spirent Communications Inc	US (Delaware)	1209 Orange Street, Wilmington, Delaware 19801	
Spirent Federal Systems Inc	US (Delaware)	1209 Orange Street, Wilmington, Delaware 19801	
Spirent Holdings Corporation	US (Delaware)	1209 Orange Street, Wilmington, Delaware 19801	
Spirent Communications Hawaii LLC	US (Hawaii)	1209 Orange Street, Wilmington, Delaware 19801	

Financial history

$ million

	2020	2019	2018	2017	2016
Summary income statement					
Revenue	**522.4**	503.6	476.9	454.8	457.9
Cost of sales	**(139.0)**	(135.0)	(132.4)	(129.8)	(133.6)
Gross profit	**383.4**	368.6	344.5	325.0	324.3
Product development	**(103.1)**	(96.5)	(96.9)	(103.0)	(111.7)
Selling and marketing	**(123.4)**	(129.2)	(123.9)	(116.8)	(125.4)
Administration	**(53.4)**	(50.0)	(46.6)	(46.3)	(40.7)
Other items	**(7.8)**	(4.3)	(19.6)	(15.2)	(87.6)
Operating profit/(loss)	**95.7**	88.6	57.5	43.7	(41.1)
Share of loss of associate	**–**	–	–	–	(4.5)
Net finance income/(costs)	**0.1**	1.0	1.3	0.3	(0.4)
Gain on divestment	**–**	–	2.4	2.6	–
Profit/(loss) before tax	**95.8**	89.6	61.2	46.6	(46.0)
Tax	**(11.4)**	(11.6)	(5.4)	(17.6)	3.7
Profit/(loss) for the year	**84.4**	78.0	55.8	29.0	(42.3)
Summary balance sheet					
Intangible assets	**159.9**	160.3	158.0	163.6	169.8
Property, plant and equipment	**25.8**	29.5	36.1	42.3	47.3
Right-of-use assets	**23.3**	26.0	–	–	–
Working capital (excluding cash and deferred tax)	**2.3**	16.0	33.2	10.2	18.9
Operating assets	**211.3**	231.8	227.3	216.1	236.0
Net funds including long-term cash	**241.2**	183.2	121.6	128.4	96.2
Lease liabilities	**(28.2)**	(33.0)	–	–	–
Provisions	**(9.8)**	(8.2)	(14.0)	(6.8)	(6.8)
Deferred tax	**21.7**	22.4	22.0	22.9	32.8
Defined benefit pension plan surplus/(deficit)	**6.6**	6.1	(1.6)	(6.5)	(15.8)
Net assets	**442.8**	402.3	355.3	354.1	342.4
Total equity	**442.8**	402.3	355.3	354.1	342.4
Summary cash flows					
Cash flow from operating activities	**121.2**	119.3	60.2	69.3	42.7
Interest received	**1.5**	2.6	1.3	0.6	0.3
Net capital expenditure	**(9.0)**	(11.9)	(10.6)	(13.5)	(17.1)
Net lease payments	**(11.1)**	(9.9)	–	–	–
Free cash flow	**102.6**	100.1	50.9	56.4	25.9
Acquisitions, disposals and investment in associate	**–**	(1.9)	1.8	(2.7)	(2.7)
Share purchase into Employee Share Ownership Trust	**(11.9)**	(8.6)	(2.5)	–	–
Dividends paid	**(33.6)**	(28.6)	(54.8)	(24.6)	(24.2)
Net increase/(decrease) in cash and cash equivalents	**57.1**	61.0	(4.6)	29.1	(1.0)

	2020	2019	2018	2017	2016
					$ million
Other information					
Expenditure on property, plant and equipment	**9.5**	10.9	12.0	14.9	17.3
Depreciation of property, plant and equipment	**12.2**	14.7	16.5	18.0	19.1
Depreciation of right-of-use assets	**8.4**	7.5	–	–	–
Product development	**103.1**	96.5	96.9	103.0	111.7
Share information					
Earnings/(loss) per share (cents)					
Basic	**13.84**	12.79	9.14	4.75	(6.93)
Diluted	**13.71**	12.63	9.05	4.71	(6.93)
Adjusted basic[1,2]	**14.68**	13.40	10.86	7.55	5.29
Dividend per Ordinary Share (cents)	**6.04**	5.39	4.49	4.08	3.89
Special dividend per Ordinary Share (cents)	**7.50**	–	–	5.00	–
Fully paid Ordinary Shares in issue at year end (number, million)	**611.7**	611.7	611.7	611.7	611.7
Segmental analysis					
Revenue					
Networks & Security	**314.7**	319.9	285.1	261.0	262.2
Lifecycle Service Assurance	**127.7**	111.2	112.8	109.2	99.2
Connected Devices	**80.0**	72.5	79.0	84.6	96.5
	522.4	503.6	476.9	454.8	457.9
Adjusted operating profit[1]					
Networks & Security	**65.3**	73.9	56.4	43.9	47.2
Lifecycle Service Assurance	**32.9**	18.1	17.4	17.9	11.2
Connected Devices	**14.5**	9.5	10.5	5.2	(4.4)
Corporate – non-segmental	**(9.2)**	(8.6)	(7.2)	(8.1)	(7.5)
Adjusted operating profit[1]	**103.5**	92.9	77.1	58.9	46.5
Exceptional items	**(3.1)**	0.5	(13.1)	(6.7)	(4.8)
Acquisition related costs	**–**	(0.1)	–	–	–
Acquired intangible asset amortisation	**(0.5)**	(1.2)	(3.7)	(6.3)	(12.9)
Goodwill and acquired intangible asset impairment	**–**	–	–	–	(69.1)
Share-based payment	**(4.2)**	(3.5)	(2.8)	(2.2)	(0.8)
Operating profit/(loss)	**95.7**	88.6	57.5	43.7	(41.1)
Geographical information					
Revenue by geographical market					
Americas	**276.2**	266.1	265.4	248.6	254.1
Asia Pacific	**189.2**	187.8	159.1	160.2	149.3
Europe, Middle East and Africa	**57.0**	49.7	52.4	46.0	54.5
	522.4	503.6	476.9	454.8	457.9

Notes
1. Before exceptional items, acquisition related costs, acquired intangible asset amortisation, goodwill and acquired intangible asset impairment and share-based payment.
2. Before gain on divestment, impairment of investment in associate, items in note 1, tax effect of items in note 1, revaluation of deferred tax assets due to US tax reform (in 2017) and over/under provisions in respect of prior year tax.

Alternative performance measures

The performance of the Group is assessed using a variety of alternative performance measures (APMs) which are presented to provide users with additional financial information that is regularly reviewed by management. The APMs presented are not defined under IFRS and therefore may not be directly comparable with similarly identified measures used by other companies.

In management's view, the APMs reflect the underlying performance of the Group and provide an alternative basis for evaluating how the Group is managed and measured on a day-to-day basis. Such APMs are non-GAAP measures and should not be viewed in isolation or as an alternative to the equivalent GAAP measure.

The APMs and key performance indicators are aligned to the Group's strategy and collectively are used to measure the performance of the Group and form the basis of the metrics for Director and management remuneration. The Group's key performance indicators are presented within the Strategic Report of its 2020 Annual Report.

Order intake

Order intake represents commitments from customers to purchase goods and/or services from Spirent that will ultimately result in recognised revenue.

Order intake is a measure of operating performance used by management to assess whether future activity levels are increasing or slowing and therefore how effective we have been in the execution of our strategy. Order intake is a key performance indicator used to measure Group, operating segment and regional performance for internal reporting purposes.

Book to bill

Book to bill is the ratio of orders booked to revenue billed in the period and is a measure of the visibility of future revenues at current levels of activity. Book to bill is a key performance indicator used to measure Group and operating segment performance for internal reporting purposes.

Adjusted operating profit

Adjusted operating profit is reported operating profit excluding exceptional items, acquisition related costs, amortisation of acquired intangible assets and share-based payment. Management uses adjusted operating profit, in conjunction with other GAAP and non-GAAP financial measures, to evaluate the overall operating performance of the Group as well as each of the operating segments and believes that this measure is relevant to understanding the Group's financial performance, as specific items (adjusting items) are identified and excluded by virtue of their size, nature or incidence, as they do not reflect the underlying trading performance of the Group. The exclusion of adjusting items from adjusted operating profit is consistent from period to period.

Adjusted operating profit is also used in setting Director and management remuneration targets and in discussions with the investment analyst community.

Adjusted operating margin

Adjusted operating margin is adjusted operating profit as a percentage of revenue. It is a measure of the Group's overall profitability and how successful we are in executing on our overall strategy, and demonstrates our ability to improve margin through efficient operations and cost management, whilst being mindful of the need to invest for the future.

Adjusted basic earnings per share

Adjusted basic earnings per share (EPS) is adjusted earnings attributable to owners of the parent Company divided by the weighted average number of Ordinary Shares outstanding during the year. Adjusted earnings is reported profit before tax excluding exceptional items, acquisition related costs, amortisation of acquired intangible assets, share-based payment, tax on adjusting items and over/under provisions in respect of prior year tax.

Adjusted basic EPS is a measure of how successful we are in executing on our strategy and ultimately delivering increased value for shareholders. Adjusted basic EPS is also used in setting Director and management remuneration targets and in discussions with the investment analyst community. The Group sets out the calculation of adjusted basic EPS in note 11 of Notes to the full year consolidated financial statements.

Product development spend as a percentage of revenue

Product development as a percentage of revenue in the period. It is a measure of how much the Group is investing to support further organic growth initiatives in line with the strategic objectives, whilst driving improved productivity and effectiveness.

Free cash flow

Free cash flow is cash flow generated from operations, less tax and net capital expenditure, lease liability principal repayments and lease liability interest paid, and interest received and lease payments received from finance leases.

Free cash flow is a measure of the quality of the Group's earnings and reflects the ability to convert profits into cash and ultimately to generate funds for future investment. It gives us financial strength and flexibility and the ability to pay sustainable dividends to our shareholders. Free cash flow is an important indicator of overall operating performance as it reflects the cash generated from operations after capital expenditure, financing and tax which are significant ongoing cash flows associated with investing in the business and financing operations.

Free cash flow excludes corporate level cash flows that are independent of ongoing trading operations such as dividends, acquisitions and disposals and share repurchases and therefore is not a measure of the funds that are available for distribution to shareholders.

A reconciliation of cash generated from operations, the closest equivalent GAAP measure, to free cash flow is provided within the Financial review on page 43.

Free cash flow conversion

Free cash flow conversion is the ratio of free cash flow to adjusted earnings, presented as a percentage.

Free cash flow conversion is a measure used in conjunction with free cash flow to assess the Group's ability to convert profit into cash and ultimately to generate funds for future investment.

Shareholder information

Financial calendar 2021

11 March 2021	Full year results and final dividend announcement
18 March	Final dividend – ex-dividend date
19 March	Final dividend – record date
28 April	Annual General Meeting
30 April	Final dividend – payment date (Ordinary shareholders)
7 May	Final dividend – payment date (ADR holders)
30 June	Half year end
August	Half year results and interim dividend announcement
August	Interim dividend – ex-dividend date
August	Interim dividend – record date
September	Interim dividend – payment date (Ordinary shareholders)
September	Interim dividend – payment date (ADR holders)
31 December 2021	Financial year end
February/March 2022	2021 full year results and final dividend announcement

Ordinary Shares and American Depositary Receipts

The Company's Ordinary Shares are traded on the London Stock Exchange (ticker: SPT). The Company operates a Level 1 American Depositary Receipt (ADR) programme with each ADR representing four Ordinary Shares. The ADRs trade on the US over-the-counter market (symbol: SPMYY; CUSIP: 84856M209). BNY Mellon is the authorised depositary bank for the Company's ADR programme.

The ADRs are quoted on the OTC Pink electronic quotation service which can be found at www.otcmarkets.com/corporate-services.

Annual General Meeting

The Company's 2021 Annual General Meeting (2021 AGM) will be held at 10.30am on Wednesday 28 April 2021 at the Company's registered office at Origin One, 108 High Street, Crawley, West Sussex RH10 1BD.

Company's registrar

Enquiries concerning shareholdings, change of address or other particulars should be directed in the first instance to the Company's registrar, Equiniti, on 0371 384 2126 from the UK or, if calling from overseas, +44 (0)121 415 7047. Equiniti also provides a range of online shareholder information services at www.shareview.co.uk, where shareholders can check their holdings and find practical help on transferring shares or updating their details.

Dividends

Shareholders are able to choose to receive their dividends direct to their bank account, reinvested in Ordinary Shares through the Company's Dividend Reinvestment Plan (see below), paid by cheque or paid in foreign currencies. To change how you receive your dividends please contact the Company's registrar, Equiniti, on 0371 384 2268 or log on to www.shareview.co.uk.

Dividend Reinvestment Plan

The Company has a Dividend Reinvestment Plan (DRIP) delivered by Equiniti Financial Services Limited. The DRIP allows eligible shareholders to use their cash dividend to buy additional shares in the Company, so increasing their shareholding. If you would like additional information, please contact the Company's registrar, Equiniti, on 0371 384 2268 or log on to www.shareview.co.uk.

Shareholder security

Shareholders are advised to be wary of any unsolicited advice, offers to buy shares at a discount or offers of free reports about the Company.

Details of any share dealing facilities that the Company endorses will be included in the Company's mailings or on our website. More detailed information can be found at www.fsa.gov.uk/consumerinformation.

Glossary

4G (Fourth Generation)	Fourth generation of mobile communications that delivers data rates of tens to hundreds of megabits per second.
5G Digital Twin	An approach to testing and assurance that provides an emulated, software replica of a 5G physical network that allows for continuous prototyping, testing, assuring and self-optimisation of the living network.
5G (Fifth Generation)	Fifth generation of cellular technology, engineered to greatly increase the speed and responsiveness of wireless networks, capable of multiple gigabit per second data rates and very low latency.
5G New Radio (5G NR)	5G NR is a new air interface (the radio frequency portion of the circuit between the mobile device and the active base station) for 5G cellular networks.
6G (Sixth Generation)	The future standard for wireless communications technologies supporting cellular data networks. As the planned successor to 5G, it is expected to be capable of much higher data speeds.
Cloud	A variety of computing concepts that involve a large number of computers connected through a real-time communication network such as the internet. Often used in reference to network-based services served up by virtual hardware, simulated by software running on one or more physical machines.
Cloud Radio Access Network (C-RAN)	A centralised, cloud computing-based architecture for radio access networks that supports a range of wireless communication standards. Consists of three primary components: a centralised baseband unit pool, remote radio unit networks, and transport network or fronthaul.
Data Center	A centralised location where computing resources critical to an organisation are maintained in a highly controlled environment.
Ethernet	A family of networking technologies originally developed for local area networks, which migrated to metro area networks and eventually became the dominant standard in wireline networks worldwide.
Evolved Packet Core (EPC)	A framework for providing converged voice and data on a 4G LTE network to support user mobility, wireless data connections, routing and authentication.
Global Navigation Satellite System (GNSS)	The standard generic term for satellite navigation systems that provide autonomous geo-spatial positioning with global coverage. GNSS allows users' receivers to determine their location to within a few metres by employing a triangulation technique that uses information from multiple satellites.
Global Positioning System (GPS)	A global navigation satellite system operated by the United States government for determining a user's location and height at any point on the Earth's surface. A receiver uses minute differences in measured time signals from clocks on satellites to calculate these positions and altitudes.
Internet of Things (IoT)	A network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable data exchange with the manufacturer, operator and/or other connected devices. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within existing internet infrastructure.
Internet Protocol (IP)	The primary network protocol used on the internet and on other network devices to facilitate and control the flow of data.
Lab-as-a-Service (LaaS)	A cloud-based build and deploy environment to manage lab resources required by developers, testers, pre- and post-sales support teams and others on an on-demand basis. LaaS is proven to reduce CapEx and increase lab user efficiency.
Light Detection and Ranging (LiDAR)	A surveying method that measures the distance to a target by illuminating it with laser light and measuring the reflected light with a sensor, which can then be used to make digital 3D representations of the target. It has terrestrial, airborne and mobile applications.
Long-Term Evolution (LTE)	An advanced wireless data communications technology standard (sometimes called "4G") which is an evolution of 3G UMTS standards. In addition to its wireless interface specification, LTE uses a simplified flat IP-based network architecture.
Massive Multiple-Input, Multiple-Output (M-MIMO)	Massive multiple-input, multiple-output is an extension of MIMO, which essentially groups together antennas at the transmitter and receiver to provide better throughput and better spectrum efficiency, but using a much higher number of antennas.
millimetre-Wave (mmWave)	The portion of the radio frequency spectrum between 30GHz and 300GHz, with very short wavelengths (from one to ten millimetres). In some 5G deployments, mmWave is expected to help increase the data bandwidth available over smaller, densely populated areas.

Glossary continued

Mobile Edge Computing (MEC)	A network architecture concept that enables cloud computing capabilities and an IT service environment at the edge of the cellular network and, more generally, at the edge of any network.
Multiple-System Operators (MSO)	A designation often used for cable companies that offer services beyond television broadcast. Many MSOs offer a "triple play" of internet and telephone service alongside their traditional cable television offerings.
Network Functions Virtualisation (NFV)	An initiative to provide a network production environment which lowers cost, raises efficiency and increases agility by hosting network functions previously carried out by proprietary, dedicated hardware on virtual machines running on industry-standard commodity hardware.
Network Functions Virtualisation Infrastructure (NFVi)	A key component of NFV architecture that describes the hardware and software components on which virtual networks are built.
Non-Stand-Alone (NSA) 5G	A 5G deployment that depends on a 4G evolved packet core for control functions, with the 5G New Radio (NR) cells exclusively focused on information transfer.
Open Radio Access Network (Open RAN)	The concept of interoperability of open hardware, software, and interfaces for cellular wireless networks.
Over-the-Air (OTA)	A testing method used to predict the performance and reliability of a wireless device in the real world. The device under test is placed in inside a test chamber where real-world environments are simulated and is subjected to a variety of test conditions.
Radio Frequency (RF)	A technology used for wireless broadcasting and/or communications that uses radio waves within the range over which they may be transmitted, from about 3 KHz to about 300,000 MHz.
Secure Access Service Edge (SASE)	A security framework for enabling secure and rapid cloud adoption, and for helping to ensure that both users and devices have secure cloud access to applications, data and services anywhere, any time.
Software-Defined Wide Area Networking (SD-WAN)	Simplifies the management and operation of a wide area network (WAN) by decoupling the networking hardware from its control mechanism. This concept is similar to how software-defined networking implements virtualisation technology to improve data center management and operation.
Stand-Alone (SA) 5G	Use of 5G cells for both signalling and information transfer. It includes new 5G packet core architecture instead of relying on the 4G evolved packet core. SA deployment is expected to have lower cost, better efficiency, and to assist development of new use cases.
Test-as-a-Service (TaaS)	The outsourcing of testing activities to a third party that focuses on simulating real-world testing environments as specified in the client requirements.
Time-Sensitive Networking (TSN)	A set of standards under development by the Time-Sensitive Networking task group of the IEEE 802.1 working group, which define mechanisms for the time-sensitive transmission of data over deterministic Ethernet networks. Applications include real-time control streams which are used in automotive or industrial control facilities.
Vehicle-to-Everything (V2X)	A vehicular technology system that enables vehicles to communicate with the traffic and the environment around them using short-range wireless signals. V2X has several subsets, including vehicle-to-vehicle communication (V2V) and vehicle-to-infrastructure (V2I).
Voice over 5G New Radio (VoNR)	A technology that uses the stand-alone architecture of a 5G network to provide significantly lower latency and improved quality over earlier approaches, resulting in an extremely elevated calling experience.
Voice over LTE (VoLTE)	A standards-based scheme adopted by the GSMA, the cellular industry's association, to provide voice service over data-only LTE networks. VoLTE's use of an IP Media Subsystem enables voice to be offered as part of a rich communications solution, integrated with services such as messaging, live video sharing and file transfer.
Virtualisation	Technologies designed to provide a layer of abstraction from the physical characteristics of computing resources to simplify the way in which other systems, applications or end-users interact with those resources.
Wide Area Network (WAN)	A wide area network is a telecommunications network that extends over a large geographical area for the primary purpose of computer networking. Wide area networks are often established with leased telecommunication circuits.
Wi-Fi 6 /Wi-Fi 6E	Also known as 802.11ax, Wi-Fi 6 is the latest generation and standard for wireless internet. Wi-Fi 6 uses advanced technology to provide lower latency and more efficient data transfer compared with Wi-Fi 5, also known as 802.11ac. Wi-Fi 6E extends the capabilities of Wi-Fi 6 into the 6 GHz band, newly-allocated to Wi-Fi in countries such as the USA.

Contact details

Registered office
Spirent Communications plc
Origin One
108 High Street
Crawley
West Sussex RH10 1BD
United Kingdom
Tel: +44 (0)1293 767676
Email: investor.relations@spirent.com
Website: https://corporate.spirent.com
Registered in England No: 470893

Auditor
Ernst & Young LLP
1 More London Place
London SE1 2AF
United Kingdom
Tel: +44 (0)20 7951 2000
Website: www.ey.com

Registrar
Equiniti Limited
Aspect House
Spencer Road
Lancing
West Sussex BN99 6DA
United Kingdom
Tel: 0371 384 2126 (UK)
Tel: +44 (0)121 415 7047 (overseas)
Text phone (for shareholders with hearing difficulties):
0371 384 2255 (UK)
+44 (0)121 415 7028 (overseas)
Website: www.shareview.co.uk

ADR depositary
BNY Mellon Corporation
PO Box 30170
College Station
TX 77842-3170
USA
Tel: +1 888 269 2377 (toll free US)
Tel: +1 (201) 680 6825 (outside US)
Email: shrrelations@cpushareownerservices.com
Website: www.computershare-na.com/bnym_adr

Brokers (joint)
Jefferies International
100 Bishopsgate
London EC2N 4JL
United Kingdom
Tel: +44 (0)20 7029 8000
Website: www.jefferies.com

UBS Limited
5 Broadgate
London EC2M 2QS
United Kingdom
Tel: +44 (0)20 7567 8000
Website: www.ubs.com

Financial adviser
NM Rothschild & Sons Limited
New Court
St Swithin's Lane
London EC4N 8AL
United Kingdom
Tel: +44 (0)20 7280 5000
Website: www.rothschildandco.com

Financial PR adviser
FTI Consulting Limited
200 Aldersgate
Aldersgate Street
London EC1A 4HD
United Kingdom
Tel: +44 (0)20 3727 1000
Website: www.fticonsulting.com

Cautionary statement regarding forward-looking statements

This Annual Report may contain forward-looking statements which are made in good faith and are based on current expectations or beliefs, as well as assumptions about future events. You can sometimes, but not always, identify these statements by the use of a date in the future or such words as "will", "anticipate", "estimate", "expect", "project", "intend", "plan", "should", "may", "assume" and other similar words. By their nature, forward-looking statements are inherently predictive and speculative and involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future. You should not place undue reliance on these forward-looking statements, which are not a guarantee of future performance and are subject to factors that could cause our actual results to differ materially from those expressed or implied by these statements. The Company undertakes no obligation to update any forward-looking statements contained in this Annual Report, whether as a result of new information, future events or otherwise.

Spirent Communications plc's commitment to environmental issues is reflected in this Annual Report, which has been printed on GalerieArt Satin, an FSC® certified material.

This document was printed by Pureprint Group using its environmental print technology, which minimises the impact of printing on the environment. Vegetable-based inks have been used and 99% of dry waste is diverted from landfill. The printer is a CarbonNeutral® company. Both the printer and the paper mill are registered to ISO 14001

FSC® C022913

www.carbonbalancedpaper.com
CBP006175

Produced by
designportfolio

Spirent Communications plc
Origin One
108 High Street
Crawley
West Sussex RH10 1BD
United Kingdom

Tel: +44 (0)1293 767676

Email: investor.relations@spirent.com

Website: https://corporate.spirent.com

Registered in England No: 470893