Promise. Assured.

PROMISE. ASSURED.

SPIRENT COMMUNICATIONS PLC
ANNUAL REPORT 2018

PROMISE. ASSURED.

FINANCIAL HIGHLIGHTS

Revenue

$476.9m
2018

↑ 5%
$454.8m
2017

Adjusted operating profit[1]

$77.1m
2018

↑ 31%
$58.9m
2017

Adjusted operating margin[2]

16.2%
2018

↑ 3.2%
13.0%
2017

Profit before tax

$61.2m
2018

↑ 31%
$46.6m
2017

Free cash flow[3]

$50.9m
2018

↓ 10%
$56.4m
2017

Adjusted basic earnings per share[4]

10.86c
2018

↑ 44%
7.55c
2017

Dividend per share

4.49c
2018

↑ 10%
4.08c
2017

Notes
1. Before exceptional items, acquired intangible asset amortisation and share-based payment amounting to $19.6 million in total (2017 $15.2 million).
2. Adjusted operating profit as a percentage of revenue in the period.
3. Operating cash flow after tax, net interest and net capital expenditure.
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.

Items with notes 1 to 4 above are non-GAAP alternative performance measures, see pages 182 and 183 for more detail.

Our customers operate in markets characterised by relentless traffic growth, ever-increasing security challenges and continual pressure to innovate while generating revenue and managing operating costs.

Our testing and measurement capabilities are needed now more than ever to assure our customers can deliver on the promises they make to their customers to keep them safe, secure and connected.

PERFORMANCE HIGHLIGHTS

GROUP

- Demonstrable delivery of our strategy in action – revenue growth 5 per cent, adjusted operating profit increased 31 per cent, adjusted basic EPS up 44 per cent.
- Robust results across all three operating segments.
- Networks & Security delivered strong growth with Lifecycle Service Assurance building scale.
- Connected Devices benefitted from cost management actions whilst revenue from ongoing businesses has stabilised.
- High cash conversion delivered, maintaining strong balance sheet, $121.6 million cash at bank.
- 5G development gathering pace with positive impact on portfolio performance across all segments.
- We have created a robust platform to leverage growth opportunities.

NETWORKS & SECURITY

- Our high-speed Ethernet business grew; we won multiple strategic deals to validate our market and product leadership in 400G.
- Our Positioning business secured record sales driven by US military spend.
- Application Security growth in order intake in excess of 20 per cent, with 25 new customers and increased subscription sales.
- Application Security expanded the functionality of its flagship product (CyberFlood) and won more security consulting business.

LIFECYCLE SERVICE ASSURANCE

- We focused our investment on laying the foundations for future growth in our Lifecycle Service Assurance business.
- We expanded our deployment of Spirent VisionWorks in our key tier 1 mobile operator customers in North America and added three new major customers.
- 5G drove demand for our Landslide mobile infrastructure test system, for which we now have more than ten 5G customers, including five tier 1 mobile service providers, multiple infrastructure providers and a leading university.

CONNECTED DEVICES

- Strong profit growth, revenue from ongoing businesses stabilised with previous cost management actions underpinning improved operating margin.
- We have developed strong partnerships to launch new 5G device test products in the second half of 2019.
- We won significant 5G channel emulation deals throughout 2018 for testing new, complex 5G radio frequency technologies.

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.

ASSUR

OUR CUSTOMERS' PROMISES

Now more than ever, our test and measurement capabilities are needed to assure our customers can deliver on the promises they make to keep users safe, secure and connected. The solutions we provide remove doubt and give our customers the confidence and assurance they need to fulfil promises they make to their customers every day.

We already embody what this brand is all about but 'Promise. Assured' allows us to articulate that clearly and simply to our customers. It acts as a new lens through which to view all of the work we do.


ING

ACTING AS TRUST ADVISERS

We are committed to extending our market-leading positions among developers and developing new products and services for the production network, providing customers with service assurance and analytics, 5G and cyber security solutions. Beyond this, we are now looking at new areas where we have identified opportunities for growth, alongside our customers, including virtualisation, autonomous vehicles and automotive testing.

We are helping our customers make critical investment decisions as a trusted adviser, assuring service performance and supporting revenue growth. Our work with China Mobile in its extensive 5G rollout, described in the case study on page 32, is an example of how we enable and assure they fulfil their promises.

Our 'Spirent Days' demonstrate to customers how we help to accelerate time to market, reduce costs and improve network performance and customer experiences. We have also strengthened our specialised and consultative sales force and enhanced how we understand and act on customer satisfaction. In addition, we aim to create new services, leveraging the expertise, technologies and experience we have across the Company.


ED

PROVIDING STRAT SUPPORT

We are increasingly engaging the CEO, the Chief Information Officer or the Chief Security Officer. We have a global footprint and work with leading enterprises, moving up the value chain within those organisations.

One of the important actions we have taken to drive this forward is to establish an Industry Advisory Council made up of a group of external industry advisers to provide business and technical advice from a customer perspective. By building our understanding of the issues our customers face, we can help deliver the key information their decision makers need to move forward. Our business is transforming in line with theirs.

We have invested in key account management and account-based marketing focused on our top customers to develop our relationship and grow our business.

EGIC

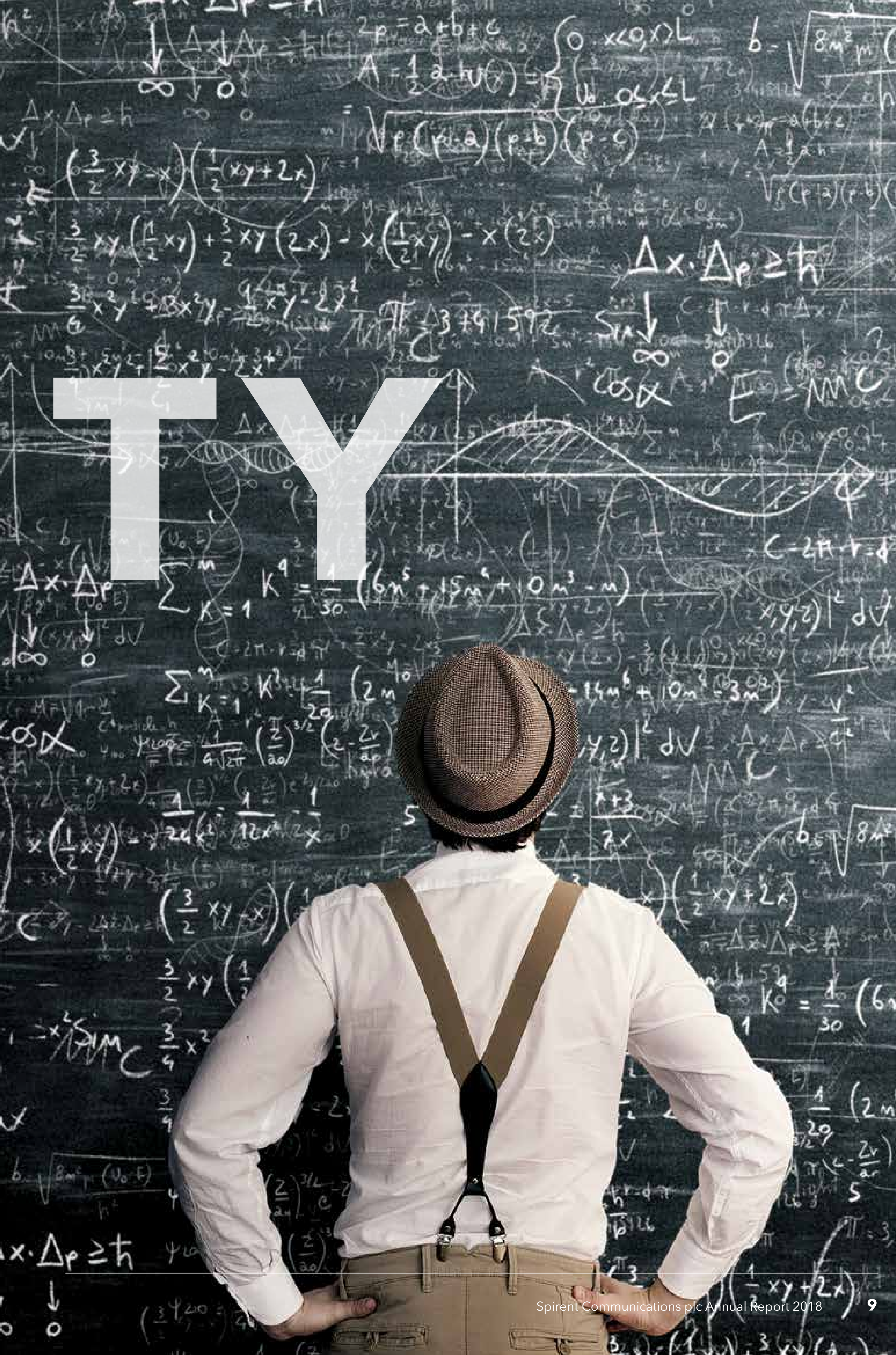
PROMISE. ASSURED.

BRINGING CLARITY TO COMPLEXITY

There are critical issues our customers face as they rollout virtual technologies, 5G wireless and tackle cyber security risks. At Spirent, we have a passion for solving problems and, with decades of experience to draw on, we help our customers navigate through these threats and challenges as they pursue new opportunities for their business.

Part of the important work we are doing in this area is our collaboration with Surrey University, one of the Government's 5G innovation centres, to enable the university's independent 5G test bed with over one million emulated users and traffic mixes, making it the world's largest capacity test bed available today.

We are aware of the pain points our customers feel in the fast paced markets in which they operate and we see our role as enabling and assuring they fulfil their promises and plans.


TY

WE ARE COMMITTED TO BEING A TRUSTED PARTNER AND STRATEGIC ADVISER TO OUR CUSTOMERS

Our new initiative, 'Promise. Assured.' represents our recognition and understanding of the critical issues facing our customers and our commitment to being a true partner and trusted adviser as their businesses transform.

We understand the promises our customers make to their customers and we enable and assure they keep them.

We will maintain strong leadership among developers while expanding into the production networks and into new industries, right alongside our customers.

Through our products and services, we are helping customers enable and assure performance and revenues for their next-generation devices and networks.

CUSTOMER BUSINESS IMPERATIVES

- Manage complexity
- Reduce costs
- Generate new revenues
- Launch new products
- Ensure continuous service
- Meet the challenges of cyber security

Developers
- Devices
- Applications
- Network Infrastructure

Operators
- Communication Service Providers
- Enterprises

OUR FOCUS AREAS

- Networks & Security
- Connected Devices
- Lifecycle Service Assurance

MARKET OPPORTUNITIES FOR SPIRENT

Extend market-leading position
- Ethernet
- Positioning
- Mobile network infrastructure

Grow revenue
- 5G
- Cyber security
- Service assurance and analytics

Explore new business opportunities
- Virtualisation
- Autonomous vehicles
- Automotive

CHAIRMAN'S STATEMENT
BILL THOMAS

SPIRENT IS PASSIONATE ABOUT

DELIVERING VALUE

"I AM CONFIDENT THAT WITH GOOD EXECUTION AGAINST OUR PRIORITIES WE WILL BE ABLE TO REALISE SPIRENT'S POTENTIAL FOR THE BENEFIT OF ALL OUR STAKEHOLDERS."

I am pleased to present our Annual Report for the year to 31 December 2018.

Ever since joining the Board of Spirent I have been struck by the calibre and commitment of our people who work tirelessly to deliver value for all our stakeholders. In 2018, this work has been rewarded with growth in our order intake, revenue and profitability. I want to thank all of our employees for delivering such a pleasing result.

PERFORMANCE

The Executive team has made good strides towards achieving our strategic priorities. In 2019 and beyond we will continue to focus on executing in those markets where we have a leadership position and investing in our identified growth areas.

We saw a 31 per cent year-on-year increase in adjusted operating profit and an increase of $22 million in Group revenue. Aside from the financial performance delivered in 2018, I believe that we have also made some key changes to the way in which we seek to service our larger customers, harness input from leaders in our industry and increase our sales effectiveness, which we expect to set us up for further success in the future.

Adjusted basic earnings per share was up 44 per cent at 10.86 cents (2017 7.55 cents). Basic earnings per share was 9.14 cents (2017 4.75 cents).

DIVIDEND

In line with the Board's progressive dividend policy, and in the light of the strength of performance in 2018, the Board is recommending a final dividend of 2.73 cents (2.08 pence) per share, resulting in a total dividend for 2018 of 4.49 cents (3.42 pence) per share, a 10 per cent increase on 2017.

BOARD

Wendy Koh and Edgar Masri joined our Board early in January 2018 and have each made a strong contribution to our meetings. Their deep technical knowledge in our served markets and extensive knowledge of dealing with our customer base has been a welcome addition to our discussions and the effectiveness of our Board and its Committees has been enhanced by their contribution.

On 15 November 2018, we announced that Eric Hutchinson, our CEO, had informed the Board of his wish to retire from the Company in 2019. Eric has been with Spirent over the last 37 years, spending 13 years as CFO and the last five years as CEO. He really was instrumental in forming the business that Spirent is today and the Board and I would like to thank Eric for his contribution to Spirent and wish him and his wife Rosemarie our best wishes for his retirement.

OUTLOOK

The Board is confident that the Group will continue to see steady profitable growth in 2019, leveraging our technology platform to meet demand whilst adopting a balanced approach to driving efficiency and investment to support growth agendas.

Bill Thomas
Chairman
7 March 2019

Adjusted basic earnings per share[1]

10.86c

↑ **44%**

2017 7.55c

Dividend per share

4.49c

↑ **10%**

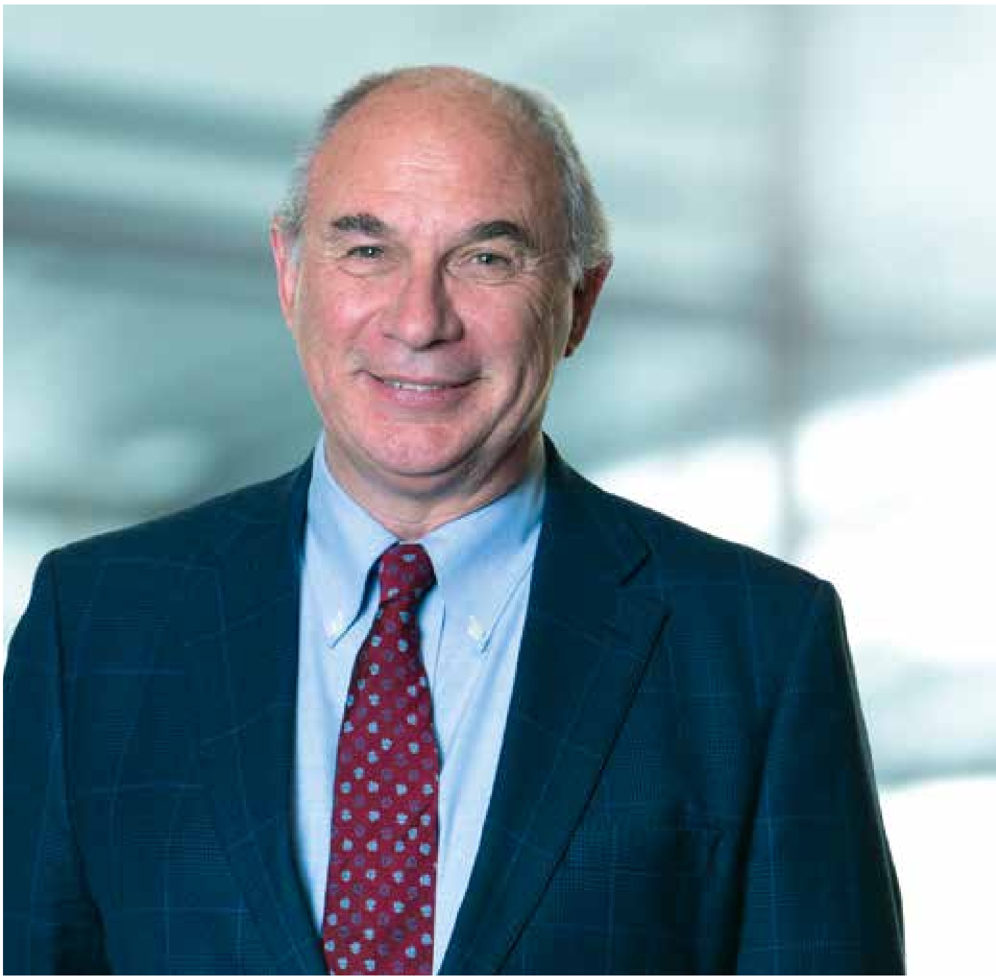
2017 4.08c

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.

CHIEF EXECUTIVE OFFICER'S STRATEGIC REVIEW
ERIC HUTCHINSON

BUILDING ON NEW MARKET OPPORTUNITIES

SPIRENT HAS CLEARLY DEMONSTRATED ITS LEADERSHIP IN TAKING MARKET SHARE IN ITS SERVED MARKET."



OVERVIEW – DELIVERING ON OUR POTENTIAL

In early 2017, Spirent launched a new strategy designed to focus on high-potential areas and deliver sustainable, profitable growth. The Group reorganised into three new segments focused around growth opportunities in each of Networks & Security, Lifecycle Service Assurance and Connected Devices and 2018 saw Spirent deliver a material increase in operating profit and earnings and begin to realise its significant potential.

MARKET

The prevailing market trends continue to be favourable to Spirent. The world's consumption and generation of data continues to drive relentless traffic growth, while in an effort to increase scale, telecoms equipment manufacturers and network operators need to reduce both operating costs and capital expenditure. Spirent's customers face these issues at the same time as seeking to meet end-customer demands for an improved quality of experience. These challenges are particularly acute for service providers with complex hybrid networks.

These dynamics are driving the need for new high-speed Ethernet technologies, the virtualisation of networks and the move to utilise capacity through cloud technologies. High-speed Ethernet increases capacity in physical networks and data centers, while virtualisation lowers the cost of capital expenditure in building networks and allows the turn up of new services to be managed more efficiently. Spirent's technology leads in both of these areas, assuring functionality before deployment and during operations to deliver real-time responses to the changing conditions in live networks.

Pervasive security threats are now a daily occurrence, impacting any individual or business connected to the digital world. The cost of cybercrime continues to grow and is heaviest in financial services, utilities, aerospace & defence and healthcare. Spirent's ability to assess vulnerabilities and detect data breaches are therefore especially well-suited to the needs of the security test market.

Perhaps most importantly, we have now begun to see the major market impact of the development and deployment of 5G. Around the globe, vendors and operators race to develop and deploy 5G devices, networks and services. With mobile subscribers and connected devices saturating the global connectivity market, machine-to-machine connections are growing exponentially. Investment in 5G wireless infrastructure will grow to billions of dollars over the next three years, and 5G wireless deployment will enable innovation in the ways in which economic activity is undertaken and how entertainment and services are consumed. The work Spirent has done to position itself to benefit from this trend is starting to bear fruit.

5G DEVELOPMENT

5G development is acclerating with postive impact on our portfolio performance across our segments. Spirent has the industry's broadest and most innovative set of 5G test and service assurance solutions. We had over 30 customer wins in 2018. Our customers range across tier 1 service providers, major network equipment manufacturers and the largest 5G semi-conductor and device manufacturers. We provide a safe pathway for our customers across the lifecycle as they look to develop, launch and operationalise 5G. 5G drove demand for our mobile infrastructure test system, for which we now have more than ten 5G customers including five tier 1 mobile service providers, multiple infrastructure providers and a leading university.

STRATEGIC PRIORITIES

Spirent's vision is to be our customers' trusted adviser, partnering with them to enable and assure their product and service offerings secure their ongoing business success.

Spirent's enabling technology allows customers to accelerate innovation, reduce time to market, achieve superior performance with their products, solutions and services, differentiate their quality of service and enhance their security of operations. Meanwhile, the Group's family of assurance solutions allow customers to manage complexity in an increasingly multi-technology world. It does this through the application of Spirent's expertise and codified methodologies in testing, measurement, assurance, analytics and security.

Our clear strategic priorities are as follows:

1. Focus on key markets and customers

Our first strategic priority is to focus on target markets and customers establishing new growth prospects for Spirent. For example, in Lifecycle Service Assurance, through the growth of our VisionWorks solutions, we serve the emerging needs of virtualised networks and 5G wireless service deployment. Another major initiative is the development, nurturing and growth of our new CyberFlood security products and services aimed at enterprise networks. The achievement of new customer wins for both VisionWorks and for CyberFlood shows that the strategy is being executed successfully, while the focus for 2019 will be about increasing the pace of execution. Looking ahead, we will continue to focus on appropriate investment to underpin growth whilst maintaining an efficient cost structure.

2. Innovate and continue leading-edge product development

The second strategic priority is innovation to further Spirent's leadership in the development and service assurance markets. Innovation is the life blood of the business, and we have successfully evolved capabilities in the high-speed Ethernet test market to establish leadership in 400G Ethernet and all other required variants. Through this activity, we have laid the foundations for ever-increasing scale. Innovation also includes the creation of new 5G wireless test solutions for both development test and service assurance across the entire portfolio and collaboration with partners. Leveraging Spirent's leadership in Global Navigation Satellite Systems (GNSS), we have also created systems utilised by US Government and commercial businesses to enable the testing of vulnerabilities linked to GNSS, like global positioning systems, sensor fusion, connected autonomous vehicles and transport infrastructure. Importantly, innovation also includes improvement in our internal processes, changing the way Spirent goes to market across its portfolio, to provide seamless service and support to the customer.

3. Maintain financial strength and flexibility

The third strategic priority is to ensure Spirent continues to have financial strength and a strong operational platform. 2018 saw the realisation of significant internal efficiency and cost-effective management programmes. Customer relationships have been strengthened through the client partner executive initiative at our key accounts. Our new Pace global channel partner programme was launched in 2018 to help expand Spirent's served markets. We retain a strong balance sheet with $121.6 million of cash, as we continue to focus on optimising cash conversion.

OPERATIONAL HIGHLIGHTS

- Strategy is delivering on Spirent's potential across all operating segments.
- Networks & Security delivered strong growth with Lifecycle Service Assurance building scale.
- Connected Devices benefitted from cost management actions whilst revenue from ongoing businesses has stabilised.
- 5G development is gathering pace with positive impact on portfolio performance across all segments.

2018 OPERATING PERFORMANCE

Adjusted basic earnings per share increased by 44 per cent to 10.86 cents (2017 7.55 cents). This reflected the 31 per cent increase in adjusted operating profit to $77.1 million (2017 $58.9 million) and the reduction in the effective tax rate to 15.4 per cent from 22.1 per cent in 2017. Group revenue grew by 5 per cent, an increase of $22.1 million to $476.9 million. Strong revenue growth was achieved in Networks & Security, Lifecycle Service Assurance consolidated its position with major customers and Connected Devices was stable after accounting for the previously reported cessation in certain product lines in 2017.

Eric Hutchinson
Chief Executive Officer
7 March 2019

WE ARE FOCUSED ON CAPTURING NEW MARKET OPPORTUNITIES

	5G	CYBER SECURITY
Market driver	The development and deployment of mobile 5G networks and applications is fuelling new investments in telecom infrastructure and innovative applications, such as autonomous vehicles and augmented reality. The global 5G equipment market was estimated at $2.4 billion in 2015 and is forecast to reach $9.6 billion by 2020, a compound annual growth rate (CAGR) of 32 per cent[1].	As cyber security threats grow globally, the requirement to verify the effectiveness and performance of security products becomes paramount. The security testing market is forecasted to grow from $3.3 billion in 2016 to $7.6 billion in 2021, a CAGR of 18 per cent[2].
Opportunities for Spirent	New test systems are required for the development and management of 5G devices, networks and applications.	Solutions are required to verify the effectiveness and performance of security products as they are developed and deployed.
Our response	We have products for 5G development. We have a new channel emulator for 5G base stations and fronthaul testing (Spirent Vertex). We have products that automate performance and security testing of Cloud RAN virtual environments (Spirent TestCenter and CyberFlood). We have performance test systems for 5G backhaul and testing and benchmarking virtualised network functions (Spirent TestCenter). We have products (Spirent Landslide) to emulate the 5G core network to test 5G New Radio (NR) and to test the evolution of the core network. We have products that will be ready to actively test and assure 5G production networks (Spirent VisionWorks).	We provide a comprehensive security testing product (Spirent CyberFlood) and services (Spirent SecurityLabs). We stay current with emerging threats and provide test solutions quickly when new threats are discovered. We are a founding member of the industry group NetSecOPEN, focused on defining new open standards for testing enterprise network security performance. We earned global CREST accreditation for penetration testing. UK-based CREST is an accreditation and certification body that supports the information security market.

Read more on pages 20, 22 and 26: Strategy at a glance, KPIs and Principal risks.

Sources
1. Technavio, "Global 5G Equipment Market" (October 2016).
2. MarketsandMarkets, "Security Testing Market" (October 2016).
3. Forbes, "Roundup of Cloud Computing Forecasts, 2017" (April 2017).
4. IHS Technology, "NFV Hardware, Software & Services Tracker" (November 2017).
5. Catapult Transport Systems Market Forecast for Connected and Autonomous Vehicles (July 2017).

CLOUDIFICATION

Enterprises adopt the cloud as an increasingly important part of their information technology infrastructure.

The worldwide public cloud services market is forecast to grow by 18 per cent to $247 billion in 2017[3].

Service providers and enterprises seek to understand the performance of their cloud services.

We developed a new product (Spirent CloudScore), the industry's first comprehensive baseline and benchmarking solution. It provides an assessment and comparison of the performance of any virtualised or cloud infrastructure.

NETWORK VIRTUALISATION

As network operators develop, trial and implement virtualised network functions, developers and operators are faced with challenges to test and deploy their virtualised implementations.

The service provider network functions virtualisation market for purchase of hardware, software, and services will grow from $10 billion in 2016 to almost $37 billion in 2021, a CAGR of 30 per cent[4].

Solutions are required to benchmark virtualised network functions under various conditions in the lab and then, as they are deployed in the network, operators are challenged to understand their performance on an ongoing basis and to isolate and diagnose problems as network conditions change.

We have test systems to benchmark virtualised network functions in the lab and to verify their performance in networks using our active service assurance and analytics solutions (Spirent VisionWorks).

CONNECTED AND AUTONOMOUS VEHICLES

Connected and autonomous vehicles have ever-increasing complexity. As vehicles adopt higher levels of Assisted Driver & Safety functions the in-vehicle networking becomes complex, the networking becomes critical, and the reliability of GNSS is essential.

The global market for connected and autonomous vehicles will reach £907 billion by 2035 with a £63 billion market for the connected and autonomous vehicle technologies[5].

New testing solutions will be needed to test and secure networking technologies used by vehicles. The development of autonomous cars will require real-world simulation solutions and emulation of GNSS cyber attacks.

Spirent was the first company to provide a certified V2X emulation test bed to complement our existing broad set of solutions for testing the conformance and performance of Automotive Ethernet.

Spirent provides software to simulate GNSS in a real-world environment that can interface to other industry-leading Sensor Fusion drive test simulation solutions. Spirent provides best-in-class GNSS simulation and emulation solutions to test the performance and reliability of GNSS receivers and their integration into the vehicle, including their reliability when jammed or spoofed.

Spirent's SecurityLabs services have been used by leading global automotive companies to test the security of their vehicles and their connection to cloud infrastructure.

OUR BUSINESS MODEL AND STRATEGY

OUR BUSINESS MODEL

SPIRENT CREATES VALUE THROUGH:

THE MARKETS WE TARGET

We target large, fast growing, complex markets, driven by a major disruption or challenge.

We serve customers who develop products and services and who operate and manage networks.

CONTINUING DEMAND FOR OUR PRODUCTS AND SOLUTIONS

We operate in a fast moving, technologically demanding environment in which everyone and everything is connected. Faster data speeds, complexity, security and innovation drives the demand for our products and solutions.

COMPETITIVE ADVANTAGE

Our competitive differentiation comes from the test methodologies we develop and our active test, automation and analytics expertise and technologies.

We aim to be first-to-market. We register intellectual property to create high barriers to entry for competitors and maintain our high-margin and high-value position in the market.

OUR CUSTOMERS' VALUE PROPOSITION

Our products and services:

- reduce the time to get products and systems to market;
- ensure the quality of customers' products and networks;
- protect customers' brand reputation; and
- increase the efficiency of their operations through automation and analytics to optimise their activities and investments.

VALUE CREATION CULTURE FOR OUR STAKEHOLDERS AND SHAREHOLDERS

We have a culture that focuses on creating value for our stakeholders and shareholders. Further information on stakeholder value can be found on page 65. We attract and retain talented people and offer career development. We have a non-discriminatory workplace and fair and competitive remuneration.

Our dividend policy is to maintain a sustainable dividend for shareholders as we consider the dividend to be a core component of shareholder return and one on which shareholders can depend.

OUR VISION

Spirent's vision is to be our customers' trusted adviser, partnering with them to enable and assure their product and service offerings, and secure their ongoing business success.

OUR STRATEGY

We work closely with customers to understand their plans and challenges, and develop first-to-market products and services to fulfil their requirements and exceed their expectations.

OUR SIX STRATEGIC PRIORITIES:

1. Work closely with our customers
2. Establish and maintain technology leadership
3. Grow our business in target markets
4. Acquire new capabilities and technologies
5. Invest in our people
6. Maintain financial strength and flexibility

HOW OUR STRATEGY AND BUSINESS MODEL WORK TOGETHER

Our business model embodies our critical success factors of working closely with customers and designing innovative first-to-market products and services and selling through our specialised sales force.

⊕ Read more on pages 20 and 21

STRATEGY AT A GLANCE

1 Work closely with our customers

DESCRIPTION
Partner with our customers.
Create innovative solutions meeting our customers' future needs.
Adopt account-based marketing and key account sales management.
Focus on quality of service, delivery and support.

IMPORTANCE
If we work closely with our customers, we have the best chance of understanding and meeting their current and future requirements.
We want our customers to view Spirent as their go to solutions provider.

PERFORMANCE
Revenue from top 20 customers

$258.2m

2017 $231.6m

COMMENTARY
We have reorganised and developed our global sales team.

We have implemented Salesforce customer relationship management software to improve interaction with our customers.

RISK
Loss of customer dependence and business continuity.

Read more on pages 27 and 28

2 Establish and maintain technology leadership

DESCRIPTION
Invest appropriately in exploring new technologies and developing our core competencies.
Participate in standardisation bodies and industry groups.

IMPORTANCE
We operate in highly competitive and specialised markets. If we fail to invest in the business at a sufficient level, we will see our market share decrease.

PERFORMANCE
Investment in product development

$96.9m

2017 $103.0m

COMMENTARY
In our largest markets, we believe that we have strong technology leadership positions after the investment in the business over the last three years. We have achieved significant new product launches as a result of this investment.

RISK
Technology change and inadequate employee skillbase.

Read more on pages 26 and 29

3 Grow our business in target markets

DESCRIPTION
Create new products and services, promote our products and services through creative marketing campaigns and industry involvement, and develop our sales channel to grow our business in our global target markets.

IMPORTANCE
To achieve revenue growth, we need to identify and capitalise on emerging business opportunities in our target markets and expand the number of customers we serve.

PERFORMANCE
Revenue[2]

$476.9m

2017 $454.8m

COMMENTARY
We identify, explore and assess new business opportunities in our target markets in a timely manner and objectively follow our innovation management and portfolio management processes.

RISK
Technology change and inadequate employee skillbase.

Read more on pages 26 and 29

OUR GOALS
To continuously innovate and develop leading products and services to enable our customers to develop devices and equipment and operate complex networks.

STRATEGIC OBJECTIVES
We have identified six priorities that we believe are critical in order to achieve our objectives and, ultimately, our vision.

OUR VISION
Spirent's vision is to be our customers' trusted adviser, partnering with them to enable and assure their product and service offerings, and secure their ongoing business success.

4 Acquire new capabilities and technologies

DESCRIPTION
Expand our portfolio through partnerships, licensing technologies, acquiring businesses, and recruiting and hiring experts in critical areas.

IMPORTANCE
We have to deeply understand technologies, networking and applications to develop methodologies and solutions to test them.

PERFORMANCE
Investment in Mergers & Acquisitions

nil

2017 nil

COMMENTARY
We prioritised our investments aligned to the market dynamics and business opportunities. We identified the areas of interest for potential acquisitions and alliances that fit our strategic opportunities and gaps.

RISK
Acquisitions underperform.

Read more on page 29

5 Invest in our people

DESCRIPTION
Attract highly qualified and skilled employees, engage our employees with exciting work and opportunities and retain the expertise and knowledge that we have built.

IMPORTANCE
Our employees are central to our strategy and success. Our strategy is built around innovation and expertise. Without the best possible team, we will not be able to deliver on our strategy.

PERFORMANCE
Voluntary employee turnover[2]

7.9%

2017 7.4%

COMMENTARY
We work on interesting challenges at the leading-edge of the communications industry. We see the direct impact of our accomplishments in our customers' success. We continue to see voluntary turnover well below industry benchmarking.

RISK
Reductions in employee skillbase.

Read more on page 29

6 Maintain financial strength and flexibility

DESCRIPTION
Maintain a strong balance sheet with healthy cash generation that allows us to invest in organic growth, pursue strategic acquisitions and pay sustainable dividends to shareholders.

IMPORTANCE
Having financial strength and flexibility means that we are able to act quickly when we see an opportunity to fulfil our strategic priorities.

PERFORMANCE
Free cash flow[1,2]

$50.9m

2017 $56.4m

COMMENTARY
We value strong financial diligence within the Group. Turning profit into cash remains a priority.

RISK
Adverse macro-economic changes.

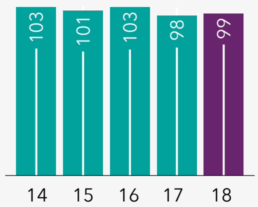
Read more on page 26

Note
1. Operating cash flow after tax, net interest and net capital expenditure.
2. Included in the Group's KPIs, read more on pages 22 and 23.

STRATEGIC REPORT
CORPORATE GOVERNANCE
FINANCIAL STATEMENTS
OTHER INFORMATION

KEY PERFORMANCE INDICATORS

BOOK TO BILL
Ratio[1]

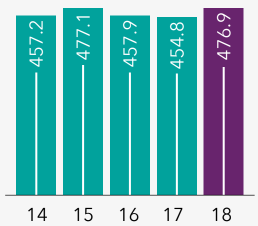


REASON FOR MEASUREMENT
The ratio of orders booked to revenue billed is a measure of the visibility of future revenues at current levels of activity and provides an indication of the underlying trend in Spirent's future revenue stream.

PERFORMANCE
The increase in book to bill ratio to 99, from 98 in 2017, reflects increased US Government business and core Ethernet product performance, partially offset by timing of Lifecycle Service Assurance VisionWorks orders.

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

REVENUE
$ million

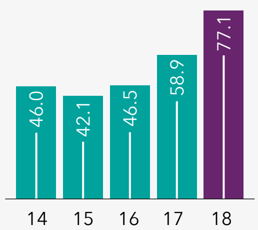


REASON FOR MEASUREMENT
Spirent monitors growth in revenue as this shows how successful Spirent has been in expanding its markets and growing its customer base.

PERFORMANCE
5 per cent revenue increase in 2018, following flat revenue in 2017, reflecting strong Positioning business performance in North America, 400G upswing and core high-speed Ethernet product performance.

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

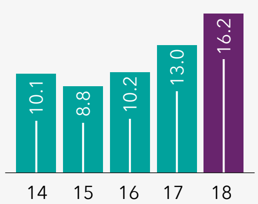


REASON FOR MEASUREMENT
Adjusted operating profit is the measure used to evaluate the overall performance of the Group as well as each of the operating segments.

PERFORMANCE
Adjusted operating profit increased by 31 per cent to $77.1 million, from $58.9 million in 2017, as a result of strong revenue growth and engineering spend efficiencies.

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]
%



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 returns compared with its peers.

PERFORMANCE
Increase in adjusted operating margin to 16.2 per cent, from 13.0 per cent in 2017, 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 margin through efficient operations whilst being mindful of the need to invest for the future.

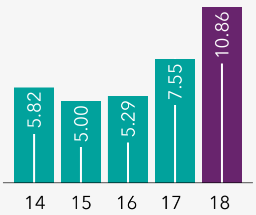
Spirent's strategy focuses on medium to long-term growth and therefore its achievement cannot just be measured by looking at performance in 2018 compared to the prior year; trends over a number of years must also be considered.

Executive Director remuneration is linked to certain financial, strategic and operational KPIs with further information available in the Remuneration Report on pages 77 to 79.

Notes
1. Ratio of orders booked to revenue in the period.
2. Before exceptional items, acquired intangible asset amortisation and share-based payment.
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. Operating cash flow after tax, net interest and net capital expenditure.

Items with notes 1 to 5 above are non-GAAP alternative performance measures, see pages 182 and 183 for more detail.

ADJUSTED BASIC EARNINGS PER SHARE[4] (EPS)
Cents

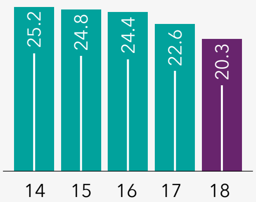


REASON FOR MEASUREMENT
Long-term growth in adjusted basic EPS is a fundamental driver to increasing shareholder value.

PERFORMANCE
Spirent's aim is to achieve growth in adjusted basic EPS. Part of the Executive Directors' remuneration is dependent on achieving EPS targets. In 2018, adjusted basic EPS grew 44 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
%

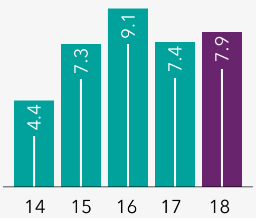


REASON FOR MEASUREMENT
To maintain its competitive position, Spirent must invest at suitable levels to support future organic growth initiatives in line with the strategic objectives, whilst driving improved productivity and effectiveness.

PERFORMANCE
In 2018, product development spend reduced to 20.3 per cent of revenue from 22.6 per cent in 2017, as a result of spend efficiencies and revenue growth.

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; it enables us to expand our markets and to maintain our technology leadership position.

VOLUNTARY EMPLOYEE TURNOVER
%

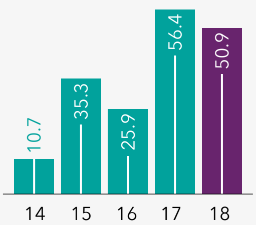


REASON FOR MEASUREMENT
Spirent's success is dependent on its talented employees and retaining them is extremely important. Voluntary employee turnover compared to the industry average is the measure used to assess how well the Group has performed.

PERFORMANCE
Our 2018 voluntary turnover rate of 7.9 per cent remains well below the global industry average of 12.8 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



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 2018 was impacted by the timing of fourth quarter business which increased working capital, offsetting growth in earnings. Free cash flow conversion for 2018 was 77 per cent of adjusted earnings (2017 122 per cent).

RELEVANCE TO STRATEGY
Having strong free cash flow reflects Spirent's ability to generate funds for future investment. It gives us financial strength and flexibility and the ability to pay sustainable dividends to our shareholders.

STRONG RISK MANAGEMENT UNDERPINS EVERYTHING WE DO

IDENTIFYING AND ASSESSING RISK

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.

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 to10 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.

The Board has identified the following principal risks, each of which is discussed on pages 26 to 29:

Risk	Impact	Likelihood	Change
Macro-economic change	High	Likely	⟷
Technology change	High	Likely	⟷
Customer dependence/ Customer investment plans	High	Likely	⟷
Business continuity	High	Likely	⟷
Competition	Medium	Possible	⟷
Acquisitions	Medium	Possible	⟷
Employee skillbase	Medium	Possible	⟷

CURRENT TOPICAL RISKS AND UNCERTAINTIES

Brexit

The United Kingdom's exit from the European Union is anticipated to have a low impact on the Group by virtue of the small proportion of sales into Europe, the nature of our operations in Europe and the mitigating actions we have taken to adopt alternative channels to service those customer relationships that could be impacted. In addition, the Group's main functional currency and presentational currency are both US dollars which largely mitigates our exposure to adverse foreign currency impact arising on Brexit.

US China Trade

Trade tensions and tariffs between the US and China are anticipated to have a low impact on the Group. Group sales to China were $92 million in 2018, 19 per cent of total. It is highly unlikely that sales to China would completely cease, more plausible is the scenario where one or more customers would be embargoed for a period of time. In these circumstances, disruption would be short-term with demand deferred and not lost, therefore the impact on trading over the medium-term is not considered material. Short-term revenue impact is possible.

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 100 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-known markets, which would be inherently cash-generative, the Board would expect to maintain a healthy 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, 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 2019; and

2) an even more severe, yet less plausible scenario where those same impacts are immediate with significant revenue decline in 2019 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 $121.6 million at 31 December 2018 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 100.

PRINCIPAL RISKS AND UNCERTAINTIES

RISK	POTENTIAL IMPACT	MITIGATING ACTIONS
Macro-economic change		
Spirent is a global business exposed to current world economic conditions and political uncertainties over which it has no control. The business is also exposed to government spending priorities, principally in the United States.	Deterioration in economic conditions and a change to the terms of conventional international trade may lead to a reduction in the level of demand for Spirent's products and services and cause customers to delay their purchasing decisions.	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. Protecting the Group's proprietary technology is important to enable Spirent to compete successfully.	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.	All Spirent's businesses work very closely with customers and remain focused on their requirements. Each business makes investment decisions specifically related to their solutions portfolio based on market needs. Spirent continues to focus its investment into areas that offer the most potential for sustainable earnings growth. In 2018 the product development investment was $96.9 million (2017 $103.0 million). Spirent has active intellectual property protection programmes in place to obtain appropriate protection in a cost-effective manner.

RISK	POTENTIAL IMPACT	MITIGATING ACTIONS
Customer dependence / Customer investment plans		
The Group sells its products and services to a wide range of companies and continually seeks to expand its customer base. In 2018, no one customer accounted for more than 10 per cent of Group revenue, although the top 10 customers represented 40 per cent of Group revenue (2017 41 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.	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 whom 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 customer's supply chain increase spending on new technologies.	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.

PRINCIPAL RISKS AND UNCERTAINTIES
CONTINUED

RISK	POTENTIAL IMPACT	MITIGATING ACTIONS
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 or cyber security 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 cyber crime 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.	A significant natural disaster 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. 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, 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.	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 2018, we tested the new 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 2018, we continued with a programme of work to develop processes and procedures in the area of cyber security.
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.	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. In the last two years, significant consolidation has been announced in 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.	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.

RISK	POTENTIAL IMPACT	MITIGATING ACTIONS
Acquisitions		
A key 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.	Underperformance by acquisitions will impact the Group's results and may lead to impairment of goodwill and/or intangible assets.	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 skillbase		
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.	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.	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.

OPERATING REVIEW

NETWORKS & SECURITY

We delight in knowing that our products and expertise keep people and companies connected, communicating and safe online. Our products enable vendors to accelerate the time required to get their products to market while ensuring the quality and performance of their products protects their brand and the value they create for their stakeholders.

Revenue

$285.1m

2017 $261.0m

Operating profit[1]

$56.4m

2017 $43.9m

Operating margin[2]

19.8%

2017 16.8%

Notes
1. Before exceptional items (2017).
2. Operating profit before exceptional items as a percentage of revenue.

PERFORMANCE HIGHLIGHTS

- Revenue growth: 9 per cent, driven by high-speed Ethernet, cyber security and positioning.
- Extended our market-leadership. in 100G and 400G Ethernet performance test. Key 400G wins secured in the second half. Demonstrated the world's highest density 400/200/100/50G test system at Optical Fibre Communication conference. Launched the industry's first 25G network emulator.
- Expanded our cyber security product capability and sales coverage, which led to greater than 20 per cent orders growth. Gained traction with new enterprise and government customers. Experienced an increase in subscription sales.
- Extended our market-leadership in global navigation satellite systems (GNSS) simulation systems. Reported our highest revenue in our 20-year history. Grew revenue 22 per cent, driven by contracts in the US.

Read how we partnered with China Mobile Research Institute to demonstrate an automated integration and delivery system at MWC 2018.

STRATEGY

Our business objectives are to extend our market-leadership in Ethernet/IP, mobile infrastructure and positioning test systems and to grow our business in emerging technologies and new application areas, such as cyber security.

Our business strategy is to:

- extend our lead in high-speed Ethernet/IP performance testing for emerging standards for data centers and wide area networks, such as 100G and 400G; wireless local area networks (LAN) and automotive Ethernet;
- develop software-defined network (SDN) and network functions virtualisation (NFV) test methodologies and tools;
- expand our security test business footprint in manufacturers, service providers and large enterprises by developing new product capabilities, investing in our security consulting services and expanding our marketing and sales channel globally; and
- extend our lead in GNSS simulation and the development of products for the detection and assessment of security threats and vulnerabilities. We will explore exciting new business opportunities in autonomous vehicles.

WHAT WE TEST

We develop performance and security testing systems for next-generation networks and applications, simulating real-world high-capacity conditions in the lab and on the network. Our portfolio covers high-speed Ethernet/IP for data centers and networks, cloud, virtualisation, applications and GNSS. Using our test systems, developers and test engineers create and transmit complex and high-capacity traffic and can safely assess the resilience of their products against security threats and vulnerabilities.

High-speed Ethernet/IP, cloud and virtualisation

Our high-speed Ethernet/IP test systems help our customers to validate high-speed network infrastructures, up to 400G, ensuring network functions and services can scale to millions of subscribers and to assess the security of devices, networks and applications. Our target customers are developers of devices, network equipment or applications and data centers, network operators, cloud and service providers.

OPERATING REVIEW
NETWORKS & SECURITY

CASE STUDY:

Better together: Spirent partners with China Mobile Research Institute for 5G C-RAN platform performance testing

The performance capability of 5G will place massive demands on the technical infrastructure supporting it. To demonstrate the integrity of that infrastructure, Spirent, using its NFV infrastructure (NFVi) automated test solution, and China Mobile jointly demonstrated the performance of virtualisation platforms from eight major providers, as well as the maturity of NFVi in supporting 5G C-RAN (cloud, or centralised, radio access network) capabilities. This also provided a solid foundation for large scale field tests of 5G by China Mobile during 2018.

"The tests demonstrated that the wireless cloud platform is capable of supporting 5G wireless commercial service deployments and is able to provide high-quality services for carrier capacities, throughput and latency, providing assurance for the commercial implementation of 5G cloud base stations," says Dr. Yi Zhiling, Chief Scientist of China Mobile Research Institute. "We are looking forward to more partners joining our research into the maturity of 5G C-RAN technologies."

Applications performance and security

We offer security test tools and consulting services. Our security test products offer unprecedented realism, threat modelling and ease of use. They directly address the proliferation and complexity of applications and vulnerability concerns of vendors, service providers, enterprises and government.

Positioning, navigation and timing

We have a portfolio of test systems and services to support the development of positioning, navigation and timing systems for military, space, research and other high-precision applications. Our Spirent GSS9000 global positioning system (GPS)/GNSS simulator is the world's leading GNSS test solution. In terms of performance, flexibility and capability, it outperforms any other GNSS test solution. Our Spirent GSS7000 multi-GNSS constellation simulator targets R&D, verification and integration testing of location-enabled civilian and consumer products. We have an interference detection system and vulnerability assessment products and services. Spirent is also a leader in the testing of hybrid positioning and sensor fusion under real-world conditions for connected autonomous vehicles (CAVs) development.

PERFORMANCE

Networks & Security revenue grew by 9 per cent to $285.1 million (2017 $261.0 million), driven by strong demand for high-speed Ethernet and positioning test systems. During the year a trade embargo with ZTE disrupted supply for a few months only and normal trading operations have resumed. Despite such challenges, sales into China have remained strong and continue to grow.

In the year we benefitted from circa $10 million of Positioning business with one customer which is unlikely to repeat.

Networks & Security generated operating profit before exceptional items of $56.4 million, an increase of 28 per cent on the prior year (2017 $43.9 million). Operating profit margin before exceptional items increased from 16.8 per cent in 2017 to 19.8 per cent.

ACCOMPLISHMENTS

High-speed Ethernet/IP, cloud and virtualisation

- Spirent won key 100G and 400G deals through 2018, affirming our product and market leadership in high-speed Ethernet testing.
- Spirent launched the industry's first 25G network emulator for verification of Ethernet products and networks.
- Spirent demonstrated the world's highest density 400/200/100/50G test system at the Optical Fiber Communication Conference & Exhibition. This product was a finalist in the 2018 Lightwave Innovation Reviews.
- Spirent released the Spirent TestCenter WLAN 802.11ax (Wi-Fi 6) testing solution to accelerate the development and deployment of Wi-Fi 6 technology, access points, gateways and end-to-end testing.
- Spirent, China Telecom Guangzhou Research Institute and Huawei completed the first successful carrier Flex Ethernet line test at China Telecom's Network and Terminal Lab.
- As members of the OPEN Alliance Special Interest Group, Spirent and Rohde & Schwarz collaborated to develop an unrivalled, fully integrated test solution, offering full coverage of the physical and protocol layers for automotive Ethernet TC8 ECU test specifications.

Applications performance and security

- Spirent increased cyber security sales to our enterprise and government customers. The contracts' subscription-based revenue streams had an initial delaying impact on revenue recognition but will improve revenue sustainability and predictability going forward.
- At Black Hat Europe in London, in December, Spirent demonstrated the new CyberFlood Data Breach Assessment, the first data breach validation solution based on emulation technology. Unlike simulation-based data breach validation tools that only replay traffic, our solution provides a holistic and realistic security evaluation of an organisation's networks and devices by emulating hackers, malware and attack behaviours.

- Spirent was approved as an Authorised Test Lab for new CTIA IoT Cybersecurity Certification, a new testing programme to confirm the security designs and capabilities of cellular-connected Internet of Things (IoT) devices. As globally acknowledged industry leaders, Spirent SecurityLabs collaborated with leading wireless operators, technology companies, security experts and other test labs on the programme's development.

Positioning, navigation and timing

- Spirent's Positioning business had the highest revenue in its 20-year history, driven by contracts in the US.
- To mitigate any effect of the UK leaving the EU, Spirent, Fraunhofer Institute for Integrated Circuits and LZE GmbH (the latter two both in Germany) collaborated to ensure the continuity of supply of Spirent's leading Galileo Public Regulated Service Radio Frequency Constellation Simulator product extension for the Spirent GSS9000 GNSS test systems.
- The industry's first M-Code solution, SimMNSA, developed and sold by Spirent Federal Systems, the leading provider of GPS/GNSS test equipment in the US, has been granted security approval by the Global Positioning System Directorate. Spirent is the first company to provide this highly anticipated solution for simulating classified GPS signals.
- The European GNSS Agency and Joint Research Centre announced they will test eCall (automatic emergency services call) devices using Spirent's GNSS simulators. The devices, which relay important information regarding a vehicle's location and damage status to the emergency services following an accident, have been a requirement for all new cars from April 2018.
- Spirent announced a collaboration with Italdesign, the leading automotive design company, to create an integrated system for testing CAVs during their development.

IMPACT OF MARKET DYNAMICS ON SPIRENT BUSINESS

Accelerate time to market

The primary value we deliver is to accelerate the time to market for developers and vendors. We enable our customers to launch their new chipsets, modules, devices, equipment and applications and to connect to networks globally, while providing a comprehensive assessment of the performance and security of their products so they can protect and strengthen their brand and reputation. As developers and vendors seek to reduce their time to market and to ensure their product quality, the demand for Spirent's test systems rises.

Meet increasing network performance and security demands

The growth of cloud services drives innovation at an ever faster pace. Service providers worldwide are investing in their networks to keep up with demand. Over the year, we saw strong demand for 100G and 400G Ethernet/IP testing by data center and network equipment suppliers. We also saw the advent of 200G Ethernet development projects. As new routers, switches and other network equipment are developed, manufacturers, service providers and third party test labs buy our test systems to measure and validate their performance and security.

Communications service providers are undergoing vast changes driven by virtualisation enabling technologies, such as SDN and NFV. We provide test tools and services to measure and benchmark the performance of virtualised products in a range of operating environments and under different conditions.

We see strong demand for our security testing solutions across network equipment manufacturers, service providers and enterprise customers. Equipment providers with security capabilities, service providers, enterprises and government organisations contract our Spirent SecurityLabs service. Our security experts carry out assessments and provide a report and advice. Organisations also purchase our application and security products outright in order to evaluate the functionality and performance of their products and networks themselves.

CASE STUDY:

How do you test a driverless vehicle? Ask Spirent!

Spirent is collaborating with Italdesign, the world famous automotive design company, to combine industry-leading systems in different domains to create an integrated system for testing CAVs during their development. Spirent's simulation combines different vehicle components, positioning information and traffic data to provide significantly more realistic scenarios and improve simulated device testing, even before prototypes have been built. This will help CAV teams reduce their product development times and give them far greater confidence in the positioning accuracy of their vehicles.

"Conventional vehicles are driven thousands of miles during development, but this is not feasible for autonomous vehicles," said Antonio Casu, Italdesign's Chief Technology Officer. "So we needed a new approach to R&D development testing that combined best-in-class components. By working with Spirent's experts, we have created a system that will help to bring connected cars to market faster."

LIFECYCLE SERVICE ASSURANCE

Our service assurance solutions accelerate the turn up of new services and the troubleshooting of customer and network performance problems. Our objective is to enable our service provider customers to reduce their costs while radically reducing their time to isolate problems and improve their network performance and customer experience.

Revenue

$112.8m

2017 $109.2m

Operating profit[1]

$17.4m

2017 $17.9m

Operating margin[2]

15.4%

2017 16.4%

Notes

1. Before exceptional items (2017).
2. Operating profit before exceptional items as a percentage of revenue.

PERFORMANCE HIGHLIGHTS

- Revenue growth: 3 per cent, driven by VisionWorks service assurance solutions.
- Expanded VisionWorks at all existing customers. Secured three new customers for VisionWorks.
- Significant order growth for 10G and 100G probes.
- Awarded Leading Lights Award for Outstanding Test and Measurement Vendor for our innovative Lifecycle Service Assurance strategy.
- 5G driving demand for Landslide mobile infrastructure test system.

Read how we partnered with the University of Surrey 5G Innovation Centre to advance development of the next-generation of mobile and wireless communications.

STRATEGY

Our business objective is to develop innovative service assurance and analytics solutions focused on the rollout and optimisation of mobile networks and services, Ethernet business services and virtualised network functions.

Our strategy is to radically reduce the time and cost to turn up new services and to speedily diagnose, troubleshoot and resolve issues with production networks and services. We do this through automation, visibility and analytics, all of which improve customer satisfaction and retention while reducing the cost and complexity of operating and managing a network. We provide systems to enable 4G/LTE, IoT and 5G devices and applications to connect to networks seamlessly, reducing the time and cost of pre-deployment qualification, and use analytics to manage the on-boarding and scaling of network devices and applications.

Spirent's patented, active test technology provides unprecedented visibility of the customer's true service experience for complex IP services that flow across providers, domains and hybrid networks. Our active test solutions effectively isolate and resolve issues in virtualised network environments. By bringing these capabilities together in the Spirent VisionWorks platform, we expect to win business and expand our existing business at multiple top-tier carriers, as they expand their mobile networks and deploy SDN, NFV and next-generation IP services, including 5G and IoT.

Our strategy is to:

- develop active service assurance systems for Ethernet business service and mobile network turn up, active testing and troubleshooting;
- develop new active service assurance solutions for mobile networks, leveraging our mobile test tool and our analytics expertise and technology;
- expand our footprint in our current installed-base and take in new service providers;
- continue to develop new capabilities for our mobile infrastructure test tool, fulfilling emerging requirements in labs and operational networks; and
- develop and deploy our test creation, management and automation platform.

OPERATING REVIEW
LIFECYCLE SERVICE ASSURANCE

CASE STUDY:
5G and the phenomenal arithmetic of amazing algorithms

Each new-generation of cellular mobile communications technology has significantly ramped up system capabilities and 5G presents opportunities that have commentators, entrepreneurs and innovators awestruck by the possibilities. But between theory and reality lies an uncertain world of testing and verification. It is in this world that Spirent Landslide comes into its own.

Regius Professor Rahim Tafazolli, Founder and Director of the University of Surrey 5G Innovation Centre (5GIC), takes up the story: "One of our key objectives is to enable our researchers and industry partners to develop innovative algorithms and then analyse their performance in real-world scenarios. Spirent Landslide supports this objective by validating new 5G algorithms before they are deployed in the live test bed."

This is all certainly a feather in Spirent's cap. The university's 5GIC, a member of the 5G UK Digital Strategy, is one of only three leading academic research centres selected by the UK Government to advance the development of the next generation of mobile and wireless communications. Needless to say, we're delighted to be on the team.

WHAT WE TEST

Service assurance and analytics

Our service assurance systems help service providers turn up new services and diagnose and troubleshoot issues within mobile backhaul, business services and global internet protocol networks to support Ethernet service delivery. Our customer experience management solutions help service providers to identify critical network issues affecting customers. Our solutions reduce churn by aggregating and analysing data from multiple sources to provide real-time insights into the customer experience.

Mobile infrastructure test

Our mobile infrastructure test systems emulate subscribers and adjacent nodes. They enable active testing of mobile network equipment and networks, including mobile core, wireless LAN, internet protocol multimedia subsystems and Diameter networks, in the lab and in the network. Network equipment manufacturers buy our test systems to develop and test their products. Service providers buy our test systems to qualify and validate network equipment in their vendor selection and acceptance testing and to actively test the functionality and performance of their network and services.

Test automation

Our industry leading lab-as-a-service and automation solutions deliver efficient, scalable and cost-effective physical and virtual build, test and deployment environments for wireline and wireless service providers, network equipment manufacturers or anyone actively developing software-enabled virtual networks.

PERFORMANCE

Lifecycle Service Assurance revenue grew by 3 per cent to $112.8 million (2017 $109.2 million), driven by demand for our VisionWorks solutions at network operators and multiple system operators (MSOs) in North America and 5G applications of our Landslide mobile infrastructure test solution.

In 2018, Lifecycle Service Assurance generated operating profit before exceptional items of $17.4 million, remaining broadly level in comparison to the prior year (2017 $17.9 million), following marketing investments to support our growth agenda.

ACCOMPLISHMENTS

Service assurance and analytics

- Major tier 1 mobile operators in North America are expanding their rollout of Spirent VisionWorks to automate operations, engineering and care functions amid a growing industry realisation of the critical need for network automation. Following successful initial rollouts of Spirent VisionWorks for unified service assurance, these operators are significantly expanding their deployments to automate more than 50 different operational, engineering and customer care functions. These deployments have delivered seven-times faster service activation, large cost savings and higher-quality, leading to differentiated service offerings.
- We expanded our deployment of Spirent VisionWorks with our key tier 1 mobile operator customers in North America. We received new orders for VisionWorks from all current customers and added three new major customers.
- We saw significant demand for our 10G and 100G probes driven by network rollouts of 100G and 10G Ethernet to support increased traffic for mobile backhaul and business services and to prepare for expected mobile traffic growth with 5G.
- In May, Light Reading awarded Spirent the 2018 Leading Lights Award for Outstanding Test and Measurement Vendor for the innovative Lifecycle Service Assurance strategy embodied in our VisionWorks solutions.
- At the Metro Ethernet Forum (MEF), Spirent showcased a proof-of-concept called 'Fulfilment and activation of an intercontinental MEF 3.0 service spanning four operators'. Spirent demonstrated how a cloud-native service assurance solution such as VisionWorks enables rapid, cost-effective network automation deployments and how service providers can completely automate intercarrier connectivity.

Mobile infrastructure test

- We extended our leadership position in the mobile infrastructure test market with our revenue up 26 per cent driven by demand for 5G infrastructure verification solutions. We now have more than ten 5G customers, including five tier 1 mobile service providers, multiple infrastructure providers and a leading university.
- The 5GIC selected Spirent's mobile infrastructure test system (Landslide) for its test bed to analyse performance of innovative 5G algorithms. The 5GIC is a member of the 5G UK Digital Strategy and one of only three leading academic research centres selected by the UK Government to advance the development of the next-generation of mobile and wireless communications. The 5GIC operates an indoor test bed with the aim of the project to study and provide context about users, services, networks and devices for next-generation services such as broadband, mobile and IoT.

Test automation

We announced that Spirent's iTest solution has been helping Aston Martin Racing (AMR), the world championship motorsports team, to ensure that their monitoring of real-time race systems is as fast as the action on track. AMR deploys a high-speed LAN trackside to connect team drivers and cars with the pit lane. Flawless network connectivity is essential to success; any failure in radio communications could cost the team its position in a race. iTest enables the race team to automatically ensure its network is configured correctly and faulty segments, connections or devices are replaced, not only providing peace of mind, but also dramatically boosting team effectiveness with a 20X test productivity gain.

IMPACT OF MARKET DYNAMICS ON SPIRENT BUSINESS

We compete in the service assurance market. The estimated size of this market is about $3.1 billion in 2018, with growth forecast at a compound annual rate of 1.7 per cent between 2017 and 2021[1].

Our current business is driven by service provider investment in Ethernet/IP services, virtualisation, in-home data services, carrier Wi-Fi and mobile technologies, such as long-term evolution (LTE), voice over long-term evolution (VoLTE), and IP multimedia subsystem (IMS). The current market dynamics and outlook are favourable for our business. The investment in mobile networks and their operation and management remains a priority for network operators. As 4G LTE rolls out globally, there is wider commercial deployment of VoLTE, more 3G and LTE-connected vehicles and an increase in IoT applications.

Network operators are facing major challenges in reducing operating expenses. We reduce operating costs by accelerating service turn up, reducing time to diagnose problems and helping our customers understand and improve their network performance and customer experience. Continued growth in the complexity of networks and services, coupled with intense competition between service providers and the fear of customer churn, has led to greater emphasis on customer experience management. Many operators are evolving from network-centric to customer-centric operations, and need to support new technologies, such as VoLTE, voice over Wi-Fi (VoWi-Fi), 5G, IoT and virtualisation.

Service providers remain cautious as they continue their shift from legacy networks to virtualisation and as they determine how best to realise the potential benefits. To manage NFV in a complex hybrid network and to manage new services, network operators require active performance test systems for service turn up and troubleshooting. Active test systems can be combined with analytics to measure network performance and customer experience periodically and to quickly isolate and diagnose performance and customer experience problems.

Note
1. Analysys Mason "Service Assurance Systems: Worldwide Forecast 2017–2021" (June 2017).

CASE STUDY:
Ready? Get set. Go! Spirent's go-faster set up solution for Aston Martin Racing

Even a casual look at a race track pit lane will show that as well as a helmeted team of flameproof-suited mechanics buzzing around each car, there will be a phalanx of headset-wearing technicians glued to the telemetry displayed on their laptops. Real-time data fed from car to pit lane is critical to gaining an edge in today's high-pressure racing, and the IT requirements are extensive. AMR deploys a high-speed LAN trackside to connect drivers and cars with the pit crew, engineers and managers, to carry radio communications, telemetry and video data. To address its complex set up needs, the team turned to its technical partnership with Spirent.

As AMR Senior Analysis Engineer, Alistair Grimshaw explains: "We travel to races all over the world and until recently, every time we set up the pit garage, we had to manually check the LAN's viability and performance – a task that was taking up a lot of time and resources. But with Spirent iTest, all we have to do is click a button and wait a few minutes for the report."

The automated tests not only speed up the team in getting everything ready for race day, there has also been a dramatic boost to team effectiveness, with a 20X test productivity gain.

CONNECTED DEVICES

Today, everyone wants to do things faster. Our test systems reduce the time to develop and test new devices and connect them to the network. Using our products or services, manufacturers and service providers can understand how new products operate on real networks.

Revenue

$79.0m

2017 $84.6m

Operating profit[1]

$10.5m

2017 $5.2m

Operating margin[2]

13.3%

2017 6.1%

Notes
1. Before exceptional items (2017).
2. Operating profit before exceptional items as a percentage of revenue.

PERFORMANCE HIGHLIGHTS

- Revenue stabilised. Operating margin increased 7.2 percentage points.
- Collaborating with National Instruments to develop performance test systems for 5G New Radio (NR) devices.
- Won 5G channel emulation deals.
- Strong demand for our Service Experience products from EMEA.
- Demonstrated the world's first 5G Over-the-Air Massive multiple-input multiple-output (MIMO) Beamforming RF Test Bed with China Academy of Information and Communication Technology and Huawei.

Read how we collaborated with The China Academy of Information and Communication Technology in designing a 5G over-the-air massive MIMO beamforming RF test bed.

STRATEGY

Our business objectives are to stabilise our revenue and improve our operating margin as the mobile device test business consolidates and declines and we develop new solutions for 5G.

Our strategy focuses on reducing cost to develop and launch new devices and services accelerating time to market while helping to ensure the highest service quality and user experience.

Our strategy is to:

- invest in wireless device test products for development, location and carrier acceptance, while adapting those products and offering new services to meet the emerging requirements and changing customer expectations for video services, 5G and IoT; and
- provide products and services to test the service experience over different networks or to benchmark a variety of devices over the same network.

WHAT WE TEST

Wireless Device Test

Spirent develops systems for testing functionality and measuring performance of 4G LTE and 3G mobile devices and services, with a roadmap to 5G:

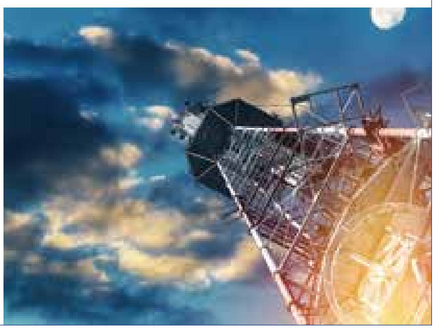
- Research & development. We offer a range of innovative industry-leading test systems that are easy to configure and use for all forms of LTE technology, including LTE-Advanced, frequency division duplex (FDD) and time division duplex (TDD).
- Conformance and certification. We help manufacturers, application developers and operators address signalling, data throughput, mobility, and other cellular specification conformance requirements for LTE, universal mobile telecommunications system (UMTS), code division multiple access (CDMA), and evolution-data optimised (EV-DO).
- Carrier acceptance. Leading carriers demand performance that goes far beyond standard specifications. Our solutions enable customers to validate the most stringent requirements, including internet protocol multimedia subsystem (IMS) signalling themes, mobility scenarios and user experience evaluation.

OPERATING REVIEW
CONNECTED DEVICES

CASE STUDY:
A world first! Spirent collaborates on 5G over-the-air massive MIMO beamforming RF test bed

5G base stations use multiple antenna elements to move as much as ten times the amount of data per second as their 4G equivalents. The China Academy of Information and Communication Technology (CAICT) developed sophisticated channel models that capture how 5G radio signals travel through the air and the effect on them of disruption caused by absorption or reflective surfaces, among other factors. Following this groundbreaking work, CAICT collaborated with Spirent in designing a test bed to replicate those effects on demand.

"It is a privilege to work with Spirent and Huawei to pioneer the test systems that the industry needs to make 5G a reality," said Dr. Zhang Xiang, product manager for 5G at CAICT. "As 5G work moves from trials to commercial deployments, Spirent and CAICT will continue to evolve the test methodology to support additional real-world scenarios and evolving 5G capabilities."



- Location test. Our Location Technology Solution (Spirent 8100 LTS) is the most comprehensive, cutting-edge solution for wireless device and chipset location technology testing. It addresses both indoor and outdoor testing scenarios covering enhanced 911, eCall, assisted-GNSS, observed time difference of arrival and cellular positioning. The platform spans conformance, certification and operator acceptance of mobile device and chipset design, and can be built to accommodate both full-rack or desktop environments in testing location-enabled 2G, 3G and 4G LTE devices.
- Channel emulation. We enhanced our Spirent Vertex Channel Emulator, which provides an unprecedented level of scalability and modularity for wireless RF testing. Vertex can scale in the field to address a wide range of uses from basic RF device tests to complex MIMO beamforming base station antenna tests. Vertex addresses high-density channel requirements and complex configurations needed to evaluate 5G technologies.

Service Experience
Our UMETRIX platform accelerates user experience evaluation for new devices and services (VoLTE, VoWi-Fi, etc.). UMETRIX automates readiness assessments of the launch of new services, device acceptance and pre-testing, eliminating test set up errors, and accelerating data aggregation and reporting. Fit4Launch is our service to conduct these tests. We have evaluated over 1,300 devices, with more than 450 devices requiring changes due to the serious user experience issues detected by our Fit4Launch service and UMETRIX platform.

PERFORMANCE
In 2018, Connected Devices maintained level revenue from ongoing businesses, at $79.0 million (2017 $78.7 million), as our device testing revenue stabilised and we saw early 5G RF test wins and strength in our Service Experience business.

Operating profit before exceptional items from ongoing businesses increased by $6.7 million to $10.5 million (2017 $3.8 million) which resulted in an increase in operating margin before exceptional items to 13.3 per cent (2017 4.8 per cent). A relentless focus to reduce cost associated with legacy business, whilst directing resource to 5G products, has been implemented successfully.

ACCOMPLISHMENTS
- We announced an important collaboration with National Instruments (Nasdaq: NATI) to develop performance test systems for 5G NR devices. This comes at a time when chipset and device manufacturers are looking to accelerate the development of 5G-capable devices. Through our collaboration with National Instruments, we will be able to provide test solutions that can validate the performance of 5G NR smartphones and IoT devices in the lab, without requiring access to expensive and complex base stations, while being flexible enough to quickly adapt to standards as they evolve. We believe this collaboration will allow us to build even stronger, long-term working relationships with industry partners to help them accelerate commercialisation of 5G NR. We will have the first prototype solutions towards the end of 2019, aligned with the emerging market need for 5G NR device performance testing.

- We continued to enhance our new Spirent Vertex Channel Emulator, which offers unprecedented scalability and modularity for wireless RF testing. Spirent won several key deals for 5G RF testing with the Vertex and collaborated with Huawei and leading Chinese test lab CAICT to demonstrate the world's first 5G over-the-air Massive MIMO beamforming test bed.
- We announced a partnership with ETS-Lindgren to pursue joint research and development on a complete radiated test system to evaluate over-the-air performance of 5G devices.

IMPACT OF MARKET DYNAMICS ON SPIRENT BUSINESS

Economic pressure and consolidation in the smartphone supply chain

Economic pressure and consolidation of top-tier global smartphone, chipset and network equipment vendors has led to a fiercely challenging, competitive and shrinking market. We anticipate the wireless device test market will continue to contract as wireless component, module and network equipment manufacturers' spending slows in the cyclical market lull between ongoing 4G enhancements and the very early days of 5G.

4G LTE services growth

Spirent benefits from the development phase of 4G LTE services, such as VoLTE and VoWi-Fi, and the focus on the user experience. GSA[1] reported that, although already widely deployed, LTE continued to be introduced into markets and regions around the world in 2018. By the end of 2018, GSA had identified 712 operators running LTE networks providing mobile and/or fixed wireless broadband services in 213 countries worldwide.

5G development

The standardisation workplan for 5G has been accelerated. The standard as specified in 3GPP Release 15 has been finalised in 2017 for Non-Standalone 5G NR and by mid-2018 for Standalone 5G NR. Early 5G deployments are anticipated in several markets, including the US, South Korea, Japan and China. By mid-January 2019, GSA[2] had identified 2,010 operators, in 83 countries, investing in 5G mobile and 5G FWA networks, in the form of tests, trials, planned and pilot deployments, and launches.

The first commercial networks based on Standalone 5G NR are expected to go live in 2019, with major network deployments from 2020. By the end of 2023, over one billion 5G subscriptions are forecast for enhanced mobile broadband[3]. Spirent benefits from the development of Non-Standalone and Standalone 5G NR technology and from the development of 5G devices.

Growing opportunities and challenges in IoT

The importance of wireless IoT connectivity continues to rise in a variety of segments from connected vehicles, homes and industry, to smart cities. This results in challenges in developing, connecting and operating IoT devices and applications on mobile and non-cellular networks, an attractive new market opportunity for Spirent. The number of IoT connected devices worldwide was 6.2 billion in 2015 and is expected to reach 32.5 billion by 2020, growing at a compound annual growth rate of 39 per cent[4].

1. GSA, "Snapshot LTE Ecosystem" (December 2017).
2. GSA, "Snapshot Global 5G Status" (January 18, 2019).
3. Ericsson, "Ericsson Mobility Report" (November 2017).
4. Technavio, "GLOBAL 5G EQUIPMENT MARKET 2016–2020" (October 2016).

CASE STUDY: National Instruments and Spirent collaborate on 5G performance test solution

Following approval of the first round of 5G specifications in June 2018 by the 5G standards body, 3GPP, new architectural options and additional capabilities have been developed at pace, all of which need test solutions flexible enough to quickly adapt to further changes and upgrades while avoiding costly hardware changes. This is an area in which Spirent is pre-eminent, as acknowledged by National Instruments' Director of Wireless Research, James Kimery.

"The marriage of our high-performance platform and Spirent's best-in-class test methodology for measuring the mobile user experience is exciting for the industry," said James. "Being able to assess the accuracy of cellular location in 5G environments and measuring the performance of video and data delivery are critical needs as 5G devices come on line in 2019."

We look forward to the challenge with relish.

FINANCIAL REVIEW
PAULA BELL, CHIEF FINANCIAL OFFICER

"A SECOND YEAR OF SUPERIOR GROWTH, DRIVEN BY EFFECTIVE OPERATIONAL ACTIONS WHILST CREATING A ROBUST GROWTH PLATFORM."

CONTINUED

STRONG MOMENTUM

GROUP OVERVIEW

A strong performance was delivered in 2018. Robust revenue growth was underpinned by progress across all operating segments as we continue to leverage our leading-edge technolgy portfolio. Cost efficiency actions implemented during 2017 and 2018 have kept the cost base relatively flat, ensuring strong earnings growth, with a resulting increase in adjusted basic earnings per share of 44 per cent. As we look forward, the market growth drivers remain positive, as we enter a new technology upcycle with the development of 5G.

We will continue to invest effectively in our product development and marketing activities to support growth, whilst carefully managing our operating model to deliver a robust operating margin.

The Group delivered revenue growth from ongoing businesses of 6 per cent, finishing at $476.9 million. The primary driver for this growth was our Networks & Security operating segment, which grew revenue by 9 per cent, with strong demand for GPS test solutions produced by our Positioning business and, as predicted, increasing demand for 400G high-speed Ethernet testing. Our Positioning line of business, in particular, benefitted from a significant one-off project with a US defence contractor for circa $10 million, which we do not expect to repeat.
Our Lifecycle Service Assurance operating segment delivered 3 per cent revenue growth but experienced some order placement delays, in particular from reorganisation at key North American customers. Connected Devices maintained level revenue with the transition to 5G progressing as expected.

Effective management of the cost base has continued during the year. Cost inflation has been largely mitigated with the overall cost base maintained broadly flat, allowing the incremental gross profit from higher revenues to flow down to adjusted operating profit. Consequently, adjusted operating profit margin from continuing businesses has increased to 16.2 per cent from 12.8 per cent in 2017.

The following table shows summary financial performance for the Group:

$ million	2018	2017	Change (%)
Ongoing businesses[1]			
Order intake[2]	**470.0**	442.6	6
Revenue	**476.9**	448.9	6
Adjusted operating profit[3]	**77.1**	57.5	34
Total Group			
Order intake[2]	**470.0**	447.8	5
Revenue	**476.9**	454.8	5
Gross profit	**344.5**	325.0	6
Gross margin (%)	**72.2**	71.5	0.7
Adjusted operating costs[3]	**267.4**	266.1	–
Adjusted operating profit[3]	**77.1**	58.9	31
Adjusted operating margin[4] (%)	**16.2**	13.0	3.2
Reported operating profit	**57.5**	43.7	32
Reported profit before tax	**61.2**	46.6	31
Adjusted basic earnings per share[5] (cents)	**10.86**	7.55	44
Basic earnings per share (cents)	**9.14**	4.75	92
Free cash flow[6]	**50.9**	56.4	(10)
Closing cash	**121.6**	128.4	(5)
Final dividend per share[7] (cents)	**2.73**	2.40	14
Special dividend per share (cents)	**–**	5.00	

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 page 182. 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 consolidated financial statements.

Notes
1. The Device Intelligence and Developer Tools lines of business, divested 30 June 2017, and therefore excluded in the measures for ongoing businesses, contributed $5.2 million of order intake, $5.9 million of revenue and $1.4 million of adjusted operating profit to the Connected Devices operating segment result in 2017.
2. Order intake represents commitments from customers to purchase goods and/or services that will ultimately result in recognised revenue.
3. Before exceptional items, acquired intangible asset amortisation and share-based payment amounting to $19.6 million in total (2017 $15.2 million).
4. Adjusted operating profit as a percentage of revenue in the period.
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. Operating cash flow after tax, net interest and net capital expenditure.
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 2018 of 2.73 cents per Ordinary Share is equivalent to 2.08 pence per Ordinary Share.

FINANCIAL REVIEW
CONTINUED

REVENUE

$ million	2018	% of total	2017	% of total
Revenue by segment				
Networks & Security	**285.1**	**59.8**	261.0	57.4
Lifecycle Service Assurance	**112.8**	**23.6**	109.2	24.0
Connected Devices	**79.0**	**16.6**	84.6	18.6
	476.9	**100.0**	454.8	100.0
Revenue by geography				
Americas	**265.4**	**55.7**	248.6	54.7
Asia Pacific	**159.1**	**33.3**	160.2	35.2
Europe, Middle East and Africa	**52.4**	**11.0**	46.0	10.1
	476.9	**100.0**	454.8	100.0

Exceptional costs include $9.1 million provision for French import duty, following receipt of a Notice of Recovery from French Customs in relation to an ongoing dispute dating back to 2011, previously disclosed as a contingent liability at 31 December 2017, and $4.0 million in relation to Guaranteed Minimum Pension (GMP) equalisation on the UK defined benefit pension plan (2017 $6.7 million of exceptional costs for restructuring and strategic review).

Adjusted basic earnings per share increased by 44 per cent to 10.86 cents reflecting the growth in adjusted operating profit together with the benefit from a reduction in the effective tax rate from 22.1 per cent in 2017 to 15.4 per cent this year, following the implementation of a number of tax management initiatives and US tax reform.

Cash at bank closed at $121.6 million, down slightly on the position at 31 December 2017 of $128.4 million, following dividend payments totalling $54.8 million in the year, including the special dividend of $29.9 million. Free cash flow was $50.9 million, also slightly lower than the prior year (2017 $56.4 million), as higher activity levels in the final quarter of the year were reflected in working capital, despite mitigation from improved receivables collection performance year-on-year. Free cash flow represented 77 per cent of adjusted earnings (2017 122 per cent).

As a result of the strong financial performance, we propose a 10 per cent increase to the full year dividend per share, from 4.08 cents to 4.49 cents.

REVENUE

Group revenue grew by $22.1 million in 2018, an increase of 5 per cent over the prior year. Excluding businesses divested in 2017, which contributed $5.9 million of revenue in the prior year, the increase was higher at $28.0 million, or 6 per cent.

All operating segments achieved revenue growth from ongoing businesses in 2018 but the primary driver was the Networks & Security operating segment with 9 per cent growth year-on-year. Within that segment all our lines of business grew revenue compared to the prior year. As anticipated, we saw growth in 400G in the second half of the year and our Application Security test solutions continued to gain traction. Orders for our Application Security solutions grew more than 20 per cent and subscription-based sales also grew which deliver revenue to future years and generate a sustainable revenue stream over the longer-term. Positioning benefitted from strong US military-related business in the year and, in particular, one US Government contractor placed business worth circa $10 million, which is one-off in nature and not expected to repeat.

Major reorganisations at key service provider customers for our Lifecycle Service Assurance solutions constrained growth to 3 per cent year-on-year. Within this segment, Mobility Infrastructure was again a highlight but this positive was tempered by delays at a major customer experience management project implementation at a key customer. Excluding businesses divested in 2017, Connected Devices revenues were level year-on-year as device testing demand stabilised, we saw early 5G RF test wins and strength in our Service Experience business.

Geographically, we saw good growth in the Americas, driven primarily by Networks & Security, in particular US military business within Positioning. The trend of decreasing revenue in EMEA was reversed in 2018 with strong growth in sales into Europe from Networks & Security and also this year from Mobility Infrastructure within Lifecycle Service Assurance. For ongoing businesses, the growth in revenue in EMEA was even more pronounced at 20 per cent year-on-year. Similarly, excluding businesses divested in 2017, APAC revenue was flat year-on-year, with modest growth in sales to China, despite the trade difficulties, offset by softness in other parts of the region, especially South East Asia.

GROSS MARGIN

$ million	**2018**	**%**	2017	%
Networks & Security	**205.3**	**72.0**	186.7	71.5
Lifecycle Service Assurance	**87.9**	**77.9**	84.7	77.6
Connected Devices	**51.3**	**64.9**	53.6	63.4
	344.5	**72.2**	325.0	71.5

Gross margin increased by 0.7 percentage points, to 72.2 per cent from 71.5 per cent in the prior year. All the operating segments achieved an improvement in gross margin but it was most pronounced in Connected Devices at 1.5 percentage points, benefitting from a higher proportion of software sales.

OPERATING COSTS

$ million	**2018**	2017
Product development	**96.9**	103.0
Selling and marketing	**123.9**	116.8
Administration[1]	**46.6**	46.3
Adjusted operating costs[1]	**267.4**	266.1
Networks & Security	**148.9**	142.8
Lifecycle Service Assurance	**70.5**	66.8
Connected Devices	**40.8**	48.4
Corporate	**7.2**	8.1
Adjusted operating costs[1]	**267.4**	266.1

Note
1. Before exceptional items, acquired intangible asset amortisation and share-based payment amounting to $19.6 million in total (2017 $15.2 million).

FINANCIAL REVIEW
CONTINUED

Overall adjusted operating costs were broadly flat in 2018 compared to 2017, with much of the increase due to inflation mitigated by effective cost management actions. $3.8 million of adjusted operating costs in 2017 were associated with the divested businesses held for six months.

Following the completion of the portfolio review programme and sales reorganisation last year, management continues to focus on effective resource allocation and cost control, with investment directed to high-growth, high-margin areas. The impact of the focus on resource allocation is evident from the analysis of operating cost by type and segment, with expenditure focused on investment in sales and marketing to address strategic growth areas and the cost base of Connected Devices materially reduced. The overall level of investment was increased in Networks & Security and, to a lesser extent, in Lifecycle Service Assurance to drive and support increased activity levels. Corporate costs in 2017 included one-off costs associated with governance and tax compliance, which have not repeated in 2018.

The total Group investment in product development was reduced by $6.1 million overall, and by $4.9 million excluding businesses divested in 2017. Connected Devices product development costs represent $4.2 million of the overall decrease.

Selling and marketing costs increased by $7.1 million in total and by $8.9 million excluding businesses divested in 2017. This reflects the full year impact of specific investments made following the review undertaken by external consultants last year, including a key account management programme and an EMEA sales reorganisation. In addition, 2018 reflects the costs associated with the rebranding launched in August.

Administration costs have been maintained essentially flat year-on-year. Overall exchange rate movements have had little impact on the cost base in 2018, compared to 2017.

Following several years of implementing cost initiatives the cost base has now been effectively reshaped to match our strategic agenda, and as we look forward, we will continue to selectively invest in our product development and associated sales and marketing expertise to support our growth agenda.

OPERATING PROFIT

$ million	2018	Adjusted operating margin[1,2] %	2017	Adjusted operating margin[1,2] %
Networks & Security	56.4	19.8	43.9	16.8
Lifecycle Service Assurance	17.4	15.4	17.9	16.4
Connected Devices	10.5	13.3	5.2	6.1
Corporate	(7.2)		(8.1)	
Adjusted operating profit[1]	**77.1**	**16.2**	58.9	13.0
Exceptional items	(13.1)		(6.7)	
Acquired intangible asset amortisation	(3.7)		(6.3)	
Share-based payment	(2.8)		(2.2)	
Reported operating profit	**57.5**		43.7	

Notes
1. Before exceptional items, acquired intangible asset amortisation and share-based payment amounting to $19.6 million in total (2017 $15.2 million).
2. Adjusted operating profit as a percentage of revenue in the period.

Adjusted operating profit increased by 31 per cent to $77.1 million, compared with $58.9 million in 2017, and adjusted operating margin increased to 16.2 per cent from 13.0 per cent in 2017. For ongoing businesses, excluding divestments made in 2017, the growth in adjusted operating profit was 34 per cent (2017 adjusted operating profit from ongoing businesses: $57.5 million) and the increase in adjusted operating margin was more pronounced at 3.4 per cent (2017 adjusted operating margin from ongoing businesses: 12.8 per cent).

Other items charged in arriving at reported operating profit were exceptional items, acquired intangible asset amortisation and share-based payment, which totalled $19.6 million in 2018 compared to $15.2 million last year.

EXCEPTIONAL ITEMS

Exceptional items totalling $13.1 million have been charged in 2018, these were comprised of:

1) $9.1 million provision for import duty following receipt of a Notice of Recovery from French Customs in relation to an ongoing inquiry which commenced in 2011. The Notice of Recovery is disputed. The issue relates to the valuation and classification of imports into France and was disclosed as a contingent liability in note 17 of Notes to the consolidated financial statements in our 2017 Annual Report; and

2) a pension scheme past service cost of $4.0 million (£3.1 million) arising from a benefit change for GMP equalisation under our UK defined benefit pension plans. The requirement to make provision for these costs arose from the High Court ruling on 26 October 2018 on the Lloyds Bank GMP Inequalities case. See the 'Defined benefit pension plans' section below for further detail.

In 2017, the Group incurred $6.7 million of exceptional costs in relation to:

1) a portfolio review together with a programme to increase the effectiveness and efficiency of the sales organisation, which resulted in exceptional restructuring costs of $5.4 million; and

2) a strategic review of Connected Devices at an exceptional cost of $1.3 million.

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 decreased significantly in 2018 to $3.7 million, down from $6.3 million in 2017.

Share-based payment has increased to $2.8 million in 2018 (2017 $2.2 million) reflecting adjustments to the expected vesting of previous awards with non-market based performance conditions and the incremental cost associated with new awards.

DIVESTMENTS

There were no divestments in 2018.

The gain on divestment in 2018 of $2.4 million arose as a result of the repayment in full of a $2.0 million loan for working capital purposes extended to the purchaser of the Device Intelligence and Developer Tools lines of business, within Connected Devices, divested 30 June 2017, which had previously been impaired. In addition, during 2018 a provision relating to a disposal in 2012, which was classified as a discontinued operation, was released.

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 (2017 $1.6 million) arising from:

1) transacting in foreign currencies, primarily US dollars in the United Kingdom, of $0.4 million (2017 $0.9 million); and

2) translation of foreign currency cash balances of $0.2 million (2017 $0.7 million).

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

Finance income of $1.4 million was earned from cash held on deposit (2017 $0.6 million). Surplus funds are held principally in the United Kingdom and United States on short-term deposit and earn market rates of interest which remain relatively low. No interest cost arose on the defined benefit pension plan in 2018 (2017 $0.3 million).

FINANCIAL REVIEW
CONTINUED

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 15.4 per cent in 2018, down from 22.1 per cent in 2017.

The US Tax Cuts and Jobs Act (the Act) became effective on 1 January 2018. The Act includes a number of significant changes in the tax law that have implications for Spirent. The most significant change is a permanent reduction in the corporate income tax rate from 35 per cent to 21 per cent. Other changes that impact the Group include the repeal of the Domestic Production Activity Deduction (DPAD) and the enactment of a new deduction, the Foreign-Derived Intangible Income (FDII) deduction.

The impact of the US tax rate reduction, together with the repeal of the DPAD and the addition of the FDII deduction, and an increased UK Patent Box deduction are the main drivers of the decrease in the Group's 2018 adjusted effective tax rate to 15.4 per cent.

The Group continues to receive a tax benefit from both the US Research & Experimental tax credit and the UK Patent Box Scheme.

EARNINGS PER SHARE

Adjusted basic earnings per share was up 44 per cent to 10.86 cents (2017 7.55 cents). Basic earnings per share was 9.14 cents (2017 4.75 cents). There were 610.4 million (2017 610.6 million) weighted average Ordinary Shares in issue. See note 11 of Notes to the full year consolidated financial statements on page 137 for the calculation of earnings per share.

TREASURY MANAGEMENT

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.

Spirent's financial risk management objectives and policies and its exposure to risks are discussed in note 29 of Notes to the consolidated financial statements.

CASH FLOW

The Group delivered healthy cash generation in 2018. Cash flow from operations in the prior year benefitted from a release in working capital driven by a focus on improving trade receivables collection performance. Further improvements were made in the current year but working capital was adversely impacted by higher activity levels in the last quarter which drove up trade receivables at the year end. Free cash flow came in marginally lower than last year at $50.9 million (2017 $56.4 million), resulting in a free cash flow conversion which represented 77 per cent of adjusted earnings (2017 122 per cent).

Cash and cash equivalents were $121.6 million at 31 December 2018, compared with $128.4 million at 31 December 2017. Although 2018 finished lower than last year, this was after paying dividends of $54.8 million in the year, including the special dividend of $29.9 million. There continues to be no debt.

Tax payments of $5.7 million were lower in 2018 than the prior year (2017 $8.4 million), primarily due to the impact of US tax reform which lowered the statutory rate of tax. Net capital expenditure of $10.6 million was lower than last year in part due to timing and also as we continue to exercise careful management of capital investment to ensure efficient use of capital and maximise return on investment.

In 2018, the final dividend for 2017 and an interim dividend for 2018 totalling $24.9 million were paid (2017 $24.6 million). In addition, the special dividend for 2017 of $29.9 million was paid at the same time as the final dividend for 2017 (2017 nil cash out flow from special dividend). Also during 2018, 1.5 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of $2.5 million.

Effective tax rate[1]

15.4%

↓ **6.7%**

2017 22.1%

Free cash flow[2]

$50.9m

↓ **10%**

2017 $56.4m

Notes
1. Adjusted tax charge as a percentage of adjusted profit before tax.
2. Operating cash flow after tax, net interest and net capital expenditure.

DEFINED BENEFIT PENSION PLANS

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

The accounting valuation of the funded defined benefit pension plans at 31 December 2018 gave rise to a net surplus of $2.5 million compared with a net deficit of $2.2 million at 31 December 2017. The basis of the assumptions underlying the valuation at 31 December 2018 were consistent with those used at 31 December 2017. Contributions to the plans paid in the year were $6.8 million (2017 $6.6 million).

The valuation at 31 December 2018 was based on the triennial actuarial valuation dated 31 March 2015. The latest triennial valuation as at 31 March 2018 is in progress. The Company is currently paying an annual contribution of £5.0 million (circa $6.6 million), which commenced 1 July 2016 for a period of seven years, under a deficit reduction plan agreed with the trustees following the 2015 triennial valuation.

Free cash flow is set out below:

$ million	2018	2017
Cash flow from operations	**65.9**	77.7
Tax paid	**(5.7)**	(8.4)
Net cash inflow from operating activities	**60.2**	69.3
Interest received	**1.3**	0.6
Net capital expenditure	**(10.6)**	(13.5)
Free cash flow	**50.9**	56.4

In addition, there is a liability for an unfunded plan of $0.6 million (31 December 2017 $0.6 million).

On 26 October 2018, the High Court ruled on the Lloyds Bank GMP Inequalities case. In response to this, an amount of $4.0 million (£3.1 million) has been included on the Company and consolidated balance sheets at 31 December 2018 to make an allowance for the estimated costs arising from the judgement. This is required to be accounted for as a benefit change, included as a past service cost in the income statement for 2018. Due to its size and nature, this charge has been classified as an exceptional item.

The Group also operates a deferred compensation plan for employees in the United States. As at 31 December 2018, the deferred compensation plan deficit amounted to $3.5 million (2017 $3.7 million). The key financial assumptions include a discount rate used to discount plan liabilities of 4.2 per cent (2017 3.4 per cent) and an expected investment yield of 6.4 per cent (2017 7.5 per cent).

BALANCE SHEET

The consolidated balance sheet is set out on page 113.

Overall net assets were little changed at $355.3 million, compared to $354.1 million last year. The corresponding small movement in equity reflects the fact that the profit for the year has been almost entirely returned to shareholders as dividend, both ordinary and special.

In terms of non-current assets, amortisation of acquired intangible assets together with management of capital investment has led to a year-on-year decrease of $11.2 million.

Current assets have increased by $5.3 million as a result of growth in trade receivables due to higher activity levels at the end of 2018, compared to 2017, this is despite successful action taken by management to reduce the number of days sales outstanding reflected in trade receivables.

Non-current liabilities are virtually unchanged at $27.2 million, with higher deferred income offsetting a reduction in the defined benefit pension plan deficit.

Current liabilities have decreased by $6.7 million, with lower deferred revenue, due to timing of shipments, lower trade payables, due to a different profile of purchasing in the year, and a fall in the value of payments received on account, offset to some extent by an increase in provisions. The latter being primarily due to the booking of a provision for $8.9 million in respect of French import duty.

LIQUIDITY AND DIVIDEND POLICY

The Board currently intends to maintain 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. In addition, the Board wishes to maintain flexibility to invest in the business organically and inorganically. 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 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, as it did during 2018 with payment of a special dividend.

The Board is pursuing a progressive dividend policy targeting cover of 2 to 2.5 times adjusted earnings.

DIVIDEND

The Board is recommending the payment of a final dividend for 2018 of 2.73 cents (2.08 pence) per share which, together with the interim dividend of 1.76 cents (1.34 pence) per share paid in September 2018, brings the full year dividend to 4.49 cents (3.42 pence) per share. This is a 10 per cent increase compared to full year dividend for 2017. In sterling terms this represents an increase of 14 per cent. The dividend is covered 2.4 times by adjusted earnings.

Subject to approval by shareholders at the Annual General Meeting on 1 May 2019, the final dividend will be paid on 3 May 2019 to shareholders on the register at 15 March 2019. Payment to ADR holders will be made on 10 May 2019.

DELIVERING A POSITIVE IMPACT

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 also has positive social and environmental impacts for customers and for our own business.

The Board has designated the CEO as being the Board member responsible for corporate social responsibility matters within the Group.

The key areas of management and performance are set out below, but 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;
- focussing 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 reviewed in 2018 using the AA 1000 standard. The review reaffirmed the importance of anti-corruption and business ethics for the business and identified the importance of our product functionality in unlocking sustainability performance for our customers.

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 2018

Key achievements

We have rolled out our STEM programme globally, with programmes now in place across EMEA, North America and APAC.

All hardware businesses have now introduced sustainability metrics in their product development processes.

We exceeded our supply chain sustainability targets (22 audits (target 18) and 89.6 per cent from verified sources (target 80 per cent).

We reduced our carbon emissions by 18 per cent.

OUR FOCUS AREAS

Our FuturePositive programme covers four main areas: Product, People, Property and Procurement. Full details of our programmes are set out in our 2018 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, 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 and 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 Ethics Policy. These principles apply to all dealings with our customers, suppliers and other stakeholders, and are included 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 our 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, in all jurisdictions in which we operate.

Anti-bribery training is required to be taken by certain employees periodically and will be rolled out to employees again in 2019.

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 Ethics and HR policies which ensure that no employee 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, being a part time employee or on the grounds of age.

Using the data provided in the Hampton-Alexander Review "Improving gender balance in FTSE leadership" published in November 2018, Spirent compares well with its peers for women on boards, with 28.6 per cent of the Board being female, compared to the FTSE 250 total of 24.9 per cent. However, we still have a long way to go to reach the 33 per cent target set in the review for female representation on the Executive Committee and Direct Reports and the Board will be working to improve these figures during 2019 and beyond.

Gender Pay Gap

Spirent is not required to comply with the Gender Pay Gap Reporting Regulations but intends to voluntarily publish data later in 2019.

Health and safety

The Board has designated the CFO as being 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 2018, with 12 reported accidents, of which none were reportable under the RIDDOR regulations and none of which 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.

Information security

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

The Group undertook a General Data Protection Regulations readiness exercise across 2017 and 2018 and updated our policies and procedures to ensure compliance with the new EU regulation. We also achieved certification to ISO 27001 for our SecurityLabs business based in Plano and San Jose.

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.

At 31 December 2018, 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]	1	9.1%	10	90.9%	–	–	11
Senior management[2]	54	19.7%	220	80.3%	–	–	274
Total employees	300	21.0%	1124	78.7%	5	0.3%	1,429

Notes
1. The data for Executive management includes members of the first layer of management below Board level, including the Company Secretary.
2. The data for Senior management includes operational managers.

FUTUREPOSITIVE: OUR SUSTAINABILITY APPROACH
CONTINUED

Periodic information security risk assessments are performed, and training is provided to all staff to prevent information security breaches. Our internal controls are audited, and we have a whistleblower 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 any 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. Our ambassadors work with students in local schools and institutions to help them develop STEM skills and help them in their professional journey.

We also provide our employees in the US and EMEA with volunteering time off to make a positive contribution to the communities in which they work. The programme will be expanded to employees in APAC in 2019.

Through financial donations and volunteering, Spirent has continued to support community projects worldwide. Projects include ongoing initiatives to rebuild homes after hurricanes Sandy and Harvey in the US and supporting education projects in India and China.

PROPERTY

Energy use

Spirent's energy use increased in 2018 by 4 per cent to 14,527MWh. This is predominantly due to the return to typical gas usage following abnormally low usage in 2017 and increased operational activity.

Greenhouse gas emissions

Spirent is committed to acting to combat climate change and reporting our progress. Our total emissions dropped by 18 per cent from 2017, and emissions per $ million of revenue were down by 22 per cent.

The Group responded to the Carbon Disclosure Project in 2018, completing the Climate Change and Supply Chain questionnaire. In 2018 we achieved a Climate Change rating of C (2017 B), and a rating of B in Supplier Engagement.

	2018 Tonnes of CO_2e	2017 Tonnes of CO_2e
Emissions from:		
Combustion of fuel and operation of facilities (scope 1)	137.2	100.5
Electricity, heat, steam and cooling purchased for own use (scope 2)	4,950.4	6,099.7
Total emissions	5,087.6	6,200.2
Emissions intensity metrics:		
Normalised per square metre of gross internal area of our facilities	0.112	0.137
Normalised per $ million of revenues	10.67	13.63

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 responsibility for any emission sources that are not included in our consolidated financial statements.

We have used the GHG Protocol Corporate Accounting and Reporting Standard (Revised Edition), along with data gathered to fulfil our requirements under these Regulations. We used emission factors from the UK Government's GHG Conversion Factors for Company Reporting 2018 for UK sites, US EPA 2018 eGrid emissions factors for the applicable individual states and emissions factors from the International Energy Agency for all other sites.

NON-FINANCIAL REPORTING COMPLIANCE STATEMENT

We aim to comply with the new 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, Guidance on the Strategic Report (UK Financial Reporting Council).

Non-financial reporting matter	Policy/Code	
Environmental matters	Environmental Policy	Policies page 50, Property, page 52
	Sustainability Policy	Sustainability at Spirent page 50
	Supplier Code of Conduct	Sustainability at Spirent page 50
Employees	Business Ethics Policy	People page 50, Committee oversight page 72
	Whistleblowing Policy	Raising concerns at work page 71
	Occupational Safety Policy	Health and safety page 51
	Volunteering Time-Off Policy	STEM initiatives and community impact projects page 52
	GDPR Privacy Notice	Information security page 51
Human rights	Business Ethics Policy	People page 51, Committee oversight page 72
	Modern Slavery Statement	People page 51
	Supplier Code of Conduct	Sustainability at Spirent page 50, Business ethics and human rights page 51
Social matters	Supporting charities	STEM initiatives and community impact projects page 52
Anti-corruption and anti-bribery	Anti-bribery Policy	People page 51, Committee oversight page 72
	Whistleblowing Policy	Raising concerns at work page 71
Policy embedding, due diligence and outcomes		Policies page 50, Business ethics and human rights page 51
Description of principal risks and impact of business activity		Risk Management pages 24-25, Principal risks and uncertainties pages 26-29
Description of the business model		Our business model and strategy pages 18-19
Non-financial key performance indicators		Key Performance Indicators page 53

Pages IFC to 53 form part of the Strategic Report which has been reviewed and approved by the Board.

Angus Iveson
Company Secretary
7 March 2019

CHAIRMAN'S INTRODUCTION TO GOVERNANCE
BILL THOMAS, CHAIRMAN

THE BOARD IS COMMITTED TO HIGH STANDARDS OF CORPORATE GOVERNANCE, WITH A FIRM BELIEF THAT GOOD CORPORATE GOVERNANCE ENHANCES LONG-TERM SHAREHOLDER VALUE AND SETS THE CULTURE, ETHICS AND VALUES FOR THE REST OF THE GROUP. "

The Board is committed to high standards of corporate governance, with a firm belief that good corporate governance enhances long-term shareholder value and sets the culture, ethics and values for the rest of the Group. We also recognise the importance of our wider stakeholders and the Board's responsibility and duty to them under Section 172 of the Companies Act 2006; our Business Model and Strategy on pages 18 and 19 illustrates how we create value for our stakeholders.

Each year, the Board undertakes a formal evaluation of its effectiveness. The results of this year's externally-led process confirmed that the Board and its Committees continue to function effectively, with no significant concerns among the Directors about its effectiveness. A number of actions which were identified to enhance effectiveness along with the progress on the actions identified in the 2017 Board evaluation can be found on page 62.

During 2018 a review of Spirent's Remuneration Policy for executive directors was completed and a revised Policy has been designed to operate for three years. The Policy is being proposed for approval by shareholders at the Annual General Meeting on 1 May 2019. Further details are provided in the Directors' Remuneration Report, which can be found on pages 74 to 95.

We announced in November 2018 Eric Hutchinson's wish to retire from his role as CEO of the Company after a career with Spirent spanning 37 years. The Nomination Committee have launched a search process for his replacement. We will ensure that the successful candidate is well-grounded in corporate governance requirements and supports the Board's goal of ensuring a healthy culture and strong core values as the basis for the way in which we conduct our business.

Bill Thomas
Chairman
7 March 2019

BOARD STATEMENTS

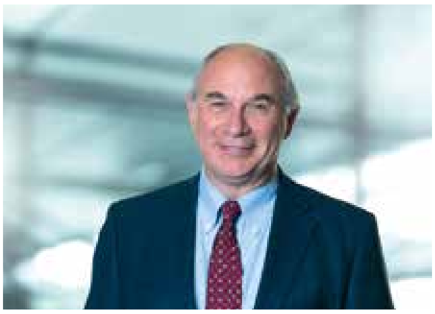
The Board considers that this Annual Report, taken as a whole, is fair, balanced and understandable and gives shareholders the information needed to assess the Group's performance, business model and strategy. Further confirmations to support the disclosures provided in this Annual Report are provided below.

Requirement	Compliance statement	Where to find further information
Strategic report	The Strategic report was approved by the Board of Directors on 7 March 2019	Pages IFC to 53
NFR statement	The Company has complied with the Non-Financial Reporting Directive contained in Sections 414CA and 414CB of the Companies Act 2006	Page 53
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 IFC 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 2018 and at the date of this Annual Report, it was in compliance with all the relevant provisions as set out in the April 2016 UK Corporate Governance Code	Pages 54 to 101
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 99
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 100
Robust assessment of the principal risks facing the Group	The Directors confirm that they have carried out a robust assessment of the principal 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 24 to 29
Annual review of the systems of risk management and internal control	During the period ended 31 December 2018, the Audit Committee provided transparency on the Group's systems of risk management and internal control which were confirmed as effective	Pages 68 to 73
Directors' report on remuneration	The Directors confirm that their report on remuneration for the period ended 31 December 2018 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 April 2016 UK Corporate Governance Code	Pages 74 to 95
Competition and Markets Authority	The Audit Committee considers that the Company complied with the mandatory audit processes and audit committee responsibility provisions of the Competitions and Markets Authority Audit Order for the period ended 31 December 2018	Pages 68 to 73
Modern Slavery Act 2015	The Directors confirm, for the financial year ended 31 December 2018, that steps that 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 51 to 52

BOARD OF DIRECTORS

PROVIDING THE RIGHT MIX OF KNOWLEDGE AND SKILLS

BILL THOMAS
Chairman



ERIC HUTCHINSON
Chief Executive Officer

PAULA BELL
Chief Financial Officer

JONATHAN SILVER
Senior Independent Non-executive Director

GARY BULLARD
Independent Non-executive Director

WENDY KOH
Independent Non-executive Director

EDGAR MASRI
Independent Non-executive Director

BILL THOMAS
Chairman

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

Committees: Nomination (Chair)

Skills and experience

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. 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

Member of the Council and President of the Alumni Association at Cranfield University School of Management; Chair of Clarkson PLC; Chair of Node4, a private equity-owned IT services firm; Chair of the Royal Navy and Royal Marines Charity; non-executive director of The Co-operative Bank; member of Advisory Board of FireEye, Inc.

ERIC HUTCHINSON
Chief Executive Officer

Appointed: CEO in September 2013; Chief Financial Officer in January 2000

Skills and experience

Eric has extensive experience in the technology industry worldwide. He joined the Company in 1983 and was appointed to the Board as Chief Financial Officer in 2000, stepping up to the role of Chief Executive Officer in September 2013.

Eric is a Fellow of the Association of Chartered Certified Accountants.

Other roles

Member of the Financial Reporting Review Panel.

PAULA BELL
Chief Financial Officer

Appointed: Chief Financial Officer in September 2016

Skills and experience

Paula joined Spirent in 2016, bringing extensive board experience of working with global technology and engineering businesses. Paula has demonstrable experience of effective financial and commercial management, driving cost-efficient organisations and improved cash management 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, 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 Committee at Keller Group plc; until June 2018 non-executive director and Chair of Audit Committee of Laird plc.

JONATHAN SILVER
Senior Independent Non-executive Director

Appointed: Senior Independent Non-executive Director, November 2016; Chair of Audit Committee, August 2015; Non-executive Director, June 2015.

Committees: Audit (Chair), Nomination, Remuneration

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 Chair of Audit Committee of Invesco Income Growth Trust; non-executive director, Chair of Audit Committee of East and North Hertfordshire NHS Trust, and non-executive director of Henderson High Income Trust PLC.

GARY BULLARD
Independent Non-executive Director

Appointed: Chair of Remuneration Committee, May 2017; Non-executive Director, December 2016

Committees: Remuneration (Chair), Audit, Nomination

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; non-executive director and Chair of Remuneration Committee of Rotork plc.

WENDY KOH
Independent Non-executive Director

Appointed: Non-executive Director, January 2018

Committees: Audit, Nomination, Remuneration

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
Independent Non-executive Director

Appointed: Non-executive Director, January 2018

Committees: Audit, Nomination, Remuneration

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 startup 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 Diplome d'Ingenieur 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

Director of Kollective Technology, Inc; Board adviser and senior consultant to Accton Technology Corporation.

DIRECTORS' STATEMENT ON CORPORATE GOVERNANCE

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 "2016 Code") published in April 2016 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 in full with the 2016 Code throughout the period under review.

The Board acknowledges the revised UK Corporate Governance Code published by the FRC in July 2018 (the "2018 Code"), and, in line with reporting requirements, will report to shareholders on the Company's compliance with the 2018 Code in its 2019 Annual Report.

Index to 2016 Code disclosures			Page
Leadership	Every company should be headed by an effective board which is collectively responsible for the long-term success of the company.	Board of directors The Board	56-57 59
	There should be a clear division of responsibilities at the head of the company between the running of the board and the executive responsibility for running of the company's business.	Chairman and CEO	59
	The chairman is responsible for leadership of the board and ensuring its effectiveness on all aspects of its role.	Chairman and CEO	59
	As part of their role as members of a unitary board, non-executive directors should constructively challenge and help develop proposals on strategy.	Non-executive Directors Board composition	59 62
Effectiveness	The board and its committees should have the appropriate balance of skills, experience, independence and knowledge of the company to enable them to discharge their respective duties and responsibilities effectively.	Board of directors Nomination Committee Report	56-57 66-67
	There should be a formal, rigorous and transparent procedure for the appointment of new directors to the board.	Election and Re-election of directors Appointments to the Board Nomination Committee Report	60 62 66-67
	All directors should be able to allocate sufficient time to the company to discharge their responsibilities effectively.	Commitment	62
	All directors should receive induction on joining the board and should regularly update and refresh their skills and knowledge.	Board development	63
	The board should be supplied in a timely manner with information in a form and of a quality appropriate to enable it to discharge its duties.	Information flow	63
	The board should undertake a formal and rigorous annual evaluation of its own performance and that of its committees and individual directors.	Board performance evaluation	62
	All directors should be submitted for re-election at regular intervals, subject to continued satisfactory performance.	Election and Re-election of directors Re-election of directors	60 67
Accountability	The board should present a fair, balanced and understandable assessment of the company's position and prospects.	Strategic Report Directors' Report	2-53 96-100
	The board is responsible for determining the nature and extent of the principal risks it is willing to take in achieving its strategic objectives. The board should maintain sound risk management and internal control systems.	Risk Management Internal control and risk management Audit Committee Report	24-25 71 68-73
	The board should establish formal and transparent arrangements for considering how they should apply the corporate reporting, risk management and internal control principles and for maintaining an appropriate relationship with the company's auditors.	Audit Committee Report	68-73
Remuneration	Executive directors' remuneration should be designed to promote the long-term success of the company. Performance-related elements should be transparent, stretching and rigorously applied.	Directors' report on remuneration	74-95
	There should be a formal and transparent procedure for developing policy on executive remuneration and for fixing the remuneration packages of individual directors. No director should be involved in deciding his or her own remuneration.	Directors' report on remuneration	74-95
Relations with shareholders	These should be a dialogue with shareholders based on the mutual understanding of objectives. The board as a whole has responsibility for ensuring that a satisfactory dialogue with shareholders takes place.	Relations with shareholders	64-65
	The board should use general meetings to communicate with investors and to encourage their participation.	Stakeholder engagement	65

LEADERSHIP

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 reviewed during the year and approved and adopted at the March 2018 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. For further details, please see the reports of each Committee that follow this statement.

Chairman and CEO

The roles of the Chairman and the CEO are separately held and 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, consists of the CFO, the EVP Global Sales, the EVP Strategic Marketing and the Company Secretary & General Counsel, with the VP Global Operations and Global Head of Human Resources joining the Executive Committee in December 2018.

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 necessary. 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 enabling 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
Non-executive Chairman, two Executive Directors, four Independent Non-executive Directors

AUDIT COMMITTEE
Four Independent Non-executive Directors
Provides oversight and governance over the Group's financial reporting, internal controls, risk management and relationship with external auditor
Committee report pages 68 to 73

NOMINATION COMMITTEE
Non-executive Chairman
Four Independent Non-executive Directors
Primary responsibility for succession planning, director selection and Board composition
Committee report pages 66 and 67

REMUNERATION COMMITTEE
Four Independent Non-executive Directors
Agrees remuneration policy and sets individual compensation levels for executive directors and senior management
Committee report pages 74 to 95

EXECUTIVE DIRECTORS
CEO, CFO

GROUP EXECUTIVE COMMITTEE
CEO, CFO, EVP Global Sales, EVP Strategic Marketing, Company Secretary & General Counsel, VP Global Operations, Global Head of Human Resources

DIRECTORS' STATEMENT ON CORPORATE GOVERNANCE
CONTINUED

Board Committees

The Board has established three principal Board committees, to which it has delegated certain of its responsibilities. These are the Audit Committee, the Nomination Committee and the Remuneration Committee. The membership, responsibilities and activities of these committees are described later in this Corporate Governance statement and, in the case of the Remuneration Committee, in the Report on directors' remuneration beginning on page 74. 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 present at the Annual General Meeting to answer questions on the work of their respective committees.

The written terms of reference for the Audit, 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

Election and re-election of Directors

In accordance with the 2016 Code's recommendations, all Directors who wish to continue in their roles will be proposed for election or re-election at the 2019 Annual General Meeting to be held in May.

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 and 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 eight meetings during the year, including a two-day strategy meeting held at the Company's site in Calabasas, California.

	Board	Audit Committee	Nomination Committee	Remuneration Committee
Bill Thomas	8/8	–	3/3	–
Paula Bell	8/8	–	–	–
Eric Hutchinson	8/8	–	–	–
Gary Bullard	8/8	4/4	3/3	8/8
Wendy Koh[1]	7/7	4/4	2/2	8/8
Edgar Masri[2]	7/7	4/4	2/2	8/8
Jonathan Silver	8/8	4/4	3/3	8/8

Notes
1. Wendy Koh was appointed to the Board on 11 January 2018.
2. Edgar Masri was appointed to the Board on 11 January 2018.

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 2018

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.

Key issues considered by the Board during 2018

	Governance/Compliance	Finance	Business/Strategy
January	• NED succession update		
March	• Stakeholder engagement • 2017 Full Year compliance and Annual Report review • Legal review	• 2017 Full Year results review • Viability Statement review • Dividend policy review • Capital policy review • Receive Audit Committee report on internal controls and risk management	• Group performance review • Sector/industry review • Business initiatives update and review
May	• AGM voting review • Stakeholder engagement update	• 2018 Q1 results review • Tax strategy update	• Group performance review • Strategic benchmarking
June	–	–	• Group performance review • Strategy presentations
August	• 2018 Half-year compliance review • Board evaluation kick-off • Regulatory and legal review • Succession planning and leadership programme review	• 2018 Half-year results review • CFO update • Insurance review	• Group performance review • Channel strategy review
October	• Stakeholder engagement update • Governance Code update	–	• Group performance review • Sales organisation review • Strategic Marketing review
November	• Board evaluation results review • Governance compliance review • Legal review • CEO succession planning	• 2018 Q3 results review • Treasury policy review • Pension update	• Group performance review • Sales organisation review • M&A landscape review
December	• Governance compliance review • Workforce engagement review • CEO succession update	• Budget 2019	• Group performance review • Sales organisation review • Future investments review • Cyber security review

DIRECTORS' STATEMENT ON CORPORATE GOVERNANCE
CONTINUED

EFFECTIVENESS

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 80) and 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 2016 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 66 and 67 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.

BOARD PERFORMANCE EVALUATION

An evaluation to assess the performance of the Board as a whole, its committees and that of the individual directors is conducted annually.

In accordance with the 2016 Code requirement that the evaluation should be conducted by an external facilitator at least every three years, in 2018 Independent Audit Limited ("IAL") was engaged to undertake a review of the Board and its Committees. IAL is independent, with no other connection with the Company.

Process

Following a scoping exercise with the Chairman, Company Secretary and IAL to agree the priority areas and issues to be addressed in the review, the Directors and Company Secretary completed an online questionnaire, centring on themes including the strengths and values of the Board, the quality of succession planning, the interaction of the Board members with the Group's various business units, the process of managing strategic planning and the management of risk. A report setting out details of the responses received was provided to the Board by IAL for discussion and to support the target-setting process for 2019 objectives.

During the period, the Chairman held one-to-one sessions with each of the Directors following which feedback was shared on performance and contribution. Alongside the wider evaluation process, the Senior Independent Director led a session with the other Directors without the Chairman present to discuss and reflect on the Chairman's performance. Feedback from this session was discussed with the Chairman.

The implementation of a number of recommended action points arising from the 2017 evaluation was overseen by the Chairman and included the following actions:

2018 actions

- Further explore the articulation of Spirent's strategic vision;
- Continue to review the effectiveness of research and development spend;
- Deepen visibility of product development investment decisions and understanding of progress of such investments;
- Increase exposure to senior management for the purposes of developing internal talent pipeline;
- Monitor effectiveness of revised internal control procedures; and
- Review 'Go To Market' approach.

All respondents to the 2018 evaluation agreed that the conduct of Board meetings allows for an open and constructive communication style and that the appointment of new Non-executive Directors would continue to expand the breadth of market and sector experience to the benefit of the Company.

The Board members agreed that the Board and its principal committees continued to perform effectively.

The Board concluded that the actions arising from the 2018 review would continue to be developed through 2019, with the addition of the following areas of focus:

2019 Objectives

- Further develop the Board's understanding of the impact of emerging technology trends on Spirent's existing business model and on its longer-term strategic vision;
- Monitor the effectiveness of the Group's new approach to internal talent development;
- Review key leading indicators of performance within Group;
- Undertake a deep review of the Group's IT strategy to ensure it meets the evolving needs of the business; and
- Evolve Spirent's culture and values to ensure that they meet the current and future needs of the business.

Other significant commitments of the Chairman and Non-executive Directors are disclosed on appointment and require approval thereafter.

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 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, directors' 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.

ACCOUNTABILITY

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 68 to 73.

Business model

A description of the Company's business model for sustainable growth is set out in "Our business model" on pages 18 and 19. 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 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, which 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 26 to 29 of this Annual Report.

Management and control of US subsidiary

Spirent Federal Systems Inc ("Spirent Federal"), which contributed approximately $46.9 million (2017 $40.8 million) to the Group's revenue in 2018, 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.

DIRECTORS' STATEMENT ON CORPORATE GOVERNANCE
CONTINUED

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 arrangements as it is required by the US National Industrial Security Program to maintain facility security clearances and to be insulated from 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 the management and operation of Spirent Federal.

In addition to their powers as directors, the Proxy holders have power under the Proxy arrangements to exercise all 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;
- 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 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, 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 74 to 95 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 and the issue and buy back of shares and significant interests in share capital is set out in the Directors' report on pages 96 to 100.

RELATIONS WITH SHAREHOLDERS

The Board is committed to maintaining good communications with shareholders. The Chairman, CEO and CFO have regular face to face contact with individual institutional shareholders in order to develop an understanding of their views which are then discussed with the Board. Key themes for discussion in 2018 have included the appointment processes for the new Non-executive Directors and the Remuneration Committee's review of the executive remuneration policy.

All directors are offered the opportunity to develop a dialogue with major shareholders to listen to their views and 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 and the Company seeks to maintain a dialogue with the various bodies which monitor the Company's governance policies and procedures.

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 and to use our shareholder mailbox at investor.relations@spirent.com for detailed enquiries.

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 and an appropriate response 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.

ANNUAL GENERAL MEETING

The Company's 2019 Annual General Meeting ("2019 AGM") will be held at 12.30pm on Wednesday 1 May 2019 at the offices of FTI Consulting, 200 Aldersgate, Aldersgate Street, London EC1A 4HD.

The Board views the AGM as a valuable opportunity to communicate with private shareholders in particular, for whom it provides the opportunity to hear about the general development of the business and to ask questions of the Chairman and, through him, the chairmen of the key Committees and other directors.

The Board looks forward to welcoming all our shareholders to our 2019 AGM and to updating them on our business developments.

Stakeholder	Why is it important to engage?	Ways Spirent engages	Shareholders' key interests
Customers	Understanding our customers' needs and behaviours allows us to deliver relevant products and services, retain customers and also attract new ones. It also identifies opportunities for growth.	• Social media engagement • Product website • Customer relevant events • Industry forums and customer groups	• Value for money • Customer service • Reliability
Colleagues	Interactions with our colleagues are the main ways that customers experience the brand of the Company. Our colleagues are fundamental to the achievement of our customer experience ambitions and are the cornerstone of our service and services proposition.	• Training and development programme • Recognition and reward • Apprenticeship and intern programmes	• Career opportunities • Pay and conditions • Training and development • Innovation • Colleague engagement
Suppliers	Engaging with our supply chain means that we can ensure security of supply and speed to market. Our brand relies heavily on the high standards of our carefully selected suppliers, in order for us to deliver market-leading products and services.	• Logistics efficiencies and environmental management • Supplier audits	• Quality management • Cost efficiency • Ethical business model
Investors	As a publicly listed company we need to provide fair, balanced and understandable information to instil trust and confidence and allow informed investment decisions to be made.	• Annual reports • Regulatory news releases • Annual General Meetings • Investor presentations • Corporate website • One-on-one meetings	• Future-oriented information • Risk information • Operating and financial performance • Dividend • Access to management
Communities	Ensures continued viability of the business into the long-term. We aim to contribute positively to the communities and environment in which we operate.	• Community investment initiatives	• Impact of Group activities on the wider community
Media and industry analysts	Ensures transparency of information on the business and Spirent's brand position in the various markets we serve.	• Press releases • Media and analyst events • Participation in industry reports	• Reliable product information • Transparency of reliable and timely Group information
Government	Policies and regulatory changes may provide opportunities and pose risk to our operations.	• Participation in government funded/sponsored smart technology initiatives	• CO_2 reduction strategies • Ethical business model • Socially responsible strategy

NOMINATION COMMITTEE REPORT

"AS PART OF ITS ONGOING ASSESSMENT OF SENIOR LEADERSHIP DEPTH, THE COMMITTEE AND THE BOARD CONTINUE TO WORK TOWARDS DEVELOPING A DIVERSE INTERNAL PIPELINE FOR FUTURE SUCCESSION TO THE BOARD AND SENIOR MANAGEMENT."

MEMBERS

During the year and at the date of this Report:

- Bill Thomas (Chairman)
- Jonathan Silver
- Gary Bullard
- Wendy Koh (appointed 11 January 2018)
- Edgar Masri (appointed 11 January 2018)

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 updated as necessary 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 2018

Policy on diversity and inclusion at Board level

Although the Board does not currently set specific aspirations in respect of diversity at Board level, it has a policy of supporting fully the 2016 Code's principles 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.

An analysis of data on the gender balance at different levels within the Company can be found in the Sustainability section on page 51 of this Annual Report.

Board appointments process

The Chairman leads the process for new appointments with external, independent consultants engaged to conduct a search for potential candidates. These are considered on the basis of their skills, experience and fit with the existing members of the Board. Procedures for appointing a non-executive or an executive director are set out in the Committee's terms of reference.

Recruitment of new CEO

Following Eric Hutchinson's decision to inform the Board of his wish to retire from the Company, the Chairman has initiated a search process for a new Chief Executive Officer. Mr Hutchinson has agreed to continue in the role until a replacement has been appointed and for a transitional period thereafter.

The services of external executive consulting firm Korn Ferry has been retained to identify candidates. Korn Ferry 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.

Appointment of new Independent Non-executive Directors

During the year, the Chairman completed the process for the appointment of two new Independent Non-executive Directors as part of the progressive refreshing of the Board.

The services of external executive consulting firm Russell Reynolds Associates were retained to identify 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.

Following a rigorous process of interviews and assessments and, on the recommendation of the Nomination Committee, the Board approved the appointments of Wendy Koh and Edgar Masri with effect from 11 January 2018.

Board succession

As part of its ongoing assessment of senior leadership depth, the Committee and the Board continue to work towards developing a diverse internal pipeline for future succession to the Board and senior management.

Performance review

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

Re-election of Directors

The Committee reviews the results of the annual Board performance 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.

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.

Bill Thomas
Chairman
7 March 2019

AUDIT COMMITTEE REPORT

ENSURING THE INTEGRITY OF FINANCIAL REPORTING AND APPROPRIATE RISK MANAGEMENT.”

DEAR SHAREHOLDER

On behalf of the Audit Committee, I am pleased to present its report for the period ending 31 December 2018.

The Committee has focused on the integrity of the Group’s financial reporting and ensuring the appropriate challenge and governance around risk management. We have continued to follow a detailed programme of work and to respond to the increasing depth of review and reporting that is now required of audit committees and are mindful of the 2018 UK Corporate Governance Code’s requirement for boards to perform a robust assessment of emerging risks in addition to the principal risks. The Committee has adapted its scope accordingly.

During 2018 the Committee continued to monitor the implementation of IFRS 15 on revenue recognition. It also assessed the Group’s readiness to comply with IFRS 16 on Leases which becomes effective for the 2019 financial period and has considered the impact it will have on disclosure in the Group’s Income Statement and the increase in both assets and liabilities in its Balance Sheet.

In 2018, the Group had to contend with a fire which surrounded its Calabasas site which was closed as a result and its business continuity plan was invoked. The site reopened with minimal disruption, providing the Committee with further assurance as to the effectiveness of its risk management practices.

During the year, the Committee has also considered the implications of Brexit, but given the Group’s global footprint, which is largely outside the UK, it does not consider it to be one of the Group’s principal risks.

The Committee has continued to develop the internal audit function with its outsource partner in accordance with an agreed strategic internal audit plan. This plan contributes to the assessment of the level and effectiveness of controls across the Group. In addition, the Committee reviews the results of a biannual internal assessment of internal controls carried out by management across all businesses.

In 2018, the Committee continued to monitor and review the Group’s preparations for the introduction of the General Data Protection Regulation which became effective in May 2018. Further details on the Committee’s activities during the year under review are set out in the report to follow.

Looking ahead, the Committee is aware that under the EU Audit Regulation it will be necessary to change the Company’s external auditor in time for the new auditor’s term to begin in 2021.

The Committee remains fully committed to championing good financial and risk reporting and to ensuring we have in place the appropriate internal controls. I look forward to meeting any shareholders who attend our AGM this year to answer any questions shareholders may have on this report or on the Committee’s activities.

Jonathan Silver
Chairman, Audit Committee
7 March 2019

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 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.

MEMBERS

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

- Jonathan Silver (Committee Chairman)
- Gary Bullard
- Wendy Koh (appointed 11 January 2018)
- Edgar Masri (appointed 11 January 2018)

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 who have the necessary range of financial and commercial expertise to challenge management. Two members constitute a quorum.

The 2016 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, 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 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 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, identifying money laundering, and the Group's arrangements for whistleblowing; and
- overseeing the relationship with the Group's external auditors, 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 their 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 their work and fees paid to them for audit, assessing the effectiveness of the audit process, and agreeing the policy in relation to the provision of non-audit services.

AUDIT COMMITTEE REPORT
CONTINUED

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 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 any executive members of the Board being present.

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 the Committee was found to be operating effectively.

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

MEETINGS

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

ACTIVITIES DURING 2018

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. In addition, the Audit Committee considered other specific matters such as the Group's approach to IT controls and cyber security.

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 their potential to impact on the viability of the Group;
- reviewed and considered assumptions in relation to the going concern basis for preparation of financial statements; and
- reviewed the external auditor's report on the interim review and year end audit and management's responses to the issues raised.

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 pressure on management to meet certain targets, and to respond to specific customer requests may drive additional deal complexity which in turn could lead to complex accounting. This may result in inappropriate recognition of revenue and associated balances. The Committee has monitored the finance organisation's implementation of the new revenue recognition standard (IFRS 15), which has applied to the Company's financial statements for the period beginning 1 January 2018.

As part of their audit procedures agreed with the Committee, Ernst & Young LLP ("EY") has 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.

Deferred tax assets

The Committee recognises there is a risk that inappropriate use of brought forward tax losses and volatility in forecast sales may result in incorrect recognition of deferred tax assets. In addition, following the significant reduction in US Federal tax rates in 2017, due consideration has continued to be given to the change in the measurement and resulting disclosures of these assets. Anticipated restrictions on the utilisation of carry forward losses in the UK may also increase the risk and uncertainty.

The Committee noted that EY has performed a detailed review of the recognition of deferred tax assets in the Group accounts as part of their audit review, with a good level of challenge of management's underlying assumptions.

Goodwill impairment

Management undertook its annual review of impairment at the end of 2018 and the Committee challenged the assumptions made and concluded that management's assessment of goodwill is appropriate.

As part of its audit process, EY undertook a review of the procedures followed and judgements made by management and agreed that management's conclusions.

Exceptional items

The Committee has reviewed and agreed the quantum and disclosure of the provisions for pension equalisation and the French Customs dispute.

MISSTATEMENTS

Management reported to the Committee that they were not aware of any material or immaterial misstatements made intentionally to achieve a particular outcome. The auditor reported to the Committee misstatements they had found in the course of their 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 2018;
- monitored and reviewed the Group's preparations for the introduction of the General Data Protection Regulation ("GDPR") in May 2018; and
- reviewed regular reports on taxation, treasury operations, health and safety and cyber security.

The Board has overall responsibility for the Group's system of internal control and risk management and for reviewing its effectiveness. The Board, assisted by the Audit Committee, has reviewed the effectiveness of this system and has enhanced the approach to Internal Control and Raising Concerns at Work as described below during 2018.

Internal audit

During 2018 the Head of Risk & Internal Audit has worked with an outsourced provider for financial control activities, with an Internal Audit Charter being approved by the Committee.

The Committee approved the programme of work for the Internal Audit function, which was focused on addressing both financial and overall risk management objectives across the Group. The Committee oversees and monitors the work of the Internal Audit function, which reviews key controls and processes throughout the Group on a rolling basis, including resources, scope and effectiveness of the function.

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

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. In 2018, a revised Groupwide Whistleblowing Policy was launched, and an external third party was appointed to receive any concerns raised by employees. Disclosures under this arrangement are investigated promptly by the Company Secretary, with the support of the Head of Risk & Internal Audit, and 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.

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.

AUDIT COMMITTEE REPORT
CONTINUED

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, 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.

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.

In 2018, the Calabasas site was closed after being surrounded by a forest fire. The business continuity plan was invoked and the site was quickly reopened with minimal interruption. A 'lessons learnt' exercise was undertaken and the business continuity plan updated accordingly.

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 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 cyber security or business continuity, are provided at the Committee's request.

The Board and Audit Committee consider that having the following key elements in place is critical to underpinning the overall internal control environment:

Operating structure and controls
An organisational structure with clear operating procedures, defined lines of responsibility and delegated levels of authority which were subject to a thorough review during 2018.

Financial control structure
A comprehensive strategic planning, financial control and budgeting system which is properly documented and regularly reviewed.

Business Ethics Policy
A policy that sets standards of professionalism and integrity for all employees and operations was relaunched during 2018. 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 and will be rolled out again during 2019.

Acquisitions and divestments
A disciplined due diligence process and post-acquisition integration programme.

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.

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: their performance in discharging the audit and interim review of financial statements, their independence and objectivity, and their re-appointment and remuneration.

Auditor appointment
Each year the Committee assesses and reports to the Board on the qualification, expertise and resources, and independence of the external auditor and the effectiveness of the audit process, with a recommendation on whether to propose to the shareholders that the external auditor be re-appointed.

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 69 years.

The Committee is aware that the transitional provisions of the CMA Order and the EU Audit Regulations (which became effective on 17 June 2016) will require the Company to change its external auditor no later than 2021. The Committee further affirms that its current intention is to change the external auditor no later than the expiry of the five-year term of the external audit partner (ie by 2021) and that on that basis, a competitive tender process will commence for the new auditor's term to begin in 2021.

The Committee will continue to monitor legislative developments and will continue to review its conclusions on an annual basis, however it believes it is appropriate to recommend the re-appointment of the incumbent external auditor at the 2019 AGM.

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 their handling of key judgements, responsiveness to the Committee and in their commentary where appropriate on the systems of internal control.

The Committee holds regular private meetings with the external auditor to assist with their 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.

The Committee reviewed and appropriately challenged the basis for these before agreeing the proposed approach and the scope of the external audit was identified.

The Committee also 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.

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 2018 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 approving 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 (2018 $0.3 million (2017 $0.3 million)) and were less than one-third of the Group's audit fee of $0.9 million (2017 $0.9 million). In accordance with the Revised Ethical Standard issued by the FRC in June 2016, the lead audit engagement partner is required to notify the Audit Committee Chairman in advance for pre-approval of any proposed non-audit services. The Committee can confirm that no such non-audit services were provided by EY during the period under review (2017 nil).

In response to the introduction of further measures under the EU Audit Reform Directive, the Committee reviewed its policy regarding the provision of non-audit services in 2017 and since that time, tax-related services previously provided by the external auditor are now provided by Deloitte LLP ("Deloitte").

REPORT ON DIRECTORS' REMUNERATION

DEAR SHAREHOLDER

I am pleased to present our Report on Directors' remuneration for the year ended 31 December 2018. This Report has been prepared on behalf of the Board by the Committee and has been approved by the Board.

COMMITTEE'S ACTIVITIES IN 2018

In 2018 the Committee focused on:

- monitoring the changing landscape of investor expectations with regard to remuneration;
- consulting with shareholders on remuneration policy proposals for 2019 and beyond;
- reviewing the base salary of the Executive Directors;
- reviewing metrics and setting targets for annual incentives; and
- reviewing metrics and targets for long term incentives.

REMUNERATION POLICY REVIEW

During 2018, the Committee concluded its in-depth review of the overall executive remuneration policy and structure with a view to ensuring that it is still fit for purpose in light of our strategy over the coming years and the nature of our business and at the same time reflected the views of our major stakeholders. As we move forward the Committee must ensure that our reward structure and remuneration policy complement our future strategy and incentivise our executives to drive long-term shareholder value.

The principal changes from the current policy are:

Annual Incentive

- the introduction of a deferral into shares being applied to one-third of the incentive achieved, for an additional period of three years; and
- to remove the differential between CEO and CFO's maximum levels of annual incentive from the remuneration policy.

Long-Term Incentive Plan ("LTIP")

- the introduction of a two-year post-vesting holding requirement; and
- to remove the differential between CEO and CFO's maximum levels of long-term incentive from the remuneration policy.

Share Ownership Guidelines

- an increase of share ownership requirements from 100 per cent to 200 per cent of base salary.

Post-cessation Shareholdings

- unvested shares under the deferred share bonus plan will continue to vest on the normal vesting date;
- unvested shares under the LTIP will, subject to standard Good Leaver provisions, continue to vest on the normal vesting date and be subject to a post-vesting holding period. Vested shares under the LTIP will continue to be subject to their holding period; and
- other beneficially owned shares will not be subject to any holding requirement post-cessation.

Retirement Benefits

- The level of retirement benefits for future newly-appointed executive directors will be set in line with the general rates applicable for new employees in the country of residence of the new executive director.

STAKEHOLDER ENGAGEMENT

The Committee is committed to open and honest dialogue with its shareholders and engaged with, and sought feedback from, 20 of its shareholders (representing 80 per cent of the Company's issued share capital) and from investor advisory bodies with respect to the proposed changes to the Policy. The Committee is very appreciative of the time, constructive dialogue and engagement received.

Overall, feedback from shareholders has indicated positive support for the proposed Policy changes and, subject to the outcome of the binding vote at the 2019 AGM, it is the Committee's expectation that it will operate the Policy for the next three years.

VARIABLE REMUNERATION IN 2018

Annual incentives in 2018 were 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 77 to 79. As demonstrated elsewhere in this Annual Report, Spirent performed well in 2018 and this is reflected in the payouts arising from the annual incentive.

Eric Hutchinson's 2015 award under the Spirent Employee Incentive Plan achieved a partial vesting in 2018, with the performance conditions vesting at 45.9 per cent for the earnings per share ("EPS") target and 81.0 per cent for the Absolute Total Shareholder Return ("Absolute TSR") target.

The Long-term Incentive Plan award given to Paula Bell in 2016 to 'buy-out' an award forfeited when she left her previous employer to join Spirent also achieved a partial vesting in 2018, with the performance conditions vesting at 50.9 per cent for the EPS target and 81.1 per cent for the Absolute TSR target.

REMUNERATION IN 2019

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

For the annual incentive, the balance of the metrics between targets for profitability, revenue and strategic and operational priorities remain the same, with the targets for the financial metrics updated to require significant growth from the achievements of 2018. The Committee believes the targets they have set to be challenging and appropriate; details of the actual targets will be disclosed in the 2019 Annual Report.

Long-term incentive awards in 2019 will retain the EPS and Absolute TSR metrics, each with a weighting at 50 per cent. The Committee remains of the view that Absolute TSR as a measure is appropriate due to the limited number of true comparator companies for Spirent.

Subject to the revised Policy receiving shareholder approval, the Committee is proposing to increase the incentive opportunities for the CFO, Paula Bell, from 100 per cent to 125 per cent of base salary for the maximum opportunity under the Annual Incentive and from an award based on 100 per cent to 125 per cent of base salary under the Long-Term Incentive Plan. Paula's current incentive opportunities are below comparable market rates and, given her proven performance in the role since her appointment, the Committee feels it is an appropriate time to bring her variable pay opportunity to a more appropriate level.

CEO EXIT AND RECRUITMENT

In November we announced that Eric Hutchinson wished to retire from Spirent after a 37-year career with the Company. Full details of Mr Hutchinson's exit remuneration will be disclosed at the appropriate time, as required by the Companies Act.

My fellow directors and I are already supporting the Nomination Committee in the recruitment of a new CEO and, as Chairman of the Remuneration Committee, I will be working to ensure that the remuneration package offered to the appointee takes into account the skills and experience of the individual and is aligned with the expectations of stakeholders to support the Board's strategic priorities.

I hope you find this Report clear and informative. I will be available at the 2019 AGM to respond to any questions that shareholders may have with respect to the work of the Committee.

Gary Bullard
Chairman, Remuneration Committee
7 March 2019

COMPLIANCE STATEMENT

This Report on Directors' remuneration for the year ended 31 December 2018 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 2016 UK Corporate Governance Code and how it is working to prepare to comply with the principles and provisions of the 2018 UK Corporate Governance Code.

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 2018 and how it will be applied for the year ended 31 December 2019. At the 2019 AGM to be held on 1 May 2019 the Directors' Annual Remuneration Report on pages 75 to 87 will be put to an advisory shareholder vote.

The Company's previous Directors' Remuneration Policy was approved by a binding vote at the 2016 AGM and became effective on 5 May 2016. A revised remuneration policy, which is set out on pages 87 to 95 of this Report, will be put to shareholders at the 2019 AGM on 1 May 2019 and, if approved, will become effective on 2 May 2019 and apply for the following three years.

DIRECTORS' ANNUAL REMUNERATION REPORT 2018

Statement of implementation of Remuneration Policy in 2019 (unaudited)

Information on how the Company intends to implement the Directors' Remuneration Policy in 2019 is set out below.

Base salary

	2019	2018	per cent change
Paula Bell	£350,097	£339,900	3.0 per cent
Eric Hutchinson	£422,300	£412,000	2.5 per cent

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 Hutchinson and Paula Bell will each 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 2019 are as follows:

Adjusted Operating Profit	50 per cent
Revenue	30 per cent
Strategic and Operational Priorities	20 per cent

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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 Hutchinson	90	150

Details of these targets and their achievement will be disclosed in the Directors' Annual Remuneration Report 2019.

Award under Spirent Long-term Incentive Plan

It is anticipated that the following award will be made under the LTIP in 2019:

	per cent of base salary	Anticipated Value of Award
Paula Bell	125	£437,621
Eric Hutchinson	150	£633,450

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 Shares awards to be made in 2019, the following parameters are appropriate, calculated over a three-year performance period:

50 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 2019, and ends after three years, in this case on 31 December 2021. The adjusted EPS figure reported for the financial period to 31 December 2018, which forms the baseline for this performance target, is 10.86 cents.

Target EPS (adjusted) at the conclusion of the performance period	Proportion of Performance shares vesting (per cent)
Below 12.90 cents	0
12.90 cents	25
Above 12.90 cents and below 14.45 cents	On a straight-line basis between 25 and 50
14.45 cents	50
Above 14.45 cents and below 18.75 cents	On a straight-line basis between 50 and 100
18.75 cents and higher	100

50 per cent of award:

In determining 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.

Absolute TSR[1]	Proportion of Performance shares vesting (per cent)
Below 17 per cent growth	0
17 per cent growth	25
Above 17 per cent growth but below 25 per cent growth	On a straight-line basis between 25 and 50
25 per cent growth	50
Above 25 per cent growth and below 42 per cent growth	On a straight-line basis between 50 and 100
42 per cent growth or higher	100

Note
1. Share price including reinvested dividends.

AUDITED INFORMATION

Single figure of total remuneration for 2018

The table below provides a single figure of total remuneration for 2018 and 2017 for the Executive directors[1].

2018

	Salary[2] £000	Benefits[3] £000	Annual Incentive[4] £000	Long-term Incentive[5] £000	Pension[6] £000	Total 2018 £000
Paula Bell	**339.9**	**16.4**	**278.8**	**267.5**	**68.0**	**970.6**
Eric Hutchinson	**412.0**	**17.1**	**494.6**	**527.3**	**82.4**	**1,533.4**

2017

	Salary[2] £000	Benefits[3] £000	Annual Incentive[4] £000	Long-term Incentive[7] £000	Pension[6] £000	Total 2017[8] £000
Paula Bell	330.0	16.2	310.6	80.6	66.0	803.4
Eric Hutchinson	400.0	17.0	520.8	274.8	80.0	1,292.6

Notes
1. All executive directors who served during 2017 and 2018 are UK based and paid in sterling, therefore the data is presented in this currency.
2. Salary and fees: cash paid in respect of the year.
3. 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.
4. Annual Incentive: cash incentive payable in respect of the year.
5. Long-term Incentive:
   The figures quoted comprise values for the elements of LTIP awards which vest based on performance during the period:
   (i) TSR element of 2015 EIP Award to Eric Hutchinson and 2016 LTIP Award to Paula Bell – actual value calculated based on the market price of a Spirent Ordinary Share at the date of vesting (118.0 pence on 23 March 2018 for Paula Bell and 117.4 pence on 18 May 2018 for Eric Hutchinson);
   (ii) EPS element of 2016 LTIP Award – level of vesting calculated based on audited EPS figure published in this Annual Report 2018; estimated value calculated based on the 3-month average price of a Spirent Ordinary Share to 31 December 2018 of 120.9 pence. This estimated value will be restated in the 2019 Annual Report on Remuneration to reflect the actual share prices on the dates of vesting for each award.
6. Pension: cash value in lieu of pension.
7. The Long-term Incentive figures for 2017 are restated to represent the actual value of the EPS element of the 2015 EIP Award to Eric Hutchinson and the 2016 LTIP Award to Paula Bell, both of which vested based on performance during 2017. The actual values are calculated based on the market price of a Spirent Ordinary Share at the date of vesting (118.0 pence on 23 March 2018 for Paula Bell and 117.4 pence on 18 May 2018 for Eric Hutchinson).
8. The total single figure of remuneration for 2017 for each Executive director is restated to reflect the restated Long-term Incentive figure (see note 7 above).

ANNUAL PERFORMANCE INCENTIVES

During 2018, cash incentives were available to Executive directors on an annual basis, with a maximum total cash incentive available of 150 per cent of base salary and 100 per cent for Eric Hutchinson and Paula Bell respectively.

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 operational effectiveness in the areas of sales, engineering and finance representing the remaining 20 per cent of the incentive.

Adjusted operating profit element (50 per cent of annual incentive)

	Target	Achievement
Entry point (20 per cent)	$60.9	
On-target (60 per cent)	$68.9	
Maximum (100 per cent)	$78.9	$77.1
Achievement		92.8 per cent

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REPORT ON DIRECTORS' REMUNERATION
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Revenue (30 per cent of annual incentive)

	Target	Achievement
Entry point (20 per cent)	$456.8	
On-target (60 per cent)	$478.8	
Maximum (100 per cent)	$503.8	$476.9
Achievement		56.5 per cent

Strategic and Operational Priorities (20 per cent of annual incentive)

The CEO and CFO were each set three priorities, with performance of each target to be equally weighted.

Productivity improvement over 2017 (CEO and CFO)

Objective: To drive cost management and growth in profitability
Metric: Total expenditure as a ratio of profit over gross profit achieved for product development, product marketing and gross profit (2017 2.5 times)

	Target improvement
Entry point (20 per cent)	2.575
On-target (60 per cent)	2.600
Maximum (100 per cent)	2.625
Achievement	100 per cent

Key account management (CEO only)
Objective: To increase business focus on key accounts

Metric:

	Achievement
Recruitment (50 per cent)	
Improvements in target accounts (50 per cent)	
Achievement	50 per cent

Developing our leadership and talent and organisation (CEO only)
Objective: Develop leadership programme and succession plan for key management roles

Metric:

	Achievement
Externally-led assessment of sales talent (20 per cent)	
Development of Future Leaders development programme (40 per cent)	
Development of succession plan for key management roles below Board and Executive Committee level (40 per cent)	
Achievement	100 per cent

Business unit restructuring risk mitigation (CFO only)
Review impact of certain business unit restructuring and develop detailed trategic plans for a range of outcomes

	Achievement
Achievement	100 per cent

Improvement in cash collection measures (CFO only)
Objective: To drive improvements in receivable days' sales outstanding (2017 76.7 days)

Metric:

	Achievement
Entry point (20 per cent)	=< 75 days
On-target (60 per cent)	=< 73 days
Maximum (100 per cent)	=< 71 days
Achievement	80 per cent

Total Annual Incentive performance

	2018			2017		
	per cent on-target annual incentive	**per cent of base salary**	**£**	per cent on-target annual incentive	per cent of base salary	£
Paula Bell	**136.7**	**82.0**	**278,821**	134.5	94.1	310,596
Eric Hutchinson	**133.4**	**120.0**	**494,821**	130.2	130.2	520,800

RELOCATION EXPENSES
No relocation expenses were paid to either Executive Director during 2018.

Following her appointment as CFO in 2016, Paula Bell received a relocation payment of £100,000, on which the Company paid an associated tax liability of £76,940, giving a total gross relocation package to the value of £176,940. The amount reimbursed is subject to a three-year clawback from her start date (5 September 2016), with the balance of the clawback reducing by one-third on each anniversary of that start date.

TOTAL PENSION ENTITLEMENTS
Eric Hutchinson receives a taxable cash allowance in lieu of pension of 20 per cent of base salary. For 2018, the allowance paid was £82,400 (2017 £80,000).

Paula Bell receives a taxable cash allowance in lieu of pension of 20 per cent of base salary. For 2018, the allowance paid was £68,000 (2017 £66,000).

EXTERNAL APPOINTMENTS
Eric Hutchinson held no external positions during the year under review or to the date of this Report.

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.

PAYMENTS TO PAST DIRECTORS
There were no payments 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.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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	2020 AGM
Wendy Koh	11 January 2018	2021 AGM
Edgar Masri	11 January 2018	2021 AGM
Jonathan Silver	25 June 2015	2019 AGM
Bill Thomas	1 December 2016	2020 AGM

During 2018, fees for the Non-executive Directors were reviewed with effect from 1 January 2019.

Under the matters reserved to the Board, the Board considered and agreed that in keeping with the salary increase applied across the Group's employees, the basic annual fee for non-executive directors should be increased by 3 per cent, from £50,000 to £51,500 with effect from 1 January 2019.

It was decided that the additional fees payable to the Chairman of the Audit and Remuneration Committees would remain at £11,000 and £9,000 respectively. The role of Senior Independent Director was entitled to receive an additional fee of £7,500 per annum in recognition of the increased time commitment associated with the role but the individual who currently fills this role has chosen to continue to waive this additional fee during the period under review and for 2019.

Similarly, under the terms of reference of the Committee, it considered and agreed that the annual fee for the Chairman, having been frozen since January 2009, should be increased from £160,000 to £175,000 with effect from 1 January 2019.

Fees for Non-executive Directors and the Chairman will be reviewed again in 2019 for the period from 1 January 2020.

Details of fees paid to Non-executive Directors in 2018 and 2017 are as follows:

	2018 £000	2017 £000
Current directors		
Bill Thomas (Chairman)[1]	**160.0**	114.2
Gary Bullard[2]	**59.0**	45.9
Wendy Koh[3]	**48.7**	–
Edgar Masri[4]	**48.7**	–
Jonathan Silver	**61.0**	51.0
Former directors		
Alex Walker (Chairman)[5]	**–**	55.2
Tom Lantzsch[6]	**–**	7.1
Tom Maxwell[7]	**–**	16.9
Sue Swenson[8]	**–**	7.4
Total	**377.4**	297.7

Notes
1. Bill Thomas was appointed Chairman on 19 May 2017.
2. Gary Bullard was appointed Chairman of the Remuneration Committee on 3 May 2017.
3. Wendy Koh was appointed to the Board on 11 January 2018.
4. Edgar Masri was appointed to the Board on 11 January 2018.
5. Alex Walker stepped down as Chairman and from the Board on 3 May 2017.
6. Tom Lantzsch stepped down from the Board on 3 March 2017.
7. Tom Maxwell stepped down as Chairman of the Remuneration Committee and from the Board on 3 May 2017.
8. Sue Swenson stepped down from the role of Senior Independent Director and from the Board on 8 March 2017.

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 2017 Ordinary shares[1]	At 31 December 2018 Ordinary shares[1]	At 7 March 2019 Ordinary shares[1,2]
Executive Directors			
Paula Bell	150,000	227,096	227,096
Eric Hutchinson	2,007,219	2,010,420	2,010,768
Non-executive Directors			
Gary Bullard	40,000	50,830	50,830
Wendy Koh[3]	–	–	–
Edgar Masri[4]	–	20,000	20,000
Jonathan Silver	70,000	70,000	70,000
Bill Thomas	46,199	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 2018:
   On 24 January 2019, Eric Hutchinson acquired 180 Ordinary Shares under the UK Employee Share Purchase Plan at a price of 138.00 pence per share.
   On 25 February 2019, Eric Hutchinson acquired 168 Ordinary Shares under the UK Employee Share Purchase Plan at a price of 150.00 pence per share.
3. Wendy Koh was appointed to the Board on 11 January 2018.
4. Edgar Masri was appointed to the Board on 11 January 2018.

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 2016 Remuneration Policy, the Committee required Executive Directors to hold shares with a value equivalent to at least 100 per cent of their base salary in the form of shares and unfettered share incentive awards which may be built up over time following appointment as an Executive Director. Under the revised Remuneration Policy, for which approval will be sought from shareholders at the 2019 AGM, this requirement will increase to a holding of shares equivalent in value to 200 per cent of base salary.

The table below sets out the holdings of the Executive Directors who served during the year at 31 December 2018:

	Guideline holding	Beneficially owned shares	Unfettered share incentives	Value of holding at 31 December 2018 as percentage of salary	Guideline met?
Paula Bell[1]	100 per cent of base salary	227,096	–	79.1 per cent	No
Eric Hutchinson	100 per cent of base salary	2,010,420	–	577.8 per cent	Yes

Note
1. Paula Bell joined the Board in September 2016 and is in the process of building up a shareholding to meet the guideline.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

OUTSTANDING SHARE INCENTIVE AWARDS[1]

The share incentive interests of Executive Directors who served during the period 1 January 2018 to the date of this Report are set out below:

Paula Bell

Plan Type	LTIP	LTIP	LTIP	LTIP
Award Type	PS	PS	PS	PS
Award Date	30 September 2016	30 September 2016	4 May 2017	22 May 2018
At 1 January 2018 (or date of appointment)	268,293	292,683	279,661	–
Granted during the period	–	–	–	302,402
Vested during the period	177,073	–	–	–
Lapsed during the period	91,220	–	–	–
Any other adjustments during the period	–	–	–	–
At 31 December 2018 (or at date of cessation)	–	292,683	279,661	302,402
Market price at date of award (£)[2]	0.8200	0.8200	1.1800	1.1240
Face value of award granted in period (£)	–	–	–	339,900
Exercise price (£)[3]	Nil	Nil	Nil	Nil
Subject to performance conditions?	Yes	Yes	Yes	Yes
Performance condition	50% EPS, 50% TSR	50% EPS, 50% TSR	50% EPS, 50% TSR	50% EPS, 50% TSR
Performance condition testing date[4]	5 March 2018[5]	30 September 2019	4 May 2020	22 May 2021
Result of performance condition testing	EPS 50.9% vest, TSR 81.1% vest			
Market price at vesting date (£)	1.180000	–	–	–
Exercise date	26 March 2018	–	–	–
Market price at exercise date (£)	1.14492	–	–	–
Gain on exercise (£)	208,946.14	–	–	–
Expiry date	23 March 2018[5]	30 September 2019	04 May 2020	22 May 2021

Eric Hutchinson

Plan Type	EIP	LTIP	LTIP	LTIP
Award Type	PS	PS	PS	PS
Award Date	18 May 2015	16 June 2016	4 May 2017	22 May 2018
At 1 January 2018 (or date of appointment)	578,035	781,758	508,474	–
Granted during the period	–	–	–	549,822
Vested during the period	366,762	–	–	–
Lapsed during the period	211,273	–	–	–
Any other adjustments during the period	–	–	–	–
At 31 December 2018 (or at date of cessation)	–	781,758	508,474	549,822
Market price at date of award (£)[2]	0.8650	0.7675	1.1800	1.1240
Face value of award granted in period (£)	–	–	–	618,000
Exercise price (£)[3]	Nil	Nil	Nil	Nil
Subject to performance conditions?	Yes	Yes	Yes	Yes
Performance condition	50% EPS, 50% TSR	50% EPS, 50% TSR	50% EPS, 50% TSR	50% EPS, 50% TSR
Performance condition testing date[4]	18 May 2018	16 June 2019	4 May 2020	22 May 2021
Result of performance condition testing	EPS 81.0% vest, TSR 45.9% vest			
Market price at vesting date (£)	1.174000	–	–	–
Exercise date	21 May 2018	–	–	–
Market price at exercise date (£)	1.126000	–	–	–
Gain on exercise (£)	430,578.59	–	–	–
Expiry date	18 May 2018	16 June 2019	4 May 2020	22 May 2021

Notes
An explanation of each share plan and its operation is given in note 32 to the audited consolidated financial statements of the Group.

1. Key to share plan and type of award:
   EIP PS – 2005 Employee Incentive Plan Performance Shares awarded as conditional share awards.
   LTIP PS – 2016 Long-term Incentive Plan Performance Shares 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 performance conditions for this award were based on (i) an EPS growth target based on performance reported for 31 December 2017 and (ii) a TSR growth target based on the Company share price averaged over a 90-day period immediately prior to the announcement of the 2017 Full Year results. Full Year results for 2017 and EPS performance to 31 December 2017 were reported on 8 March 2018, not 5 March 2018 as previously anticipated and therefore the performance condition testing date for this award was updated accordingly.

SHARE INCENTIVE INTERESTS AWARDED DURING THE YEAR

In 2018, the Committee approved an award of Performance Shares to Mr Hutchinson and Ms Bell equivalent to 150 per cent and 100 per cent of base salary respectively.

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 2018, and ends after three years, in this case on 31 December 2020.

Target EPS (adjusted) at the conclusion of the performance period	Proportion of Performance shares vesting (per cent)
Below 9.3 cents	0
9.3 cents	25
Above 9.3 cents and below 10.6 cents	On a straight-line basis between 25 and 50
10.6 cents	50
Above 10.6 cents and below 13.5 cents	On a straight-line basis between 50 and 100
13.5 cents and higher	100

50 per cent of award:

Absolute TSR[1]	Proportion of Performance shares vesting (per cent)
Below 17 per cent growth	0
17 per cent growth	25
Above 17 per cent growth but below 25 per cent growth	On a straight-line basis between 25 and 50
25 per cent growth	50
Above 25 per cent growth and below 42 per cent growth	On a straight-line basis between 50 and 100
42 per cent growth or higher	100

Note
1. Share price including reinvested dividends.

In determining TSR growth for the Company, share prices will be averaged over 90-day periods immediately prior to the announcement of the 2017 Full Year results on 8 March 2018 and the 2020 Full Year results, which will be announced in March 2021.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

SHARE INCENTIVE INTERESTS VESTING DURING 2019

Both Mr Hutchinson's award which is due to vest on 16 June 2019 and Ms Bell's award which is due to vest on 30 September 2019 are subject to the same performance conditions: an EPS performance condition and a TSR performance condition.

- The EPS condition has passed the growth threshold required for partial vesting but has not achieved the growth required for full vesting.
- The 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 a significant level of vesting.

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 0.5 million Ordinary Shares for the purpose of satisfying the exercises of current and future awards by employees and former employees of the Group.

DILUTION

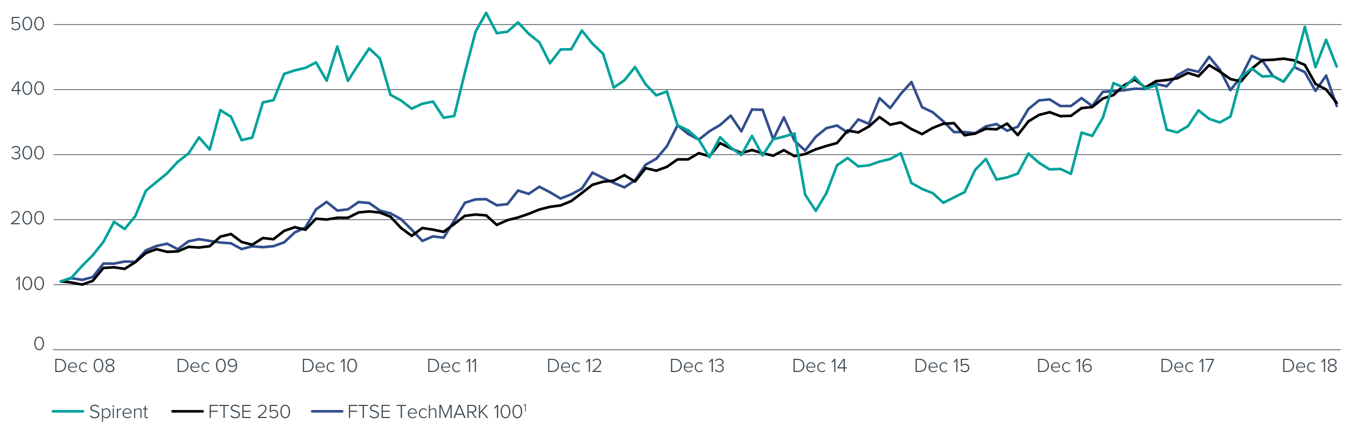
Overall shareholder dilution resulting from the Company's share incentive plans (on a rolling ten-year basis) has fallen by 1.1 per cent when comparing the positions at 31 December 2018 (4.0 per cent) and 31 December 2017 (5.1 per cent). The overall number of share incentives outstanding has decreased by 0.9 million during the year to 9.1 million at 31 December 2018 (2017 10.0 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.

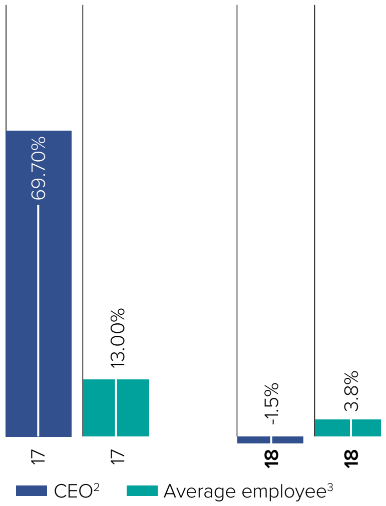
Ten-year TSR performance – Spirent vs FTSE TechMARK[1] and FTSE 250



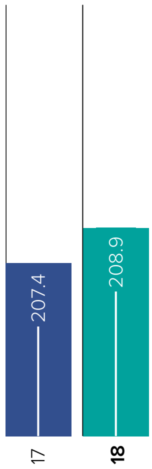
Note
1. As of 1 January 2009, excluding FTSE 100 companies.

The middle market price of an Ordinary Share at the close of business on 2 January 2018 and 31 December 2018 (being the first and last days the London Stock Exchange was open for trading in 2018) was 102.00 pence and 118.40 pence respectively, and during that period ranged between a high of 138.00 pence and a low of 96.60 pence.

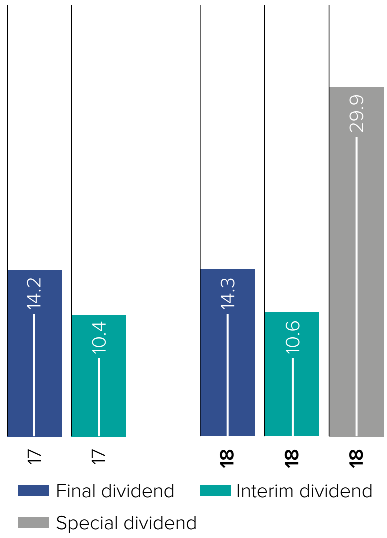
Percentage change in the remuneration of the director undertaking the role of CEO compared to the percentage change in remuneration of average employee[1]



Remuneration paid to all employees[4]
$ million



Returns to shareholders[5]
$ million



Notes
1. The graph shows the change in CEO's annual cash remuneration, defined as base salary, taxable benefits and Annual Incentive, compared to that of the average employee for 2017 and 2018. The 2017 average employee figure has been restated since the disclosure in the 2017 Annual Report on Remuneration to ensure that the same elements of remuneration are being compared.
2. As explained on the 2017 Annual Report on Remuneration, the CEO received a base salary increase of 3% in 2018 but did not receive a base salary increase in 2017. The increase shown in this graph represents the payout of the CEO's Annual Incentive relating to 2018, compared to the Annual Incentive payout received in 2017.
3. As set out in note 8 to the consolidated financial statements.
4. Total as set out in note 8 to the consolidated financial statements.
5. Total as set out in note 12 to the consolidated financial statements.

CEO Pay Ratio disclosure

The Committee is aware of the requirement in the 2018 UK Corporate Governance Code for the disclosure of more detailed CEO pay ratio data and will make the appropriate disclosures in the 2019 Annual Remuneration Report.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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
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[2]	186.9	12.0	–
2013	Bill Burns[3]	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. Prior year data in this table has been recalculated from US dollars to be presented in sterling at the following average exchange rates: 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 Hutchinson took up the position of CEO on 3 September 2013.
3. Earnings disclosed are to 3 September 2013, when Bill Burns stepped down as CEO.

STATEMENT OF SHAREHOLDER VOTING
At the 2018 AGM on 2 May 2018 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 2017:

Votes For[1]	per cent	Votes Against	per cent	Votes Cast	Votes Withheld[2]
478,462,934	94.12	29,903,021	5.88	508,365,955	2,281,361

The most recent binding vote for the Company's Remuneration Policy, approved by shareholders at the 2016 AGM and effective from 5 May 2016:

Votes For[1]	per cent	Votes Against	per cent	Votes Cast	Votes Withheld[2]
461,594,887	96.70	15,772,687	3.30	477,367,574	28,531

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 and 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 March 2018 and 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 2016 UK Corporate Governance Code (the "2016 Code").

Advisers to the Committee

During the period under review the Committee consulted with the Company's Chairman, CEO, CFO and the 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 to be put to shareholders at the 2019 Annual General Meeting. The Committee is satisfied that Aon is independent, thoughtful and challenging. Aon is also 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 Committee considers Aon to be independent in its approach.

The fees paid to Aon to carry out work for the Remuneration Committee during the period under review totalled £33,900 (2017 nil). Fees are based on a fixed retainer for certain services and time and materials otherwise.

Deloitte LLP was appointed by the Committee in 2015 to undertake a market review of executive remuneration practices and continued to assist the Committee through early 2018. The Committee is satisfied that Deloitte LLP is independent, thoughtful and challenging. Deloitte LLP is also 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 Committee considers Deloitte LLP to have been independent in its approach during its time as advisers to the Committee.

The fees paid to Deloitte LLP to carry out work for the Remuneration Committee during the period under review totalled £16,200 (2017 £25,380) and were based on time and materials.

Kepler Associates Limited, who were acquired in June 2015 by Mercer Limited, were 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 is 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 Committee considers Mercer Limited to be independent in its approach.

The fees paid to Mercer Limited to carry out work for the Remuneration Committee during the period under review totalled £8,040 (2017 £11,325) 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 2016 AGM on 4 May 2016 and received 96.7 per cent of all votes cast in favour. A revised remuneration policy will be put to shareholders for approval at the AGM on 1 May 2019 and, if approved, is intended to apply for the next three years. The revised policy is broadly consistent with the previously approved policy. However, certain changes have been made to ensure that the new policy remains fit for purpose for the next three years for the Company and its shareholders. The principal changes from the previously approved policy are:

- introduction of a cap on the maximum pension contribution (or cash allowance in lieu) that may be offered to a newly-appointed Executive Director;
- introduction of mandatory deferral into shares for one-third of the Annual Incentive for Executive Directors for bonuses paid with respect to 2019 and beyond;
- addition of a two year post-vesting holding requirement for the long-term incentive plan awards;
- clarification of the malus and clawback provisions operable in each of the Company's incentive plans; and
- an increase to the share ownership guideline for Executive Directors to 200 per cent of salary (whilst in employment) and the introduction of a formal policy on post-cessation holdings.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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
Fixed pay	
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.
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).
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.
Variable pay	
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.
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 opportunity	Framework to assess performance
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 report on remuneration.	Not applicable
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
It is intended that the maximum value of retirement benefits offered will remain broadly in line with market practice in the location in which the Executive Director operates. The maximum Company contribution is set at 20 per cent of base salary (combined cash supplement and/or defined contribution plan). 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
Maximum opportunity is capped at 150 per cent of base salary. The annual incentive starts accruing from threshold levels of performance. 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 the majority of the weighting being given to financial metrics. Measures, weightings and targets are determined by the Remuneration Committee each year taking into account the Group's key strategic priorities and the approved budget for the year and are set out in the Annual Remuneration Report. The payment of any bonus is at the absolute discretion of the Committee.
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 2019 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.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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;
- 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 inflight 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;
- where 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 up to three years following the granting of awards under the Company's deferred bonus arrangements.

Shareholding guideline

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.

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.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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.

Both Eric Hutchinson and Paula Bell currently have a service agreement with Spirent Communications plc, and, being UK residents, both their contracts are in line with UK employment practice and are governed by the laws of England and Wales. Eric Hutchinson's service agreement dated 8 December 2014 may be terminated on 12 months' notice from the Company and six months' notice from Mr Hutchinson. Paula 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 2019 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 Report of the directors);
- 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.

The table below sets out key provisions for Executive Directors under their service contracts and the Incentive Plan rules:

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.
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. On approval of this policy and in respect of the incentive awards to be granted thereafter, the following will ordinarily apply:

- unvested shares under the deferred share bonus plan – will continue to vest on the normal vesting date (ie 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;
- vested shares under the LTIP – the holding period will continue to apply;
- other beneficially owned shares – no sale restriction applies.

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.

REPORT ON DIRECTORS' REMUNERATION
CONTINUED

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 2016 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 2019 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

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 will be introducing an enhanced workforce engagement programme in 2019 to facilitate this.

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; and
- December 2018: consultation regarding the revised remuneration policy for which the Committee is proposing to seek shareholder approval at the 2019 Annual General Meeting.

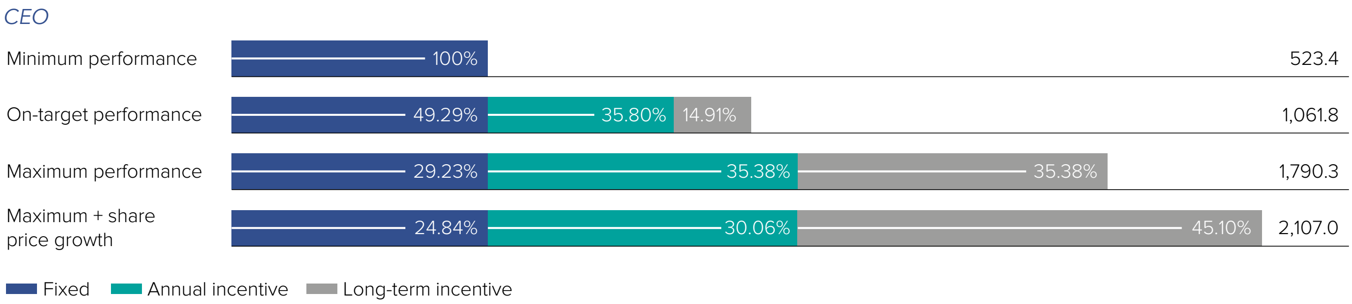
Legacy matters
For the avoidance of doubt, in approving this Remuneration Policy, authority is given to the Company to make payments and honour any commitments entered into with current or former directors (such as the payment of pension or the unwinding of legacy share schemes) where the terms were 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. Details of any payments will be set out in the Annual Remuneration Report as they arise.

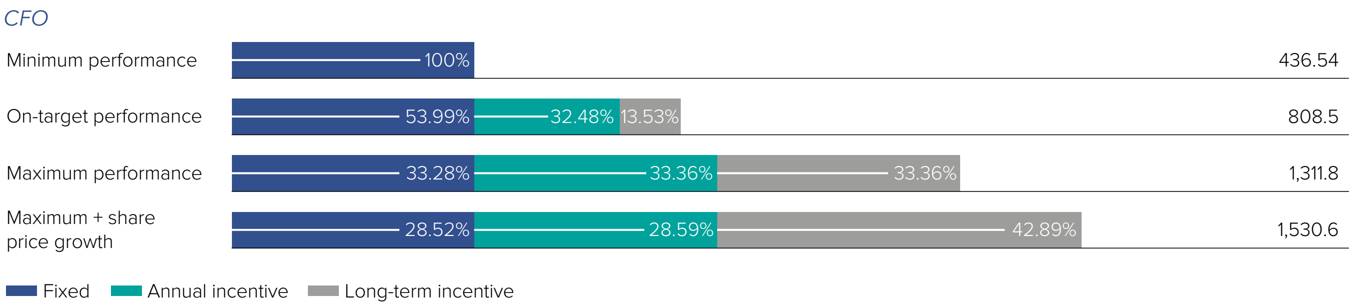
Illustrations of the application of Remuneration Policy in 2019

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 2019 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 2019
2 Benefits as received during 2018 financial year
3 Cash sum in lieu of pension equal to 20 per cent of base salary
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





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 56 to 65 (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 IFC to 53.

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 IFC to 53.

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 50 to 53.

RESULTS AND DIVIDENDS

The consolidated income statement is on page 111. Profit for the financial year attributable to equity shareholders amounted to $55.8 million.

The directors recommend a final dividend of 2.73 cents per Ordinary Share to be paid. Subject to approval by shareholders at the 2019 AGM, the final dividend will be paid on 3 May 2019 to shareholders on the Register of Members at close of business on 15 March 2019.

This final dividend, together with the interim dividend paid in September 2018, will represent a total dividend of 4.49 cents per Ordinary Share for the year ended 31 December 2018 (2017 4.08 cents).

DIRECTORS

The names of the persons who were Directors of the Company during the period under review and as at 7 March 2019 appear on page 60. All current Directors are standing for election or re-election at the 2019 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 election or re-election at the AGM this year in compliance with the 2016 UK Corporate Governance Code. Details of unexpired terms of directors' service contracts are set out in the Directors' report on remuneration on page 80.

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 81.

EMPLOYEES

The average number of Group employees during 2018 was 1,457 worldwide (2017 1,505). 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.

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 chains 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 50 to 53.

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. Information relevant to employees will be provided to them.

Employees are provided with information on the performance of their business unit and their involvement is encouraged in a variety of ways, such as through engagement surveys, "town hall" meetings and management presentations.

The Group encourages an open culture in all its dealings between employees and people with whom it comes into contact. The Group's whistleblowing procedure 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	Yes	Pro-rated	Still applies
Spirent Long-term Incentive Plan	Yes	Pro-rated	Still applies

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.

DIRECTORS' REPORT
CONTINUED

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 2018 to 31 December 2018 or earlier as applicable:

	Date of notification	Total holding	per cent of Company's total voting rights
Ameriprise Financial, Inc	15 March 2017	92,804,839	15.17
Teleios Capital Partners LLC	26 October 2018	63,229,576	10.34
Prudential plc	14 March 2018	59,795,222	9.77
AXA Investment Managers SA	18 October 2011	47,515,946	7.77
Standard Life Investments Limited	27 January 2011	32,370,026	5.29
PrimeStone Capital LLP	13 November 2015	31,215,569	5.10
Aberforth Partners	17 August 2017	31,012,618	5.07
Brandes Investment Partners LP	3 March 2016	30,537,440	4.99
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
Sun Life Assurance Company of Canada (UK) Limited	5 December 2008	23,382,347	3.82
Kames Capital	6 February 2012	18,507,514	3.03

No further notifications have been received during the period 1 January 2019 to 7 March 2019.

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 31 to the consolidated financial statements and note 16 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 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. For further details on the employee benefit trusts see "Investment in own Ordinary Shares" in note 31 to the consolidated financial statements and note 16 to the parent Company financial statements. 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. 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 2018 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 2019 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 7 March 2019.

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 2018 AGM remains valid until the earlier of the 2019 AGM or 30 June 2019. 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 2018 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 2019 AGM to facilitate any further return of capital if the Board concludes that it is in the best interests of shareholders to do so.

POLITICAL DONATIONS

In accordance with the Group's Ethics Policy, no political donations were made during the year (2017 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 29 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 26 to 29 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.

DIRECTORS' REPORT
CONTINUED

VIABILITY STATEMENT
In accordance with provision C.2.2 of the 2016 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 2019, the Group's long-term strategy, the Board's risk appetite and the Group's principal risks and uncertainties as set out on pages 26 to 29 of this Annual Report.

The plans and cash flow projections used as the basis for the assessment were the 2019 budget and the three-year strategic plan.

They were drawn up on the basis that the Group ends 2018 with a cash balance of circa $120 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
No post-balance sheet events are required to be disclosed in the consolidated financial statements.

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 their 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 their Report and to establish that the Company's auditor is aware of that information.

INDEPENDENT AUDITOR
As described in more detail on page 72 of the Audit Committee report, the Board will be proposing a resolution to re-appoint EY as auditor at the 2019 AGM.

ANNUAL GENERAL MEETING
The 2019 AGM will be held at 12.30pm on Wednesday 1 May 2019 at the offices of FTI Consulting, 200 Aldersgate, Aldersgate Street, London EC1A 4HD.

By Order of the Board

Angus Iveson
Company Secretary
7 March 2019

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.

Company law requires the Directors to prepare financial statements for each financial year. Under that law they are required to prepare the consolidated financial statements of the Group in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union (EU) 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 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 of the parent Company.

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 and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state for the audited consolidated financial statements of the Group whether they have been prepared in accordance with IFRS as adopted by the EU;
- state for the parent Company financial statements whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the parent Company financial statements; and
- 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.

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 transactions and that disclose with reasonable accuracy at any time the financial position of the Group and the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006 and, for the Group, Article 4 of the International Accounting Standards (IAS) Regulation. 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.

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 to assess the Company's performance, business model and strategy.

This Annual Report complies with the Disclosure 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 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 Officer
7 March 2019

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 2018 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with IFRSs as adopted by 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, and, as regards the Group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements of Spirent Communications plc which comprise:

Group	Parent Company
Consolidated balance sheet as at 31 December 2018	Balance sheet as at 31 December 2018
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 17 to the 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 37 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 Financial Reporting Standards (IFRSs) as adopted by 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 PRINCIPAL RISKS, GOING CONCERN AND VIABILITY STATEMENT

We have nothing to report in respect of the following information in the Annual Report, in relation to which the ISAs (UK) require us to report to you whether we have anything material to add or draw attention to:

- the disclosures in the Annual Report set out on page 26 that describe the principal risks and explain how they are being managed or mitigated;
- the directors' confirmation set out on page 100 in the Annual Report that they have carried out a robust assessment of the principal risks facing the entity, including those that would threaten its business model, future performance, solvency or liquidity;
- the directors' statement set out on page 100 in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the entity's ability to continue to do so over a period of at least 12 months from the date of approval of the financial statements;
- whether the directors' statement in relation to going concern required under the Listing Rules in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit; or
- the directors' explanation set out on page 100 in the Annual Report as to how they have assessed the prospects of the entity, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the entity will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

OVERVIEW OF OUR AUDIT APPROACH

Key audit matters	• Inappropriate revenue recognition • Recoverability of deferred tax assets • Carrying value of goodwill (Group) and investments in subsidiary undertakings (parent Company only)
Audit scope	• We performed an audit of the complete financial information of three components and audit procedures on specific balances for a further five components. • The components where we performed full or specific audit procedures accounted for 93 per cent of profit before tax adjusted for non-recurring items, 93 per cent of revenue and 96 per cent of total assets.
Materiality	• Overall Group materiality of $3.5 million which represents 5 per cent of profit before tax adjusted for non-recurring items.

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 (page 68); Accounting policies (page 121); and note 3 of the consolidated financial statements (page 126).* The Group has reported revenues of $476.9 million (2017 $454.8 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, pressure on management to meet certain targets may result in inappropriate recognition of revenue and associated balances which may lead to 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 revenue 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 components consisting of hardware, software and support services. This included recalculating revenue allocations, agreeing revenue to cash receipts and, where appropriate, testing whether revenue had been deferred correctly at year end; • 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 transaction 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 transaction price was allocated to separate performance obligations on a reasonable and consistent basis; • 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 including the impact of the Group's adoption of IFRS 15 in note 37.	We concluded that revenue recognised in the year, and deferred as at 31 December 2018, is materially correct on the basis of our procedures performed.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF SPIRENT COMMUNICATIONS PLC CONTINUED

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 68); Accounting policies (page 124); and note 25 of the consolidated financial statements (page 145).* The Group has deferred tax assets of \$22.0 million (2017 \$23.2 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 has decreased from the prior year due to the improving performance of the Group.	Procedures on the deferred tax assets were performed centrally by the Group team supported by overseas 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 forecasting 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; • We formed our own view of the Group's capacity to obtain effective tax relief for tax losses and other temporary differences over the forecast period; • 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 reform 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 correctness 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 is appropriate.
Carrying value of goodwill (Group), and investments in subsidiary undertakings (parent Company) *Refer to the Audit Committee Report (page 68); Accounting policies (page 123); and note 13 of the consolidated financial statements (page 139).* The Group has goodwill of \$155.7 million (2017 \$156.8 million) and investments in subsidiary undertakings of £366.6 million (2017 £351.8 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 2016 management impaired goodwill relating to the Connected Devices segment by \$41.3 million down to its recoverable amount. Headroom for this segment has increased following improving profitability, however we continue to monitor this segment in particular. The risk has decreased from the prior year due to the improving performance of the Group.	Procedures on the carrying value of goodwill and investments in subsidiary undertakings were performed centrally by the Group team: • With the support of our valuation specialists, we assessed the discount rate used by obtaining the underlying data used in the calculation and benchmarking it against comparable organisations and market data; • We validated the growth rates assumed by comparing them to economic and industry forecasts; • We challenged management on the achievability of the cash flow forecasts, the downside risk relating to Brexit and possible US-China trade wars, 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; and • We considered the appropriateness of the related disclosures provided in note 13 to the Group financial statements.	We concluded that there is no goodwill impairment as at 31 December 2018. We note that whilst the performance of Connected Devices has improved during the year there remains judgement with regards to the expected future cash flows as a result of the upcoming 5G technology. We also concluded that there is no impairment required to parent Company investments.

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 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 three components ("full scope components") which were selected based on their size or risk characteristics. For the remaining five 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.

	2018					2017			
Reporting Components	**Number**	**% of Group adjusted profit before tax***	**% of Group Revenue**	**% of Group Assets**	**See Note**	Number	% of Group adjusted profit before tax*	% of Group Revenue	% of Group Assets
Full Scope	**3**	**104%**	**83%**	**73%**	**1,2**	3	95%	84%	61%
Specific Scope	**5**	**(11%)**	**10%**	**23%**	**3,4,5**	5	(5%)	9%	33%
Full and Specific scope coverage	**8**	**93%**	**93%**	**96%**		8	90%	93%	94%
Remaining components	**16**	**7%**	**7%**	**4%**	**6**	20	10%	7%	6%
Total Reporting components	**24**	**100%**	**100%**	**100%**		28	100%	100%	100%

* Profit before tax adjusted for non-recurring items as defined in the 'Our application of materiality' section of this report.

Note 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.

Note 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.

Note 3
One of the five specific scope components relates to the corporate division of the parent Company which includes consolidation and elimination adjustments.

Note 4
The specific scope loss before tax adjusted for non-recurring items coverage of 11 per cent represents four specific scope components having a positive contribution of 15 per cent offset by the corporate component having a negative contribution of 26 per cent.

Note 5
The audit scope of these components may not have included testing of all significant accounts of the component but will have contributed to the coverage of the significant account tested for the Group.

Note 6
Of the remaining components that together represent 7 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.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF SPIRENT COMMUNICATIONS PLC CONTINUED

Changes from the prior year

Our scoping is comparable with the prior year. We note that the number of 'Remaining components' in the table above has reduced reflecting the 2017 disposal of the Developer Tools (DT) and Device Intelligence (DI) line of business and associated components.

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 three full scope components, audit procedures were overseen on one of these directly by the Group audit partner with the other two performed by component audit teams. Of the five specific scope components audit procedures were performed on three of these directly by the Group audit team and two 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. In addition, the Group audit team continued to follow a programme of planned visits that has been designed to ensure that the Senior Statutory Auditor visits certain material or high risk locations on a rotational basis. During the current year's audit cycle, visits were undertaken by the Group audit team to the component teams in North America and Asia. These visits involved meeting with our component team to discuss and direct their planned audit approach, holding meetings with local management and reviewing procedures performed to date on the Group risk areas.

The Group team interacted regularly with the component teams where appropriate during various stages of the audit, including attendance at all closing meetings by phone, 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.

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 $3.5 million (2017 $2.5 million), which is 5 per cent (2017 5 per cent) of profit before tax adjusted for non-recurring items, of $71.9 million (2017 $50.7 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 £3.0 million (2017 £2.8 million), which is 1 per cent (2017 1 per cent) of net assets. Parent Company materiality is higher than 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 $61.2 million (2017 profit before tax $46.6 million)

ADJUSTMENTS
Adjusted for non-recurring items:
- Exceptional costs of $13.1 million (2017 $6.7 million)
- Gain on divestments of $2.4 million (2017 $2.6 million)

MATERIALITY
- Profit before tax adjusted for non-recurring items $71.9 million (basis for materiality) (2017 $50.7 million)
- Materiality of $3.5 million (2017 $2.5 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 intangible asset amortisation of $3.7 million (2017 $6.3 million), Share based payment expense of $2.8 million (2017 $2.2 million), and net interest income of $1.3 million (2017 $0.3 million). Adjusting for these items gives adjusted operating profit of $77.1 million (2017 $58.9 million).

The $1.0 million increase in materiality is in proportion to the $21.2 million increase of profit before tax adjusted for non-recurring items (2018 $71.9 million, 2017 $50.7 million). That increase is a result of the $18.2 million increase in adjusted operating profit (2018 $77.1 million, 2017 $58.9 million), the $2.6 million reduction in intangible asset amortisation (2018 $3.7 million, 2017 $6.3 million), and the $1.0 million increase in net finance income (2018 $1.3 million, 2017 $0.3 million) partially offset by a $0.6 million increase in share based payment expense (2018 $2.8 million, 2017 $2.2 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.

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF SPIRENT COMMUNICATIONS PLC CONTINUED

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 (2017 75 per cent) of our planning materiality, namely $2.6 million (2017 $1.8 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 $3.5 million (2017 $2.5 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 $0.4 million to $1.3 million (2017 $0.3 million to $1.1 million).

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 $0.17 million (2017 $0.12 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 IFC to 53), corporate governance and directors' report (set out on pages 96 to 100), and other information (set out on pages 180 to 187) other than the financial statements and our auditor's report thereon. The directors are responsible for the other information.

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.

In connection with our audit of the financial statements, 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.

In this context, we also have nothing to report in regard to our responsibility to specifically address the following items in the other information and to report as uncorrected material misstatements of the other information where we conclude that those items meet the following conditions:

- Fair, balanced and understandable set out on page 68 – the statement given by the directors that they consider the Annual Report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or
- Audit Committee reporting set out on page 68 – the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee or is materially inconsistent with our knowledge obtained in the audit; or
- Directors' statement of compliance with the UK Corporate Governance Code set out on page 58 – the parts of the directors' statement required under the Listing Rules relating to the Company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

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.

RESPONSIBILITIES OF DIRECTORS

As explained more fully in the directors' responsibilities statement set out on page 101, 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.

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

The objectives of our audit, in respect to fraud, are: to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and to respond appropriately to fraud or suspected fraud identified during the audit. 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 which 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.
- 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. In addition, we completed procedures to conclude on the compliance of the disclosures in the Annual Report and Accounts with the requirements of the relevant accounting standards, UK legislation and the UK Corporate Governance Code 2016.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's (FRC) 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 3 August 2018 to audit the financial statements for the year ending 31 December 2018 and subsequent financial periods.
- 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 and subsequent financial periods. Our total uninterrupted period of engagement is 69 years, covering periods from our appointment through to the period ending 31 December 2018.
- 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.

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
7 March 2019

Notes
1. The maintenance and integrity of the Spirent Communications plc website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.
2. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

CONSOLIDATED INCOME STATEMENT
YEAR TO 31 DECEMBER 2018

	Notes	Year ended 31 December 2018 Adjusted $ million	Year ended 31 December 2018 Adjusting items[1] $ million	Year ended 31 December 2018 Reported $ million	Year ended 31 December 2017 Adjusted $ million	Year ended 31 December 2017 Adjusting items[1] $ million	Year ended 31 December 2017 Reported $ million
Revenue	3	**476.9**	**–**	**476.9**	454.8	–	454.8
Cost of sales		**(132.4)**	**–**	**(132.4)**	(129.8)	–	(129.8)
Gross profit		**344.5**	**–**	**344.5**	325.0	–	325.0
Product development	3	**(96.9)**	**–**	**(96.9)**	(103.0)	–	(103.0)
Selling and marketing		**(123.9)**	**–**	**(123.9)**	(116.8)	–	(116.8)
Administration		**(46.6)**	**–**	**(46.6)**	(46.3)	–	(46.3)
Other items		**–**	**(19.6)**	**(19.6)**	–	(15.2)	(15.2)
Operating profit		**77.1**	**(19.6)**	**57.5**	58.9	(15.2)	43.7
Other items charged in arriving at operating profit:							
Exceptional items	5	**–**	**(13.1)**	**(13.1)**	–	(6.7)	(6.7)
Acquired intangible asset amortisation		**–**	**(3.7)**	**(3.7)**	–	(6.3)	(6.3)
Share-based payment	33	**–**	**(2.8)**	**(2.8)**	–	(2.2)	(2.2)
Other items		**–**	**(19.6)**	**(19.6)**	–	(15.2)	(15.2)
Finance income	6	**1.4**	**–**	**1.4**	0.6	–	0.6
Finance costs	7	**(0.1)**	**–**	**(0.1)**	(0.3)	–	(0.3)
Gain on divestment	35	**–**	**2.4**	**2.4**	–	2.6	2.6
Profit before tax	4	**78.4**	**(17.2)**	**61.2**	59.2	(12.6)	46.6
Tax	10	**(12.1)**	**6.7**	**(5.4)**	(13.1)	(4.5)	(17.6)
Profit for the year attributable to owners of the parent Company		**66.3**	**(10.5)**	**55.8**	46.1	(17.1)	29.0
Earnings per share (cents)	11						
Basic		**10.86**		**9.14**	7.55		4.75
Diluted		**10.75**		**9.05**	7.48		4.71

Note
1. Adjusting items comprise exceptional items, amortisation of acquired intangible assets, share-based payment, gain on divestment, tax on adjusting items and prior year tax. 2017 also includes revaluation of deferred tax assets due to US tax reform.

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 page 182.

The notes on pages 116 to 158 and pages 178 and 179 form part of these financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME YEAR TO 31 DECEMBER 2018

	Notes	2018 $ million	2017 $ million
Profit for the year attributable to owners of the parent Company		**55.8**	29.0
Other comprehensive (loss)/income			
Items reclassified to profit or loss:			
Reclassification of foreign exchange on overseas divestments	35	**-**	(3.1)
Items that may subsequently be reclassified to profit or loss:			
Exchange differences on retranslation of foreign operations		**(3.1)**	4.1
		(3.1)	1.0
Items that will not subsequently be reclassified to profit or loss:			
Re-measurement of the net defined benefit pension asset/liability	9	**2.8**	5.5
Income tax effect of re-measurement of the net defined benefit pension asset/liability	10	**(0.6)**	(1.0)
Re-measurement of the deferred compensation liability	9	**0.5**	(0.9)
Income tax effect of re-measurement of the deferred compensation liability	10	**(0.1)**	0.2
		2.6	3.8
Other comprehensive (loss)/income		**(0.5)**	4.8
Total comprehensive income for the year attributable to owners of the parent Company		**55.3**	33.8

The notes on pages 116 to 158 and pages 178 and 179 form part of these financial statements.

CONSOLIDATED BALANCE SHEET
AT 31 DECEMBER 2018

	Notes	2018 $ million	Restated[1] 2017 $ million	Restated[1] At 1 January 2017 $ million
Assets				
Non-current assets				
Intangible assets	13	**158.0**	163.6	169.8
Property, plant and equipment	14	**36.1**	42.3	47.3
Trade and other receivables	19	**4.5**	4.1	4.6
Assets recognised from costs to obtain a contract	20	**0.5**	0.4	0.4
Investment in associate	15	**–**	–	–
Cash on deposit		**–**	–	0.1
Defined benefit pension plan surplus	9	**2.5**	1.2	0.9
Deferred tax asset	25	**22.0**	23.2	33.1
		223.6	234.8	256.2
Current assets				
Inventories	18	**25.7**	23.6	27.4
Trade and other receivables	19	**139.9**	130.1	128.9
Assets recognised from costs to obtain a contract	20	**0.5**	0.6	0.6
Other financial assets	19	**–**	0.1	–
Current tax asset		**1.4**	1.0	0.4
Cash and cash equivalents	21	**121.6**	128.4	96.1
		289.1	283.8	253.4
Total assets		**512.7**	518.6	509.6
Liabilities				
Current liabilities				
Trade and other payables	22	**(63.1)**	(70.2)	(67.8)
Deferred income	24	**(55.2)**	(61.7)	(59.4)
Other financial liabilities		**–**	–	(0.1)
Current tax liability		**(1.2)**	(1.4)	(1.5)
Provisions	27	**(10.7)**	(3.6)	(4.2)
		(130.2)	(136.9)	(133.0)
Non-current liabilities				
Trade and other payables	26	**(5.4)**	(5.4)	(3.4)
Deferred income	24	**(14.4)**	(11.0)	(11.2)
Deferred tax liability	25	**–**	(0.3)	(0.3)
Defined benefit pension plan deficit	9	**(4.1)**	(7.7)	(16.7)
Provisions	27	**(3.3)**	(3.2)	(2.6)
		(27.2)	(27.6)	(34.2)
Total liabilities		**(157.4)**	(164.5)	(167.2)
Net assets		**355.3**	354.1	342.4
Capital and reserves	31			
Share capital		**26.0**	27.5	25.3
Share premium account		**25.7**	27.3	25.0
Capital redemption reserve		**16.8**	17.8	16.3
Other reserves		**17.5**	13.4	19.4
Translation reserve		**8.2**	11.3	10.3
Retained earnings		**261.1**	256.8	246.1
Total equity attributable to owners of the parent Company		**355.3**	354.1	342.4

Note
1. Restated for the adoption of IFRS 15 on 1 January 2018, as per note 37.

The notes on pages 116 to 158 and pages 178 and 179 form part of these financial statements.

Signed on behalf of the Board

Paula Bell
Director
7 March 2019

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

		Attributable to the equity holders of the parent Company						$ million
	Notes	Share capital	Share premium account	Capital redemption reserve	Other reserves	Translation reserve	Retained earnings	Total equity
At 1 January 2017, as reported		25.3	25.0	16.3	19.4	10.3	245.3	341.6
Impact of change in accounting standards – IFRS 15		–	–	–	–	–	0.8	0.8
At 1 January 2017, restated[1]		25.3	25.0	16.3	19.4	10.3	246.1	342.4
Profit for the year		–	–	–	–	–	29.0	29.0
Other comprehensive income[2]		–	–	–	–	1.0	3.8	4.8
Total comprehensive income		–	–	–	–	1.0	32.8	33.8
Share-based payment	33	–	–	–	–	–	2.2	2.2
Tax credit on share incentives	10	–	–	–	–	–	0.3	0.3
Equity dividends	12	–	–	–	–	–	(24.6)	(24.6)
Exchange adjustment		2.2	2.3	1.5	(6.0)	–	–	–
At 1 January 2018, restated[1]		**27.5**	**27.3**	**17.8**	**13.4**	**11.3**	**256.8**	**354.1**
Profit for the year		**–**	**–**	**–**	**–**	**–**	**55.8**	**55.8**
Other comprehensive (loss)/income[3]		**–**	**–**	**–**	**–**	**(3.1)**	**2.6**	**(0.5)**
Total comprehensive (loss)/income		**–**	**–**	**–**	**–**	**(3.1)**	**58.4**	**55.3**
Share-based payment	33	**–**	**–**	**–**	**–**	**–**	**2.8**	**2.8**
Tax credit on share incentives	10	**–**	**–**	**–**	**–**	**–**	**0.4**	**0.4**
Equity dividends	12	**–**	**–**	**–**	**–**	**–**	**(54.8)**	**(54.8)**
Employee Share Ownership Trust	31	**–**	**–**	**–**	**–**	**–**	**(2.5)**	**(2.5)**
Exchange adjustment		**(1.5)**	**(1.6)**	**(1.0)**	**4.1**	**–**	**–**	**–**
At 31 December 2018		**26.0**	**25.7**	**16.8**	**17.5**	**8.2**	**261.1**	**355.3**

Notes
1. Restated for the adoption of IFRS 15 on 1 January 2018, as per note 37.
2. The amount included in other comprehensive income for 2017 of $3.8 million represents re-measurement gains on the net defined benefit pension liability of $5.5 million, net of a tax charge of $1.0 million, and re-measurement losses on the deferred compensation liability of $0.9 million, net of a tax credit of $0.2 million. The amount included in the translation reserve of $1.0 million represents other comprehensive income related to the translation of foreign operations of $4.1 million net of an other comprehensive loss arising on the reclassification of foreign exchange on overseas divestments of $3.1 million.
3. The amount included in other comprehensive (loss)/income for 2018 of $2.6 million represents re-measurement gains on the net defined benefit pension asset of $2.8 million, net of a tax charge of $0.6 million, and re-measurement gains on the deferred compensation liability of $0.5 million, net of a tax charge of $0.1 million. The amount included in the translation reserve of $3.1 million represents other comprehensive loss related to the translation of foreign operations.

The notes on pages 116 to 158 and pages 178 and 179 form part of these financial statements.

CONSOLIDATED CASH FLOW STATEMENT
YEAR TO 31 DECEMBER 2018

	Notes	2018 $ million	2017 $ million
Cash flows from operating activities			
Cash flow from operations	34	**65.9**	77.7
Tax paid		**(5.7)**	(8.4)
Net cash inflow from operating activities		**60.2**	69.3
Cash flows from investing activities			
Interest received		**1.3**	0.6
Purchase of intangible assets	13	**–**	(0.4)
Purchase of property, plant and equipment		**(12.0)**	(14.9)
Proceeds from the sale of property, plant and equipment		**1.4**	1.8
Net expenses of divestments	35	**(0.2)**	(0.7)
Loan from/(to) divested subsidiaries	35	**2.0**	(2.0)
Net cash used in investing activities		**(7.5)**	(15.6)
Cash flows from financing activities			
Dividend paid	12	**(54.8)**	(24.6)
Share purchase into Employee Share Ownership Trust	31	**(2.5)**	–
Net cash used in financing activities		**(57.3)**	(24.6)
Net (decrease)/increase in cash and cash equivalents		**(4.6)**	29.1
Cash and cash equivalents at the beginning of the year		**128.4**	96.1
Effect of foreign exchange rate changes		**(2.2)**	3.2
Cash and cash equivalents at the end of the year	21	**121.6**	128.4

The notes on pages 116 to 158 and pages 178 and 179 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 2018 were authorised for issue by the Board of directors on 7 March 2019. 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 Northwood Park, Gatwick Road, Crawley, West Sussex, RH10 9XN, United Kingdom.

The Company's Ordinary Shares are traded on the London Stock Exchange.

As required by the European Union's (EU) IAS Regulation and the Companies Act 2006, the Group has prepared its consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and issued by the International Accounting Standards Board (IASB).

The Company has elected to prepare the Company financial statements in accordance with UK Accounting Standards. These are presented on pages 159 to 160 and the accounting policies in respect of the Company are set out on pages 161 to 166.

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

At 31 December 2018 the Group had cash balances of $121.6 million and no debt.

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 2020 and 2021 financial years. They have also considered the principal risks and uncertainties that the Group faces and its current financial position and are satisfied that the Group has adequate financial resources to continue in operational existence for the foreseeable future, a period of not less than 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 2018 that have been applied by the Group which have resulted in a significant impact on its consolidated results or financial position, other than in relation to IFRS 9 'Financial Instruments' and IFRS 15 'Revenue from Contracts with Customers'.

IFRS 9 Financial Instruments

IFRS 9 'Financial Instruments' is effective from 1 January 2018 and replaces the existing standard, IAS 39: 'Financial Instruments: Recognition and Measurement'. The consolidated financial statements for the year ending 31 December 2018 are the first financial statements presented under IFRS 9. There is no material impact to the financial statements on transition to IFRS 9, other than the classification effects described below, which have not impacted the measurement or carrying amount of financial instruments.

	Original measurement category under IAS 39	New measurement category under IFRS 9
Cash and cash equivalents, trade and other receivables (excluding corporate owned life insurance)	Loans and receivables	Financial assets at amortised cost
Trade and other receivables (corporate owned life insurance)	Available-for-sale through profit or loss	Financial assets at FVTPL
Current other financial assets and liabilities (forward foreign currency exchange contracts)	Derivatives designated at FVTPL	Derivatives designated at FVTPL
Trade payables, other payables and accruals	Financial liabilities at amortised cost	Financial liabilities at amortised cost
Contractual provisions	Financial liabilities at amortised cost	Financial liabilities at amortised cost

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

IFRS 15 Revenue from Contracts with Customers

IFRS 15 'Revenue from Contracts with Customers' is effective from 1 January 2018 and replaces all existing revenue requirements in IFRS. The consolidated financial statements for the year ending 31 December 2018 are the first financial statements presented under IFRS 15.

IFRS 15 applies to all revenue arising from contracts with customers unless the contracts are in scope of other standards.

The standard establishes a new five-step model that applies to revenue from contracts with customers. Under IFRS 15, the core principle is that revenue is recognised to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

The standard requires entities to exercise considerable judgement taking into account all the relevant facts and circumstances when applying each step of the model to its contracts with customers. The standard also specifies how to account for the incremental costs of obtaining a contract and the costs directly related to fulfilling a contract.

The Group has applied IFRS 15 fully retrospectively in accordance with paragraph C3 (a) of the standard, restating the prior period comparatives and electing to use the following practical expedients:

- in respect of completed contracts, the Group will not restate contracts that (i) begin and end within the same annual reporting period; or (ii) are completed contracts at the beginning of the earliest period presented (para. C5(a); and
- for all reporting periods presented before the date of initial application, the Group will not disclose the amount of the transaction price allocated to the remaining performance obligations or an explanation of when the Group expects to recognise that amount as revenue (para C5(d)).

Details of the Group's accounting policy in respect of revenue is presented on page 121. An explanation of the impact on the Group's prior period financial statements and related matters consequent upon the adoption of IFRS 15 are set out in note 37.

PRESENTATION

The Group's deferred compensation plan balance has been reclassified from 'trade and other payables – non-current' to 'defined benefit pension plan deficit' to appropriately aggregate pension-related liabilities. The presentation of the comparative amounts in the Group's balance sheet has also been amended to reflect this change. This resulted in a reclassification of $3.7 million in 2017 and $2.3 million in 2016. The related cash flow movement in 2017 was also reclassified using the appropriate corresponding line item within the 'cash flow from operating activities' category in the Group's 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 2018 or 2017.

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 178 and 179.

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 63. 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 5 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).

Associates are those entities in which the Group has significant influence, but not control, over the financial and operating policies. Significant influence is presumed to exist when the Group holds between 20 and 50 per cent of the voting power of another entity.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

Associates are accounted for using the equity method and are initially recognised at cost. The Group's investment includes goodwill identified on acquisition, net of any accumulated impairment losses. The consolidated financial statements include the Group's share of the total comprehensive income from the date that significant influence commences until the date that significant influence ceases. When the Group's share of losses exceeds its interest in an equity accounted investee, the Group's carrying amount is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of an associate.

Dividends received from associates reduce the carrying value of the associate. Investments in associates are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount.

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 costs are expensed and included in administration costs.

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	2020
Current technology	5 to 7 years	2021
Brand names	5 years	2020
Licences	3 to 5 years	2020

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 2018 and 31 December 2017, no amounts have met the recognition criteria.

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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

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 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

A lease is an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.

Operating leases are leases where the lessor retains substantially all the risks and rewards of ownership of the asset and are not finance leases. Operating lease rentals are charged to the income statement on a straight line basis over the period of the lease.

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.

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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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, 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. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of trade receivables over a period of 12 months before 31 December 2017 and the corresponding historical credit losses experienced within this period.

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 usually 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 and hedge accounting

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.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts.

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 liability or asset 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 liability or asset, taking account of any changes in the net defined benefit pension liability 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 recognised investment gains or losses in the period 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 most 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 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, either based on a measure of progress towards complete satisfaction of the performance obligation or at periodic intervals. Progress is measured with reference to the actual cost of services provided as a proportion of the total cost of services expected to be provided under the contract. Where the professional service has a predetermined 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.

Revenue from multi-component and bundled orders that includes both products and services is accounted for as two or more separate performance obligations only where the commercial substance is that the individual components operate independently of each other, because they are capable of being distinct and are separately identifiable from other promises in the context of the contract with the customer.

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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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 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 2018 (31 December 2017 no assets).

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. These liabilities are reported on the consolidated balance sheet within trade and other payables 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. Grants that compensate the Group for the acquisition of an asset are presented by deducting them from the acquisition cost of the related asset in accordance with IAS 20 'Accounting for Government Grants and Disclosure of Government Assistance'.

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.

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 Hull-White trinomial 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 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.

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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;
- in respect of taxable temporary differences associated with investments in subsidiaries, associates and joint ventures, 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, amortisation of acquired intangible assets, share-based payment, gain on divestment, the tax effect of these items, prior year tax and revaluation of deferred tax assets due to US tax reform (in 2017).

Certain items are classified as exceptional items due to their nature, amount or infrequency. Such presentation is relevant to an understanding of the Group's financial statements. These items are not part of the Group's normal ongoing operations.

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

Business combinations and 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.

Changing the assumptions selected by management, in particular the discount rate and growth rate assumptions used in the cash flow projections, could significantly affect the Group's impairment evaluation and hence reported assets and profits and losses. Further details, including sensitivity analysis, is included in note 13.

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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

At 31 December 2018, the Group has 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. The data used in the calculation is high-level and appropriate for an approximate calculation. Detailed data which will be required for member-by-member recalculation of benefits is not generally available, and we believe would not significantly reduce the overall uncertainty in the calculation. We have therefore not used more detailed data on the grounds that it would be disproportionate for the purposes of this 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.

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 25.

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 and contingent liabilities are disclosed in notes 27 and 16, respectively.

Judgements

Revenue recognition

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. For revenue recognition purposes contractual arrangements are accounted for as two or more separate performance obligations only where the commercial substance is that the individual components operate independently of each other, because they are capable of being distinct and are separately identifiable from other promises in the context of the contract with the customer. Management exercises a degree of judgement in setting the criteria used for determining when revenue which involves several elements should be recognised and the stand-alone selling prices of each element. The Group generally determines the stand-alone selling prices of individual elements based on prices which are not observable and are therefore based on stand-alone internal list prices which are then subject to discount.

For professional services revenue recognised over time, the selection of the method to measure progress towards completion requires judgement and is based on the nature of the services to be provided.

Contracts are sometimes modified to account for changes in customer requirements. Contract modifications are considered to exist when the modification either creates new, or changes the existing, enforceable rights and obligations. Most of the Group's contract modifications are for products and services that are distinct from existing performance obligations and are made prior to the transfer of the products or services to the customer. Accordingly, these are included in the products and services to be transferred and are included in the accounting of the contract on a prospective basis or as a separate performance obligation as appropriate.

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 generally determines any difference arising is not significant and therefore a financing component does not exist. This evaluation requires judgement.

2. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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
IAS 1	Definition of Material (Amendments to IAS 1)	1 January 2020
IAS 19	Plan Amendment, Curtailment or Settlement (Amendments to IAS 19)	1 January 2019
IFRS 3	Definition of a Business (Amendments to IFRS 3)	1 January 2020
IFRS 16	Leases	1 January 2019
IFRIC 23	Uncertainty over Income Tax Treatments	1 January 2019
Annual Improvements		
2015-2017 Cycle		1 January 2019

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 other than in relation to IFRS 16 which is discussed below.

IFRS 16 Leases

IFRS 16 'Leases' was issued in January 2016 to replace IAS 17 'Leases' and is effective for accounting periods beginning on or after 1 January 2019. IFRS 16 has been adopted by the European Union. The Group will first adopt IFRS 16 in the financial year ending 31 December 2019.

The Group has completed its impact assessment and determined that the application of the new standard will have a material impact on both gross assets and gross liabilities, adding circa $29 million of right-of-use assets and circa $32 million of lease liabilities. There will be a decrease in retained earnings of circa $3 million. There will also be an impact to the income statement, resulting in an increase to adjusted operating profit through the operating lease expense being removed and replaced with a smaller depreciation charge. This impact is deemed to be immaterial. There will be an interest expense under the new accounting, that would not have occurred under IAS 17, which will substantially offset the increase in adjusted operating profit and result in an immaterial difference to profit before tax. There will not be an impact to total cash flows, however there will be an increase in cash flows from operating activities of circa $7 million, and a corresponding decrease in cash flows from financing activities.

The impact on the parent Company financial statements is deemed immaterial as the majority of leases are situated outside of the UK.

The most significant judgement area in the application of the standard is the determination of a suitable discount rate. 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.

At the point of transition the Group has elected to apply the standard using the modified retrospective approach, in accordance with paragraph C7 of the standard, meaning comparatives do not get restated. Under this option, the Group has decided to calculate the asset value as if the standard had always been applied (para. C8 (b)(i)). The Group has also elected to use the following practical expedients:

- use of its onerous lease assessment calculated in accordance with IAS 37 'Provisions, Contingent Liabilities and Contingent Assets' as an alternative to performing an impairment review of right-of-use assets on initial application (para. C10 (b));
- leases with less than 12 months remaining at date of initial application can be accounted for as short-term leases and continue to be expensed as incurred (para. C10 (c));
- initial direct costs can be excluded from the measurement of the right-of-use assets at the date of initial application (para. C10 (d)); and
- hindsight can be used in determining the lease term if the contract contains options to extend or terminate the lease (para. C10 (e)).

The Group will also make use of the exemptions in respect of short-term leases and leases for which the underlying asset is of low value in accordance with paragraph 6 of IFRS 16.

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, acquired intangible asset amortisation and share-based payment. Finance income, finance costs and gain on divestment 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.

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.

						2018 $ million
	Notes	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	Total
Revenue						
Nature of products and services						
Sale of hardware and software		239.8	66.9	40.0	–	346.7
Maintenance and support services		45.3	45.9	39.0	–	130.2
		285.1	112.8	79.0	–	476.9
Primary geographical markets						
Americas		133.7	93.4	38.3	–	265.4
Asia Pacific		112.6	9.8	36.7	–	159.1
Europe, Middle East and Africa		38.8	9.6	4.0	–	52.4
		285.1	112.8	79.0	–	476.9
Inter-segment revenue is eliminated.						
Profit before tax						
Total reportable segment profit before exceptional items		56.4	17.4	10.5	(7.2)	77.1
Exceptional items	5	–	–	–	(13.1)	(13.1)
Total reportable segment profit		56.4	17.4	10.5	(20.3)	64.0
Unallocated amounts						
Acquired intangible asset amortisation						(3.7)
Share-based payment	33					(2.8)
Operating profit						57.5
Finance income						1.4
Finance costs						(0.1)
Gain on divestment	35					2.4
Profit before tax						61.2
Other information						
Product development		53.0	29.6	14.3	–	96.9
Intangible asset amortisation – other		–	–	0.6	–	0.6
Depreciation	14	9.7	3.1	3.6	0.1	16.5

3. OPERATING SEGMENTS CONTINUED

	Notes	Networks & Security	Lifecycle Service Assurance	Connected Devices	Corporate	2017 $ million Total
Revenue						
Nature of products and services						
Sale of hardware and software		214.2	68.6	37.7	–	320.5
Maintenance and support services		46.8	40.6	45.7	–	133.1
Royalty income		–	–	1.2	–	1.2
		261.0	109.2	84.6	–	454.8
Primary geographical markets						
Americas		116.9	90.0	41.7	–	248.6
Asia Pacific		111.4	12.2	36.6	–	160.2
Europe, Middle East and Africa		32.7	7.0	6.3	–	46.0
		261.0	109.2	84.6	–	454.8

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		43.9	17.9	5.2	(8.1)	58.9
Exceptional items	5	(3.9)	(0.1)	(1.4)	(1.3)	(6.7)
Total reportable segment profit		40.0	17.8	3.8	(9.4)	52.2
Unallocated amounts						
Acquired intangible asset amortisation						(6.3)
Share-based payment	33					(2.2)
Operating profit						43.7
Finance income						0.6
Finance costs						(0.3)
Gain on divestment	35					2.6
Profit before tax						46.6
Other information						
Product development		53.6	30.9	18.5	–	103.0
Intangible asset amortisation – other		–	–	0.8	–	0.8
Depreciation	14	9.6	3.5	4.8	0.1	18.0

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 $6.8 million (2017 $8.1 million).

Americas includes United States revenue of $254.1 million (2017 $237.8 million).

Asia Pacific includes China revenue of $92.2 million (2017 $88.3 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 2018 or 2017.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

3. OPERATING SEGMENTS CONTINUED

	2018 $ million	2017 $ million
Non-current assets[1]		
Americas	**184.6**	195.4
Asia Pacific	**4.4**	4.9
Europe, Middle East and Africa	**5.1**	5.6
	194.1	205.9

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 $2.0 million (2017 $2.9 million).

Americas includes United States non-current assets of $171.1 million (2017 $182.5 million).

4. PROFIT BEFORE TAX

The following items have been charged in arriving at profit before tax:

	Notes	2018 $ million	2017 $ million
Employee benefit costs	8	**208.9**	207.4
Costs of inventories recognised as an expense		**79.8**	78.4
Write-down of inventories to net realisable value	18	**0.1**	2.3
Amortisation of intangible assets	13	**4.3**	7.1
Depreciation of property, plant and equipment – owned assets	14	**16.5**	18.0
Amortisation of assets recognised from costs to obtain a contract	20	**0.6**	0.6
Operating leases – minimum lease payments		**8.5**	9.1
Product development costs		**96.9**	103.0
Net foreign exchange loss		**0.6**	1.6

Services provided to all of the operations of the Group by the auditor, Ernst & Young LLP, and its associates:

	2018 $ million	2017 $ million
Audit services		
Group audit fee	**0.9**	0.9

A description of the work of the Audit Committee is set out in the Audit Committee report on pages 68 to 73 and includes an explanation of how auditor objectivity and independence is safeguarded when non-audit services are provided by the auditor.

5. EXCEPTIONAL ITEMS

	Note	2018 $ million	2017 $ million
French Customs duty		**9.1**	–
UK pension fund GMP equalisation past service cost	9	**4.0**	–
Portfolio review and sales organisation restructuring		**–**	5.4
Strategic review of Connected Devices		**–**	1.3
		13.1	6.7

5. EXCEPTIONAL ITEMS CONTINUED
In 2018, the Group has recognised a $9.1 million charge in relation to an ongoing 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. The amount is comprised of a provision for $8.9 million (note 27) and $0.2 million other costs.

In addition, following the Lloyds Bank GMP inequalities court judgement published in October 2018, the Group has equalised GMP benefits amounting to $4.0 million (£3.1 million) of defined benefit pension past service costs.

In 2017, Spirent concluded a portfolio and sales organisation review and also incurred a contract amendment fee in relation to outsourced research and development services. In addition, in 2017 the Group undertook a strategic review of the Connected Devices operating segment incurring advisers' fees of $1.3 million.

The tax effect of exceptional items is a credit of $3.8 million (2017 $1.9 million). The total cash outflow in respect of exceptional items charged in 2018 is anticipated to be $9.1 million, with $0.2 million paid in the year (2017 $6.8 million with $3.4 million paid in that year). The cash outflow in 2018 in respect of exceptional items charged in 2017 was $3.4 million (2017 $2.5 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

	2018 $ million	2017 $ million
Bank interest receivable	1.4	0.6

7. FINANCE COSTS

	Notes	2018 $ million	2017 $ million
Net defined benefit pension plan interest	9	-	0.2
Unwind of discount on provisions	27	0.1	0.1
		0.1	0.3

8. EMPLOYEES
The average number of people employed by the Group during the year was:

	2018 Number	2017 Number
Manufacturing	329	330
Product development	478	531
Selling and marketing	456	447
Administration	194	197
	1,457	1,505

Employee benefit costs were:

	Note	2018 $ million	2017 $ million
Remuneration		183.3	184.4
Social security costs		15.6	14.3
Pension and other related costs		7.2	6.5
Expense of share-based payment	33	2.8	2.2
		208.9	207.4

Please refer to the Report on Directors' Remuneration on pages 74 to 95 and note 36 for disclosures relating to the emoluments, share incentives and pensions of the directors.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

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 2019 are $6.4 million. This includes the contributions agreed with the funded plans' trustees in accordance with UK legislation. The triennial valuation as at 1 April 2015 was in deficit, whereas the IAS 19 accounting valuation is in surplus, therefore the Group has agreed to pay $6.4 million (£5.0 million) per annum into the Staff Plan from 1 July 2016, over a seven-year period, in order to clear the funding deficit as assessed by the trustees' independent actuary.

If the contributions currently agreed are insufficient to pay the benefits due, the Group will need to make further contributions.

GMP equalisation

On 26 October 2018, the High Court ruled on the Lloyds Bank GMP Inequalities case. In response to this, an allowance of $4.0 million (£3.1 million) has been included on the balance sheet at 31 December 2018 to make provision for the estimated costs arising from the judgement. This past service cost has been charged to exceptional items in the income statement in the year and relates to the Staff Plan. There is no impact on the Cash Plan.

The Staff Plan was contracted-out between 17 May 1990 and 5 April 1997, and therefore has accrued GMP benefits for all members who were active during that period. From the data available as at 31 March 2018, which was provided for the formal valuation of the Staff Plan as at that date, we have estimated the amount of the GMP liability in the Plan applicable for each member for this period of service.

In estimating the impact of equalising these benefits, we have considered the possible range of results that could arise from the various different possible methods given the circumstances of the Plan. In particular, we note that:

- no decision has been made on the methodology to be adopted to equalise GMPs, but we would expect the cost to be broadly in line with "method D2" (or "method C2", which is similar) considered by the Lloyds Bank judgement;
- legal opinion is not yet available on how historical claims will be dealt with; at this stage we have included allowance for full back-payments on pensions in payment, but no allowance for payments in respect of past transfers and deaths; and
- financial assumptions, demographic assumptions, and benefits are consistent with those disclosed below.

Based on these considerations, we have included an allowance of 15 per cent of the estimated GMP liability affected by the equalisation process.

9. PENSIONS CONTINUED

We have therefore adopted the process below to calculate the allowance:

1. Calculate proportion of Plan's obligations relating to Post-1988 GMP

The proportion of the Plan's liabilities on an accounting basis that relate to Post-1988 GMP is estimated as 14 per cent, based on the valuation data as at 31 March 2018. Overall, this implies that approximately 14 per cent of the Plan's total IAS 19 obligations relate to Post-1988 GMPs.

2. Estimate the proportion of GMPs relating to benefits that need to be equalised (post-1990 GMPs)

The requirement to equalise relates only to benefits accrued after 17 May 1990. We estimate the obligation for GMPs accrued after this date on a pro rata basis as seven-ninths of the Post-1988 GMP obligation.

3. We have estimated the cost of removing GMP inequalities in the Plan is 15 per cent of post-1990 GMP obligation, giving a figure of $4.0 million (£3.1 million)

This estimate of 15 per cent is informed by the actuary's experience of working with schemes that have already undertaken a process to remove GMP inequalities. We have not considered the specific circumstances of the scheme in detail, on the grounds that this would be disproportionate.

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, that 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.

ii) Amounts in the financial statements

The assets and liabilities on the balance sheet are as follows:

	2018 $ million	2017 $ million
Schemes in net asset position		
UK defined benefit pension plan – Staff Plan	**1.4**	–
UK defined benefit pension plan – Cash Plan	**1.1**	1.2
	2.5	1.2
Schemes in net liability position		
UK defined benefit pension plan – Staff Plan	**–**	(3.4)
UK unfunded plan	**(0.6)**	(0.6)
US deferred compensation plan	**(3.5)**	(3.7)
	(4.1)	(7.7)
Net pension plan deficit on the balance sheet	**(1.6)**	(6.5)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

9. PENSIONS CONTINUED

a) The assets and liabilities in each plan

	2018 $ million	2017 $ million
Staff Plan		
Quoted		
Equities	53.4	65.7
Government bonds	5.2	5.8
Corporate bonds	4.1	5.3
Unquoted		
LDI funds	40.4	50.0
Cash benchmarked bonds	95.5	102.0
Hedge funds	23.8	26.7
Insured annuities	2.7	3.4
Property	1.4	1.5
Cash and other	17.9	10.9
Fair value of plan assets	244.4	271.3
Present value of defined benefit pension plan obligations	(243.0)	(274.7)
Surplus/(deficit) in the plan	1.4	(3.4)
Cash Plan		
Quoted		
Equities	4.2	4.6
Government bonds	3.4	4.3
Unquoted		
Insured annuities	0.1	0.1
Cash and other	2.1	2.3
Fair value of plan assets	9.8	11.3
Present value of defined benefit pension plan obligations	(8.7)	(10.1)
Surplus in the plan	1.1	1.2
Total net surplus/(deficit) recognised	2.5	(2.2)
Unfunded plan		
Present value of unfunded obligations	(0.6)	(0.6)
Deferred compensation plan		
Present value of deferred compensation obligations	(3.5)	(3.7)
Net pension plan deficit on the balance sheet	(1.6)	(6.5)

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 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.

9. PENSIONS CONTINUED

b) Analysis of the amounts charged to the income statement

	2018 $ million	2017 $ million
Plan administration expenses	0.5	0.4
Current service cost	0.1	0.1
Amount charged to operating costs	0.6	0.5
Past service cost charged to exceptional items (GMP equalisation)	4.0	–
Net interest on the net defined benefit pension liability	–	0.2
Net charge to the income statement	4.6	0.7

c) Analysis of amount recognised directly in the statement of comprehensive income

	2018 $ million	2017 $ million
Re-measurement (loss)/gain on plans' assets	(14.2)	10.5
Actuarial gain/(loss) arising from experience	3.1	(0.8)
Actuarial gain arising from the demographic assumptions	1.9	5.5
Actuarial gain/(loss) arising from changes in financial assumptions	12.0	(9.7)
Re-measurement of the net defined benefit pension liability	2.8	5.5

d) Movements in the present value of funded defined benefit obligations

	2018 $ million	2017 $ million
At 1 January	284.8	260.9
Current service cost	0.1	0.1
Past service cost	4.0	–
Interest cost	7.0	7.3
Benefit payments	(12.1)	(11.7)
Actuarial (gain)/loss arising from experience	(3.1)	0.8
Actuarial gain arising from the demographic assumptions	(1.9)	(5.5)
Actuarial (gain)/loss arising from changes in financial assumptions	(12.0)	9.7
Exchange adjustment	(15.1)	23.2
Present value of funded defined benefit pension plans' obligations	251.7	284.8

e) Movements in the fair value of plans' assets

	2018 $ million	2017 $ million
At 1 January	282.6	248.1
Interest income on plans' assets	7.0	7.1
Employer contributions	6.8	6.6
Benefit payments	(12.1)	(11.7)
Plan administration expenses	(0.5)	(0.4)
Re-measurement (loss)/gain on plans' assets	(14.2)	10.5
Exchange adjustment	(15.4)	22.4
Fair value of plans' assets	254.2	282.6

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

9. PENSIONS CONTINUED

f) The key financial assumptions

The assumptions used for both plans using a weighted average were as follows:

	2018 %	2017 %
Inflation – RPI	**3.2**	3.1
Inflation – CPI	**2.1**	2.0
Rate of increase in pensionable salaries	**2.1**	2.0
Rate of increase for pensions in payment pre 2001 service	**3.7**	3.6
Rate of increase for pensions in payment 2001 to 5 April 2005 service	**3.1**	3.0
Rate of increase for pensions post 5 April 2005 service	**2.1**	2.1
Rate of increase in deferred pensions	**2.1**	2.0
Rate used to discount plan liabilities	**2.8**	2.5

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 (2017 aged 65) will live on average for a further 22.5 years (2017 22.7 years) if they are male and for a further 24.5 years (2017 24.6 years) if they are female. For a member who retires in 2038 (2017 in 2037) at age 65 (2017 age 65), the assumptions are that they will live on average for a further 23.9 years (2017 24.1 years) after retirement if they are male and for a further 26.0 years (2017 26.1 years) after retirement if they are female.

iii) Amount, timing and uncertainty of future cash flows

The approximate impact to the past service liabilities of changing these main assumptions is as follows:

- Reducing the discount rate by 0.1 per cent per annum would increase past service liabilities by $3.4 million (2017 $4.2 million).
- Increasing RPI inflation by 0.1 per cent would increase the plans' liabilities by $1.3 million (2017 $1.5 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 $11.5 million (2017 $13.9 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:

	2018	2017
Weighted average duration of the defined benefit obligation (years)	**15**	15
Maturity analysis of benefit payments (non-discounted amounts) $ million		
Maturity ≤ 1 year	**10.4**	10.4
Maturity > 1 ≤ 5 years	**43.2**	43.5
Maturity > 5 ≤ 10 years	**119.0**	124.9
Maturity > 10 ≤ 20 years	**103.0**	113.3
Maturity > 20 ≤ 30 years	**68.0**	78.8
Maturity > 30 years	**42.9**	52.4

DEFERRED COMPENSATION PLAN

At 31 December 2018, the deferred compensation plan deficit amounted to $3.5 million (2017 $3.7 million).

During the year, $0.2 million was charged to the income statement (2017 $0.3 million) and a re-measurement gain of $0.5 million (2017 $0.9 million loss) was recognised directly in the statement of other comprehensive income. The key financial assumptions include a discount rate used to discount plan liabilities of 4.2 per cent (2017 3.4 per cent) and an expected investment yield of 6.4 per cent (2017 7.5 per cent). There is no material impact in 2018 or 2017 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 2018 were $0.9 million (2017 $0.8 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 $3.9 million for 2018 (2017 $4.0 million). There were no defined benefit plans in the United States in 2018 or 2017.

9. PENSIONS CONTINUED

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 2018 in respect of these plans amounted to $1.2 million (2017 $1.1 million).

Total employer contributions to defined contribution plans were $6.0 million (2017 $5.9 million).

Directors' pension arrangements

The pension arrangements of the executive directors are described in detail in the Report on Directors' Remuneration on pages 74 to 95.

10. TAX

	2018 $ million	2017 $ million
Tax charge in the income statement		
Current income tax		
UK tax	0.1	0.1
Foreign tax	6.2	7.4
Amounts (overprovided)/underprovided in previous years	(1.2)	0.1
Total current income tax charge	5.1	7.6
Deferred tax		
Recognition of deferred tax assets – US Research and Experimental tax credit	–	(1.5)
Recognition of deferred tax assets – other	(0.8)	(0.8)
Write-off of previously recognised tax assets including rate changes	–	8.0
Reversal of temporary differences	1.4	3.0
Adjustments in respect of prior years	(0.3)	1.3
Total deferred tax charge	0.3	10.0
Tax charge in the income statement	**5.4**	**17.6**

The tax charge for the year ended 31 December 2018 was $5.4 million (2017 $17.6 million). This was after a prior year tax credit of $1.5 million and a tax credit on the adjusting items of $5.2 million (2017 prior year charge of $1.4 million and tax charge on adjusting items of $3.1 million). Excluding the prior year and tax charge on adjusting items, the effective tax rate was 15.4 per cent (2017 22.1 per cent).

Tax relating to items charged/(credited) to other comprehensive income or equity:

	2018 $ million	2017 $ million
Deferred tax on share incentives	(0.3)	(0.3)
Current tax on share incentives	(0.1)	–
Tax credit on share incentives	(0.4)	(0.3)
Deferred tax charge on defined benefit pension plan	0.6	1.0
Deferred tax charge/(credit) on deferred compensation plan	0.1	(0.2)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

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 19.00 per cent (2017 19.25 per cent). The differences are reconciled below:

	Year ended 31 December 2018		
	Adjusted $ million	Adjusting $ million	Reported $ million
Accounting profit before tax	78.4	(17.2)	61.2
Accounting profit multiplied by the UK standard rate of corporation tax of 19.00 per cent	14.9	(3.3)	11.6
Differences in overseas rates	3.3	(1.5)	1.8
Non-taxable income	(0.8)	(0.4)	(1.2)
Recognition of temporary differences previously not recgonised for deferred tax	(0.8)	–	(0.8)
Current year losses upon which no deferred tax recognised	0.4	–	0.4
Utilisation of temporary differences not previously recognised	(1.3)	–	(1.3)
UK & US Research and Experimental tax credit	(2.0)	–	(2.0)
Withholding tax	0.8	–	0.8
Permanent differences	(2.4)	–	(2.4)
Tax overprovided in prior years	–	(1.5)	(1.5)
Total tax charge reported in the income statement	12.1	(6.7)	5.4

	Year ended 31 December 2017		
	Adjusted $ million	Adjusting $ million	Reported $ million
Accounting profit before tax	59.2	(12.6)	46.6
Accounting profit multiplied by the UK standard rate of corporation tax 19.25 per cent	11.4	(2.4)	9.0
Differences in overseas rates	5.5	(1.6)	3.9
US tax rate change	–	7.9	7.9
Non-taxable income	(1.0)	(0.3)	(1.3)
Recognition of deferred tax assets	(0.3)	(0.5)	(0.8)
Write-off of previously recognised tax assets including rate changes	0.2	–	0.2
Current year losses upon which no deferred tax recognised	(0.6)	–	(0.6)
UK & US Research and Experimental tax credit	(2.5)	–	(2.5)
Withholding tax	0.8	–	0.8
Permanent differences	(0.4)	–	(0.4)
Tax underprovided in prior years	–	1.4	1.4
Total tax charge reported in the income statement	13.1	4.5	17.6

Included in the above reconciliation are the following items: Research and Experimental tax credits of $2.0 million; non-taxable income of $1.2 million, most of which relates to offshore income in the rest of the world; permanent differences of $2.4 million largely relating to the UK patent box deduction; and a recognition of deferred tax assets in Canada of $0.8 million.

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 33.3 per cent to a low of 15 per cent. The UK Patent Box deduction benefit of $1.6 million (2017 $0.7 million) and Research and Experimental credits of $2.0 million (2017 $2.5 million) bring down the rate but items such as state taxes and withholding tax increase our 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.

	2018 $ million	2017 $ million
Profit for the year attributable to owners of the parent Company	**55.8**	29.0
	Number million	Number million
Weighted average number of Ordinary Shares in issue – basic	**610.4**	610.6
Dilutive potential of employee share incentives	**6.5**	5.5
Weighted average number of Ordinary Shares in issue – diluted	**616.9**	616.1
	Cents	Cents
Earnings per share		
Basic	**9.14**	4.75
Diluted	**9.05**	4.71

ADJUSTED

The Group is disclosing adjusted earnings per share for continuing operations 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
- Acquired intangible asset amortisation
- Share-based payment
- Gain on divestment
- Tax effect on the above items
- Prior year tax (adjustments made to provisions in respect of prior years)
- Revaluation of deferred tax assets due to US tax reform (in 2017)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

11. EARNINGS PER SHARE CONTINUED

A reconciliation is provided below:

		2018		2017	
	Notes	$ million	EPS (cents)	$ million	EPS (cents)
Profit for the year attributable to owners of the parent Company		**55.8**	**9.14**	29.0	4.75
Exceptional items	5	**13.1**		6.7	
Acquired intangible asset amortisation		**3.7**		6.3	
Share-based payment	33	**2.8**		2.2	
Gain on divestment	35	**(2.4)**		(2.6)	
Tax effect on the above items	10	**(5.2)**		(4.8)	
Revaluation of deferred tax assets due to US tax reform	10	**–**		7.9	
Prior year tax (credit)/charge	10	**(1.5)**		1.4	
Adjusted basic		**66.3**	**10.86**	46.1	7.55
Adjusted diluted			**10.75**		7.48

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

	2018 $ million	2017 $ million
Declared and paid in the year		
Equity dividend on Ordinary Shares		
Final dividend 2017 of 2.40 cents (1.73 pence) per Ordinary Share (2016 2.21 cents (1.59 pence))	**14.3**	14.2
Special dividend 2017 of 5.00 cents (3.60 pence) per Ordinary Share	**29.9**	–
Interim dividend 2018 of 1.76 cents (1.34 pence) per Ordinary Share (2017 1.68 cents (1.27 pence))	**10.6**	10.4
	54.8	24.6
Proposed for approval at AGM (not recognised as a liability at 31 December)		
Equity dividend on Ordinary Shares		
Final dividend 2018 of 2.73 cents (2.08 pence) per Ordinary Share (2017 2.40 cents (1.73 pence))	**16.7**	14.3
Special dividend 2017 of 5.00 cents (3.60 pence) per Ordinary Share	**–**	29.9
	16.7	44.2

The directors are proposing a final dividend in respect of the financial year ended 31 December 2018 of 2.73 cents per Ordinary Share (2.08 pence) (2017 2.40 cents (1.73 pence)), which will absorb an estimated $16.7 million of shareholders' funds (2017 $14.3 million). The final dividend will be paid on 3 May 2019 to Ordinary shareholders who are on the Register of Members at close of business on 15 March 2019. Payment will be made to ADR holders on 10 May 2019. No liability is recorded in the financial statements in respect of these dividends.

Dividends are determined in US dollars and paid in pounds sterling. The exchange rate for determining the amount of the final dividend to be paid for 2018 was $1.31: £1 (2017 $1.39: £1).

13. INTANGIBLE ASSETS

	Goodwill	Customer list	Current technology	Brand names	Other	Licences	Total
							$ million
Cost, net of accumulated amortisation and impairment losses							
At 1 January 2017	155.7	4.0	7.4	0.5	–	2.2	169.8
Additions	–	–	–	–	–	0.4	0.4
Adjustments	–	(0.1)	(0.3)	–	–	–	(0.4)
Amortisation for the year	–	(1.8)	(4.2)	(0.3)	–	(0.8)	(7.1)
Exchange adjustment	1.1	–	–	–	–	(0.2)	0.9
At 1 January 2018	**156.8**	**2.1**	**2.9**	**0.2**	**–**	**1.6**	**163.6**
Additions	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Disposals	**–**	**–**	**–**	**–**	**–**	**(0.2)**	**(0.2)**
Amortisation for the year	**–**	**(1.5)**	**(2.0)**	**(0.2)**	**–**	**(0.6)**	**(4.3)**
Exchange adjustment	**(1.1)**	**–**	**–**	**–**	**–**	**–**	**(1.1)**
At 31 December 2018	**155.7**	**0.6**	**0.9**	**–**	**–**	**0.8**	**158.0**
At 31 December 2017							
Cost (gross carrying amount)	595.4	16.9	36.2	2.3	3.6	12.1	666.5
Amortisation and accumulated impairment losses	(438.6)	(14.8)	(33.3)	(2.1)	(3.6)	(10.5)	(502.9)
Net carrying amount	156.8	2.1	2.9	0.2	–	1.6	163.6
At 31 December 2018							
Cost (gross carrying amount)	**593.4**	**16.9**	**36.2**	**2.3**	**3.6**	**11.9**	**664.3**
Amortisation and accumulated impairment losses	**(437.7)**	**(16.3)**	**(35.3)**	**(2.3)**	**(3.6)**	**(11.1)**	**(506.3)**
Net carrying amount	**155.7**	**0.6**	**0.9**	**–**	**–**	**0.8**	**158.0**

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.

Goodwill has been allocated to three CGUs, which align with the reportable operating segments, as follows:

	2018 $ million	2017 $ million
Networks & Security	**72.0**	73.1
Lifecycle Service Assurance	**37.6**	37.6
Connected Devices	**46.1**	46.1
	155.7	156.8

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

13. INTANGIBLE ASSETS CONTINUED

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 (2017 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.

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:

	2018 %	2017 %
Networks & Security	**15.1**	15.6
Lifecycle Service Assurance	**14.3**	16.7
Connected Devices	**14.8**	14.9

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 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 and growth in network virtualisation, is expected to drive earnings. Further growth in Networks & Security is expected in the Positioning business, with focus on core markets in APAC and on the emerging autonomous vehicle market. Management expects that the security business will benefit in the longer term from the launch of data breach emulation, and also the move to a subscription model and further expansion of SecurityLabs into EMEA and APAC. Application Security is expected to benefit from synergies with Positioning and continued expansion in complementary solutions with Cloud and IP.

The continuing drive in lab sales and enhancements to the feature set at the Mobility Infrastructure business unit is expected to grow revenue in Lifecycle Service Assurance on a relatively flat cost base in the near term. Management expects revenue increases at the Customer Experience Management business unit driven by the VisionWorks sales strategy and a relatively flat gross margin over the three-year forecast period. The Lumos legacy business in Lifecycle Service Assurance is expected to drop in the near term to be replaced by growth in new Ethernet products supported by investment in product development, particularly in virtualisation. 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 as the smartphone market recovers, driven by network emulator partnerships with growth in 5G. Management expects gross margin improvement as a result of product mix shifting to more software solutions and cost reduction initiatives, including a new channel emulator platform and a new network emulator platform. Operating expenses are expected to remain relatively flat as business unit integration synergies are leveraged following recent organisational change and research and development flexibility is gained from outsourcing programmes and shifting investment to new growth areas.

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.

13. INTANGIBLE ASSETS CONTINUED

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 and Lifecycle Service Assurance CGUs to fall below the carrying value.

The headroom on the Connected Devices CGU was $38.9 million. Sensitivity analysis around the key assumptions has indicated that for the Connected Devices CGU, a 30 per cent decrease in forecast revenue in year one and continuing to apply the forecast growth rates to subsequent years, in isolation and without cost mitigation, would cause the value in use to fall below the carrying value. There is no reasonable possible change in the discount rate and long-term growth rate, in isolation, that would cause the value in use of the Connected Devices CGU to fall below the carrying value.

OTHER INTANGIBLE ASSETS

There was no impairment charge in respect of the other intangible assets in either 2018 or 2017.

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 2017	15.3	19.9	12.1	47.3
Additions – owned assets	1.7	10.1	3.1	14.9
Disposals	(0.2)	(1.9)	(0.2)	(2.3)
Inter-class transfers	–	(0.5)	0.5	–
Depreciation charge for the year	(2.6)	(10.7)	(4.7)	(18.0)
Exchange adjustment	0.1	0.2	0.1	0.4
At 1 January 2018	**14.3**	**17.1**	**10.9**	**42.3**
Additions – owned assets	**0.8**	**9.7**	**1.5**	**12.0**
Disposals	**–**	**(1.4)**	**–**	**(1.4)**
Depreciation charge for the year	**(2.9)**	**(9.2)**	**(4.4)**	**(16.5)**
Exchange adjustment	**(0.1)**	**(0.2)**	**–**	**(0.3)**
At 31 December 2018	**12.1**	**16.0**	**8.0**	**36.1**
At 31 December 2017				
Cost	26.4	82.1	57.3	165.8
Accumulated depreciation and accumulated impairment	(12.1)	(65.0)	(46.4)	(123.5)
Net carrying amount	14.3	17.1	10.9	42.3
At 31 December 2018				
Cost	**26.1**	**80.7**	**57.3**	**164.1**
Accumulated depreciation and accumulated impairment	**(14.0)**	**(64.7)**	**(49.3)**	**(128.0)**
Net carrying amount	**12.1**	**16.0**	**8.0**	**36.1**

None of the property, plant and equipment is held under finance lease arrangements.

15. INVESTMENT IN ASSOCIATE

The carrying amount for Jolata is nil in 2018 (2017 nil) and is individually immaterial.

Jolata, Inc. ("Jolata") is a company incorporated in the United States and its principal activity is the provision of network testing.

Jolata is considered an associate as the Group controls 26 per cent (2017 26 per cent) of the voting power and therefore has significant influence over the entity.

The investment in Jolata has been impaired in full and the recoverable amount is therefore nil.

The Group has $1.0 million cumulative unrecognised share of losses in Jolata (2017 $1.0 million).

The Group's share of Jolata's total comprehensive income is immaterial in 2018 and 2017.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

16. CAPITAL COMMITMENTS AND CONTINGENT LIABILITIES

The Group had capital commitments in relation to property, plant and equipment of $0.7 million at 31 December 2018 (31 December 2017 $0.8 million).

17. SUBSIDIARIES

A list of subsidiaries, including the name, country of incorporation and proportion of ownership interest is given on pages 178 and 179 of these financial statements.

18. INVENTORIES

	2018 $ million	2017 $ million
Raw materials	6.6	4.3
Work in progress	1.2	0.8
Finished goods	17.9	18.5
	25.7	23.6

An expense of $0.1 million (2017 $2.3 million) has been recognised in the year for inventory write-downs. There were no reversals of prior period inventory write-downs (2017 nil).

No inventories are carried at fair value less costs to sell (2017 nil).

19. TRADE AND OTHER RECEIVABLES

	2018 $ million	2017 $ million
Non-current		
Other receivables	3.5	4.1
Prepayments	1.0	–
	4.5	4.1
Current		
Trade receivables	123.4	113.8
Other receivables	3.5	4.8
Prepayments	11.2	9.2
Deferred costs	1.8	2.3
	139.9	130.1
	144.4	134.2

The trade receivables are stated net of an allowance for expected credit losses. The movement in the allowance was as follows:

	2018 $ million	2017 $ million
At 1 January	1.2	2.3
Charge for the year	0.5	0.3
Released in the year	(0.8)	(1.4)
At 31 December	0.9	1.2

The directors consider that the carrying amount of trade and other receivables approximates their fair value.

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.

19. TRADE AND OTHER RECEIVABLES CONTINUED

OTHER FINANCIAL ASSETS – CURRENT

	2018 $ million	2017 $ million
Other financial assets	–	0.1

Other financial assets comprises forward foreign currency exchange contracts.

20. ASSETS RECOGNISED FROM COSTS TO OBTAIN A CONTRACT

	2018 $ million	2017 $ million
Non-current		
Assets recognised from costs to obtain a contract	0.5	0.4
Current		
Assets recognised from costs to obtain a contract	0.5	0.6
	1.0	1.0

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 $0.6 million was charged to the income statement (2017 $0.6 million).

No assets were impaired or derecognised during the current year or prior year.

21. CASH AND CASH EQUIVALENTS

	2018 $ million	2017 $ million
Cash at bank and in hand	57.7	83.3
Short-term bank deposits	63.9	45.1
	121.6	128.4

Cash at bank and in hand earns interest at floating interest rates. Of the total cash and cash equivalents balance, $63.9 million (2017 $45.1 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.

At the end of 2018, the currency split of cash and cash equivalents was US dollar 83 per cent (2017 85 per cent), sterling 8 per cent (2017 11 per cent) and other currencies 9 per cent (2017 4 per cent).

For the purposes of the cash flow statement, cash and cash equivalents comprise the above amounts.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

22. TRADE AND OTHER PAYABLES – CURRENT

	2018 $ million	2017[1] $ million
Trade payables	**12.9**	16.3
Payments received on account	**1.4**	3.8
Other taxes and social security costs	**3.7**	3.5
Other payables	**1.0**	0.9
Accruals	**44.1**	45.7
	63.1	70.2

Note
1. Deferred income has been reclassified to its own line item in the balance sheet. See note 37 for further details.

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:

	2018 $ million	2017 $ million
At 1 January	**2.6**	2.4
Received during the year	**0.1**	0.5
Released to the income statement	**(0.4)**	(0.3)
At 31 December	**2.3**	2.6

	2018 $ million	2017 $ million
Current	**1.3**	1.2
Non-current	**1.0**	1.4
	2.3	2.6

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. DEFERRED INCOME

	2018 $ million	2017 $ million
Current		
Deferred income	**55.2**	61.7
Non-current		
Deferred income	**14.4**	11.0
	69.6	72.7

The Group's deferred income balances relate solely to revenue from contracts with customers.

25. DEFERRED TAX

The movements in the deferred tax assets/(liabilities) are as follows:

						$ million
	Notes	Temporary differences	Tax losses	Tax credits	UK pension plans	Total
At 1 January 2017, restated[1]		18.1	8.2	3.9	2.6	32.8
Credited in the year	10	(5.3)	(1.3)	(2.3)	(1.1)	(10.0)
Deferred tax on defined benefit pension plan	10	–	–	–	(1.0)	(1.0)
Deferred tax on deferred compensation plan	10	0.2	–	–	–	0.2
Deferred tax on share incentives recognised in equity	10	0.3	–	–	–	0.3
Exchange adjustment		0.1	0.5	–	–	0.6
At 1 January 2018, restated[1]		**13.4**	**7.4**	**1.6**	**0.5**	**22.9**
Charged/(credited) in the year	10	**2.3**	**(1.5)**	**(0.7)**	**(0.4)**	**(0.3)**
Deferred tax on defined benefit pension plan	10	**–**	**–**	**–**	**(0.6)**	**(0.6)**
Deferred tax on deferred compensation plan	10	**(0.1)**	**–**	**–**	**–**	**(0.1)**
Deferred tax on share incentives recognised in equity	10	**0.3**	**–**	**–**	**–**	**0.3**
Transfers		**–**	**(1.0)**	**1.0**	**–**	**–**
Exchange adjustment		**(0.2)**	**(0.1)**	**–**	**0.1**	**(0.2)**
At 31 December 2018		**15.7**	**4.8**	**1.9**	**(0.4)**	**22.0**
Amounts on the balance sheet:						
At 31 December 2017						
Deferred tax asset		13.7	7.4	1.6	0.5	23.2
Deferred tax liability, restated[1]		(0.3)	–	–	–	(0.3)
		13.4	7.4	1.6	0.5	22.9
At 31 December 2018						
Deferred tax asset		**15.9**	**4.8**	**1.9**	**–**	**22.6**
Deferred tax liability		**(0.2)**	**–**	**–**	**(0.4)**	**(0.6)**
		15.7	**4.8**	**1.9**	**(0.4)**	**22.0**

Note

1. Restated for the adoption of IRFS 15 on 1 January 2018, as per note 37.

In 2018, the deferred tax asset and liability have been offset on the balance sheet as they relate to income taxes raised by the same authority on the same taxable entity.

A deferred tax asset of $22.0 million has been recognised at 31 December 2018 (2017 $23.2 million). $2.0 million is in the United Kingdom (2017 $3.5 million), $14.7 million is in the United States (2017 $18.8 million), $3.6 million is in France (2017 $0.1 million) and $1.7 million is in the rest of the world (2017 $0.8 million).

The deferred tax asset includes $1.6 million (2017 $1.1 million) in respect of the tax deduction which may be available on the future exercise of share incentives.

The Group has tax losses arising in the United Kingdom of $38.3 million (2017 $40.0 million), at the State level in the United States of $5.5 million (2017 $22.4 million), and the rest of the world of $0.0 million (2017 $0.4 million) that are available for offset against suitable future taxable profits. The US tax losses can be carried forward until 2036 . Additionally, there are short-term timing differences in the rest of the world of $4.9 million (2017 $3.5 million), tax credits at the State level in the United States and the rest of the world of $7.2 million and $1.2 million, respectively (2017 $7.1 million and $2.2 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 $1,045.6 million (2017 $1,103.2 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, aggregate $255.8 million (2017 $258.4 million). The Group does not expect a significant amount of the undistributed profits to be distributed in the foreseeable future.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

25. DEFERRED TAX CONTINUED

CHANGES IN TAX RATES

Following the enactment of the United Kingdom Finance Act 2016, which reduced the United Kingdom rate of corporation tax to 19 per cent from 1 April 2017 and by a further 2 per cent to 17 per cent from April 2020, no further United Kingdom corporation tax reductions have been announced. 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 being realised or settled before 2020 have been based on a rate of 19 per cent. Those being realised or settled after 2020 have been based on a rate of 17 per cent.

26. TRADE AND OTHER PAYABLES – NON-CURRENT

	2018 $ million	2017 $ million
Other payables	**5.4**	5.4

27. PROVISIONS

				$ million
	Lease provisions	Restructuring provisions	Other provisions	Total
At 1 January 2017	3.1	2.3	1.4	6.8
Charged in the year	0.8	3.7	0.5	5.0
Asset retirement obligation	0.1	–	–	0.1
Released in the year	(0.1)	–	(0.1)	(0.2)
Utilised in the year	(0.3)	(4.6)	–	(4.9)
Unwind of discount	0.1	–	–	0.1
Disposals	(0.2)	(0.1)	–	(0.3)
Exchange difference	–	0.1	0.1	0.2
At 1 January 2018	**3.5**	**1.4**	**1.9**	**6.8**
Charged in the year	**–**	**0.5**	**9.4**	**9.9**
Asset retirement obligation	**0.5**	**–**	**–**	**0.5**
Released in the year	**–**	**(0.1)**	**(0.9)**	**(1.0)**
Utilised in the year	**(0.5)**	**(1.8)**	**(0.1)**	**(2.4)**
Unwind of discount	**0.1**	**–**	**–**	**0.1**
Exchange difference	**–**	**–**	**0.1**	**0.1**
At 31 December 2018	**3.6**	**–**	**10.4**	**14.0**

	2018 $ million	2017 $ million
Current	**10.7**	3.6
Non-current	**3.3**	3.2
	14.0	6.8

The lease provisions are for the continuing obligations under leases in respect of space which has been vacated by the Group and property dilapidation and restoration provisions. Where material, lease obligations are discounted. The Group expects these provisions to be utilised over one to six 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.

The Group has 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 is an ongoing dispute which commenced with enquiries in 2011. Spirent adopted a duty tariff based on World Customs Organisation guidelines which conflicted with European Union regulation. A contingent liability relating to French Customs was disclosed in the prior year.

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 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 claim received under the Notice of Recovery.

28. CONTRACT BALANCES

The following table provides information about receivables and contract liabilities from contracts with customers. The Group does not have any contract assets.

	Notes	**2018 $ million**	2017 $ million	2016 $ million
Trade receivables	19	**123.4**	113.8	112.2
Contract liabilities				
Payments received on account	22	**1.4**	3.8	2.7
Deferred income	24	**69.6**	72.7	70.6
		71.0	76.5	73.3
Revenue recognised in the period from amounts included in contract liabilities at the beginning of the period		**65.5**	62.1	61.6

There was no revenue recognised in 2018, 2017, or 2016 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 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) we perform 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.

For contracts that exceed one year, deferred income that relates to unsatisfied or partially satisfied performance obligations at year end, are expected to be recognised as revenue in the future as follows:

	2018 $ million	2017 $ million
Within 1 year	**15.5**	17.1
Greater than 1 year	**12.7**	11.5
	28.2	28.6

The above information represents the revenue the Group will recognise when it satisifies 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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

29. FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT

The main purpose of the Group's financial instruments, other than trade receivables, trade payables and provisions, is to fund the Group's liquidity requirements.

All of the Group's financial assets and liabilities are categorised as financial assets/liabilities stated at amortised cost, except for forward foreign currency exchange contracts, included within current other financial assets, that are designated as financial assets at fair value through profit or loss and corporate owned life insurance, amounting to $2.4 million (2017 $2.5 million), included within non-current trade and other receivables, that is designated as financial assets at fair value through profit or loss. These are shown in the below table:

	Notes	2018 $ million	2017 $ million
Non-current trade and other receivables	19	**3.5**	4.1
Cash and cash equivalents	21	**121.6**	128.4
Current trade and other receivables	19	**126.9**	118.6
Current other financial assets	19	**-**	0.1
Financial assets		**252.0**	251.2
Non-current other payables, excluding government grants	26	**4.4**	4.0
Current trade payables, other payables and accruals	22	**58.0**	62.9
Contractual provisions	27	**3.6**	3.5
Financial liabilities		**66.0**	70.4

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.

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 no external debt and has limited exposure to interest rate risk. 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 sterling and US dollar interest rates.

Cash and cash equivalents, long-term cash on deposit 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:

	2018		2017	
	Effective interest rate %	$ million	Effective interest rate %	$ million
Fixed rate				
Fixed deposits	**2.52**	**63.9**	1.46	45.1
Floating rate				
Cash at bank and in hand		**57.7**		83.3

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 (2017 $0.6 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 2018 would increase or reduce interest income and equity by $0.2 million (2017 $0.2 million).

29. FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT CONTINUED

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 Company's functional currency is sterling and its share capital is denominated in pounds 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 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; sterling $3.1 million, Euro $0.3 million and Chinese Yuan $1.4 million (2017 in aggregate $1.9 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 $121.6 million (2017 $128.4 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.

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of trade receivables over a period of 12 months before 31 December 2017 and the corresponding historical credit losses experienced within this period.

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 $123.4 million (2017 $113.8 million). The credit risk relating to trade receivables has not increased significantly from the prior year.

The composition of trade receivables at 31 December is as follows:

	2018 $ million	2017 $ million
Neither impaired nor past due	**99.8**	86.0
Past due but not impaired:		
Less than 30 days overdue	**16.8**	15.1
30 to 60 days	**3.2**	6.7
Over 60 days	**3.6**	6.0
Trade receivables	**123.4**	113.8

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 $0.9 million (2017 $1.2 million). For all other financial assets, the maximum exposure to credit risk is represented by the carrying amount.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

29. FINANCIAL INSTRUMENTS AND FINANCIAL RISK MANAGEMENT CONTINUED

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 2018, the Group had cash and cash equivalents of $121.6 million (2017 $128.4 million), of which $57.7 million (2017 $83.3 million) is available on demand and $63.9 million matures within three months (2017 $45.1 million matures within three months).

During 2018, the Group generated $60.2 million of cash from operating activities (2017 $69.3 million) and considers that, with current cash resources, no debt 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:

	2018 $ million	2017 $ million
Sale of US dollars against sterling	**13.1**	8.0

The Group is 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 2018 and 2017 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.

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 makes adjustments to it in the light of changes in economic conditions.

Spirent's policy on the payment of dividends to shareholders is to maintain a sustainable dividend.

30. OPERATING LEASE COMMITMENTS

At 31 December, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	2018 $ million	2017 $ million
Within one year	**9.6**	9.2
In the second to fifth years	**28.7**	30.2
Over five years	**2.2**	6.9
	40.5	46.3

The Group leases certain land and buildings under non-cancellable operating lease agreements with a variety of terms. The Group also leases certain plant and equipment under non-cancellable operating lease agreements.

31. EQUITY

A) ISSUED SHARE CAPITAL

Issued and fully paid Ordinary Shares of 3⅓ pence each:

	Number of Ordinary Shares million	$ million
At 1 January 2017	611.7	25.3
Exchange adjustment		2.2
At 1 January 2018	**611.7**	**27.5**
Exchange adjustment		**(1.5)**
At 31 December 2018	**611.7**	**26.0**

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 resultant exchange differences are included in other reserves; and
- 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, 1.5 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of $2.5 million, and 1.5 million shares were also transferred from the Employee Share Ownership Trust to satisfy options exercised under the Spirent employee share plans.

At 31 December 2018, the Employee Share Ownership Trust held 0.6 million Ordinary Shares (2017 0.6 million Ordinary Shares) to satisfy awards under various share incentive plans. At 31 December 2018, the Spirent Sharesave Trust held 0.5 million Ordinary Shares (2017 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 1.1 million Ordinary Shares (2017 1.1 million Ordinary Shares), at 31 December 2018 was $1.7 million (2017 $1.5 million).

32. EMPLOYEE SHARE PLANS

Movements in share incentives over a two-year period ending on 31 December 2018 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 2016	6.7	53	3.9	–
Exercised	–	–	–	–
Granted	–	–	2.9	–
Forfeited	(3.2)	50	(0.3)	–
Incentives outstanding at 31 December 2017	**3.5**	**55**	**6.5**	**–**
Exercised	**(1.7)**	**45**	**(0.4)**	**–**
Granted	**–**	**–**	**2.7**	**–**
Forfeited	**(1.0)**	**47**	**(0.5)**	**–**
Incentives outstanding at 31 December 2018	**0.8**	**89**	**8.3**	**–**
Incentives exercisable				
At 31 December 2017	–	–	–	–
At 31 December 2018	**0.8**	**89**	**–**	**–**

Notes
1. Figures for the 2005 Employee Incentive Plan include share options, stock appreciation rights and Performance Shares in aggregate.
2. Figures for the Spirent Long-term Incentive Plan include restricted stock and Performance Shares in aggregate.

The weighted average share price at exercise date was 118 pence (2017 103 pence).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

32. EMPLOYEE SHARE PLANS CONTINUED

The following information relates to outstanding share incentives at 31 December 2018:

					2018			2017
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	28.04.17-17.05.25	-	-	-	-	–	1.3	7.3
	23.03.18-23.03.25	89	89	0.8	6.2	89	2.2	7.2
Spirent Long-Term Incentive Plan	16.06.19-16.12.28	-	-	8.3	8.4	–	6.5	9.9
				9.1			10.0	

DISCRETIONARY PLANS

Spirent Long-Term Incentive Plan (LTIP)

The LTIP, which was approved by shareholders at the 2016 AGM, is available for selected employees, including executive directors, on a discretionary basis.

Under the LTIP, the Company is able to grant share options, including HMRC-approved options, share settled stock appreciation rights (SARs), Performance Shares and Restricted Stock. No price is payable on the grant of an award.

In normal circumstances, LTIP awards vest three years following the date of grant provided the relevant performance conditions have been met. For Performance Share awards, performance conditions related to Total Shareholder Return (TSR) and the Company's earnings per share (EPS). For Restricted Stock, the performance conditions relate to the recipient's continued employment with the Company.

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.

The EIP, which was approved by shareholders and introduced in 2005, was available for selected employees, including executive directors, on a discretionary basis.

Under the EIP, the Company was able to grant share options, including HMRC-approved options, share settled stock appreciation rights (SARs) and Performance Shares. No price was payable on the grant of an award.

In normal circumstances, EIP awards vest three years following the date of grant provided the relevant performance conditions have been met. For share options and SARs, the performance conditions relate to the Company's earnings per share (EPS). For Performance Share awards made prior to 2011, performance conditions related to Total Shareholder Return (TSR). For awards made since 2011, performance conditions relate to the Company's EPS and TSR.

Further information on the performance conditions for EIP share incentives is set out in the Report on directors' remuneration.

Options and SARs granted under the EIP expire on the tenth anniversary of their grant unless they have previously lapsed or been exercised.

ALL EMPLOYEE PLANS

UK Employee Share Purchase Plan (UK ESPP)

The UK ESPP, which is an HMRC-approved share incentive plan, was approved by shareholders in 2005 and 2015 and is available to all UK employees. The UK ESPP offers four ways to provide Ordinary Shares to employees: free shares, partnership shares, matching shares and dividend shares. The UK ESPP operates in conjunction with a trust, which holds the shares on behalf of participants.

In November 2010, the Company commenced making invitations to all UK employees to acquire partnership shares on market using deductions from payroll.

32. EMPLOYEE SHARE PLANS CONTINUED

US Employee Stock Purchase Plan (US ESPP)

The US ESPP was initially approved by shareholders in 2000, with amendments being approved by shareholders in 2005 and 2011.

The US ESPP enables the Company to invite all US employees to acquire Ordinary Shares in the Company on market using deductions from payroll. In November 2010, the Company commenced making six-monthly invitations to employees.

The US ESPP also enables the Company to grant eligible US employees the right to acquire Ordinary Shares in the Company using the proceeds of a savings contract. If such a grant were made, when joining the US ESPP, participants would enter into a 12 month contract to save up to 15 per cent of base salary subject to an individual limit of $1,000 per month. No grants of this nature have been made since 2003.

Global All Employee Share Purchase Plan (GAESPP)

The GAESPP was initially approved by shareholders in 2001 with amendments being approved by shareholders in 2005 and 2011. 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. In September 2011, the first such invitation was made to all employees in Canada, Hong Kong, France and Germany and subsequent invitations have been made on a six-monthly basis since 2012.

The GAESPP can also be operated on similar terms to the US ESPP above, with participants entering into a 12 month contract to save up to 15 per cent of base salary subject to an individual limit. No grants of this nature have been made since 2003.

33. SHARE-BASED PAYMENT

	2018 $ million	2017 $ million
2005 Employee Incentive Plan	**0.1**	0.5
Spirent Long-Term Incentive Plan	**2.7**	1.7
	2.8	2.2

All schemes are equity-settled.

2.7 million share incentives were granted during 2018 (2017 2.9 million). The fair value of share incentives has been estimated as at the date of grant using the Hull-White trinomial model. The following table gives the assumptions made in arriving at the share-based payment charge and the fair value:

	2018	2017
Weighted average share price (pence)	**112.9**	118.1
Weighted average exercise price (pence)	**–**	–
Weighted average fair value (pence)	**95.1**	92.8
Expected volatility (%)	**30.6**	31.0
Option life (years)		
Performance Shares	**3.0**	3.0
Options and SARs	**10.0**	NA
Sub-optimal exercise factor	**1.5**	1.5
Risk free rate (%)	**0.88**	1.1–1.2
Dividend yield (%)	**3.0**	3.5

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.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

34. RECONCILIATION OF PROFIT BEFORE TAX TO CASH GENERATED FROM OPERATIONS

	2018 $ million	2017 $ million
Profit before tax	**61.2**	46.6
Adjustments for:		
Finance income	**(1.4)**	(0.6)
Finance costs	**0.1**	0.3
Intangible asset amortisation	**4.3**	7.1
Depreciation of property, plant and equipment	**16.5**	18.0
Loss on the disposal of property, plant and equipment	**–**	0.2
Gain on divestment	**(2.4)**	(2.6)
Share-based payment	**2.8**	2.2
Changes in working capital		
Deferred income (released)/received	**(2.5)**	5.1
Increase in receivables	**(11.0)**	(2.3)
(Increase)/decrease in inventories	**(2.2)**	3.7
(Decrease)/increase in payables	**(4.7)**	5.5
Increase in provisions	**7.6**	0.1
Defined benefit pension plan	**(6.7)**	(6.1)
Defined benefit pension plan re-measurement (GMP equalisation)	**4.0**	–
Deferred compensation plan	**0.3**	0.5
Cash flow from operations	**65.9**	77.7

35. DIVESTMENTS

There were no divestments in 2018.

The gain on divestments in 2018 of $2.4 million represents the repayment of a $2.0 million loan from the subsidiaries the Group divested of on 30 June 2017, together with the release of a $0.5 million provision relating to unsettled legal claims from a disposal the Group made in 2012. The $2.0 million loan had previously been impaired. The Group also incurred legal fees of $0.1 million relating to the divestments made in 2017. The net cash inflow from divestments in 2018 was $1.8 million.

On 16 February 2017, the Group divested of certain assets and liabilities of Epitiro Group Limited (Epitiro) for consideration of $0.4 million. Epitiro was reported within the Lifecycle Service Assurance operating segment.

On 30 June 2017, the Group divested the entire issued share capital of its subsidiaries, Spirent Communications Israel Limited, its Developer Tools (DT) line of business, and Spirent Holdings Denmark ApS and its subsidiaries, its Device Intelligence (DI) line of business, to Dorfi Limited, an Israeli entity established by the former General Manager of the business units, for a total cash consideration of $1. Both DI and DT were reported within the Connected Devices operating segment.

In 2017, DI and DT reported combined revenue of $5.9 million and made an adjusted operating profit and profit before tax of $1.4 million. These divestments did not constitute discontinued operations under IFRS 5 'Non-current Assets Held for Sale and Discontinued Operations'.

35. DIVESTMENTS CONTINUED

The gain on divestments during 2017 was as follows:

	DI/DT $ million	Epitiro $ million	2017 Total
Gross consideration	–	0.4	0.4
Net liabilities/(assets) at date of divestment	2.9	(0.5)	2.4
Provision against loan to divested subsidiaries	(2.0)	–	(2.0)
Expenses of sale	(0.8)	(0.5)	(1.3)
Foreign exchange adjustments	3.1	–	3.1
Net gain/(loss) on divestments before and after tax	3.2	(0.6)	2.6

Accumulated foreign exchange gains of $3.1 million were recycled to profit or loss on divestment of DI and DT in 2017.

As part of the sale of DI and DT, Spirent made a $2.0 million interest bearing loan to the divested subsidiaries to fund working capital requirements. This loan was fully provided for by the Group in 2017 and expensed in the calculation of the gain on divestments.

The net cash impact of divestments in 2017 was as follows:

	DI/DT $ million	Epitiro $ million	2017 Total
Cash consideration	–	0.4	0.4
Loan to divested subsidiaries	(2.0)	–	(2.0)
Expenses of sale	(0.7)	(0.4)	(1.1)
Net cash impact from divestments in the year	(2.7)	–	(2.7)

The net (liabilities)/assets divested during 2017 were as follows:

	DI/DT $ million	Epitiro $ million	2017 Total
At date of divestment			
Intangible assets	–	0.4	0.4
Property, plant and equipment	0.3	–	0.3
Cash on deposit	0.1	–	0.1
Inventories	–	0.1	0.1
Trade and other receivables	3.0	–	3.0
Trade and other payables	(6.0)	–	(6.0)
Provisions	(0.3)	–	(0.3)
Net (liabilities)/assets	(2.9)	0.5	(2.4)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

36. 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':

	2018 $000	2017 $000
Short-term employee benefits	**3,842.1**	2,629.4
Share-based payment	**664.6**	493.3
	4,506.7	3,122.7

No director received compensation for loss of office (2017 $nil).

There were gains of $852,742 (2017 no gains) on the exercise of options by key management personnel in 2018.

For further details refer to the Report on Directors' Remuneration on pages 74 to 95.

37. TRANSITION TO IFRS 15

The Group adopted IFRS 15 'Revenue from Contracts with Customers' on 1 January 2018 using the fully retrospective transition method, requiring restated comparatives. This note presents the impact of the adoption of IFRS 15 on the Group's financial statements.

The cumulative effect of the adoption of IFRS 15 has resulted in an increase in net assets of $0.8 million as at 1 January 2017 (31 December 2017 $0.8 million). This reflects the capitalisation of incremental costs incurred to obtain a contract, being sales commissions previously expensed as incurred, net of the associated deferred tax impact. The adoption of IFRS 15 has not impacted revenue previously reported.

37. TRANSITION TO IFRS 15 CONTINUED

CONSOLIDATED BALANCE SHEET RESTATEMENT UNDER IFRS 15

$ million	Notes	As reported 1 Jan 2017	Impact of IFRS 15	Restated 1 Jan 2017	As reported 31 Dec 2017	Impact of IFRS 15	Restated 31 Dec 2017
Assets							
Non-current assets							
Intangible assets		169.8	–	169.8	163.6	–	163.6
Property, plant and equipment		47.3	–	47.3	42.3	–	42.3
Trade and other receivables		4.6	–	4.6	4.1	–	4.1
Assets recognised from costs to obtain a contract	A	–	0.4	0.4	–	0.4	0.4
Cash on deposit		0.1	–	0.1	–	–	–
Defined benefit pension plan surplus		0.9	–	0.9	1.2	–	1.2
Deferred tax asset		33.1	–	33.1	23.2	–	23.2
		255.8	0.4	256.2	234.4	0.4	234.8
Current assets							
Inventories		27.4	–	27.4	23.6	–	23.6
Trade and other receivables		128.9	–	128.9	130.1	–	130.1
Assets recognised from costs to obtain a contract	A	–	0.6	0.6	–	0.6	0.6
Other financial assets		–	–	–	0.1	–	0.1
Current tax asset		0.4	–	0.4	1.0	–	1.0
Cash and cash equivalents		96.1	–	96.1	128.4	–	128.4
		252.8	0.6	253.4	283.2	0.6	283.8
Total assets		508.6	1.0	509.6	517.6	1.0	518.6
Liabilities							
Current liabilities							
Trade and other payables	B	(127.2)	59.4	(67.8)	(131.9)	61.7	(70.2)
Deferred income	B	–	(59.4)	(59.4)	–	(61.7)	(61.7)
Other financial liabilities		(0.1)	–	(0.1)	–	–	–
Current tax liability		(1.5)	–	(1.5)	(1.4)	–	(1.4)
Provisions		(4.2)	–	(4.2)	(3.6)	–	(3.6)
		(133.0)	–	(133.0)	(136.9)	–	(136.9)
Non-current liabilities							
Trade and other payables	B	(14.6)	11.2	(3.4)	(16.4)	11.0	(5.4)
Deferred income	B	–	(11.2)	(11.2)	–	(11.0)	(11.0)
Deferred tax liability	C	(0.1)	(0.2)	(0.3)	(0.1)	(0.2)	(0.3)
Defined benefit pension plan deficit		(16.7)	–	(16.7)	(7.7)	–	(7.7)
Provisions		(2.6)	–	(2.6)	(3.2)	–	(3.2)
		(34.0)	(0.2)	(34.2)	(27.4)	(0.2)	(27.6)
Total liabilities		(167.0)	(0.2)	(167.2)	(164.3)	(0.2)	(164.5)
Net assets		341.6	0.8	342.4	353.3	0.8	354.1
Capital and reserves							
Share capital		25.3	–	25.3	27.5	–	27.5
Share premium account		25.0	–	25.0	27.3	–	27.3
Capital redemption reserve		16.3	–	16.3	17.8	–	17.8
Other reserves		19.4	–	19.4	13.4	–	13.4
Translation reserve		10.3	–	10.3	11.3	–	11.3
Retained earnings	A, C	245.3	0.8	246.1	256.0	0.8	256.8
Total equity attributable to owners of the parent Company		341.6	0.8	342.4	353.3	0.8	354.1

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS CONTINUED

37. TRANSITION TO IFRS 15 CONTINUED

NOTES

A. Recognition and utilisation of assets recognised from costs to obtain a contract

IFRS 15 specifies that the incremental costs of obtaining a contract are capitalised if the entity expects to recover them.

At 1 January 2017, the Group has capitalised sales commissions amounting to $1.0 million that were previously expensed as incurred. These assets are amortised on a systematic basis through selling costs in the income statement consistent with how the related revenue is recognised. At 31 December 2017, the assets capitalised also amounted to $1.0 million.

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.

B. Reclassification of trade and other payables

Deferred income has been reclassified from trade and other payables to its own line item in the balance sheet as required by IFRS 15, reflecting the materiality and nature of this balance in the context of the Group's business.

C. Deferred tax

The recognition of assets recognised from costs to obtain a contract on the balance sheet from 1 January 2017 as stated above resulted in a deferred tax liability of $0.2 million. There was an immaterial adjustment to deferred tax in the year ended 31 December 2017.

Consolidated income statement under IFRS 15

There is no material impact to the consolidated income statement on transition to IFRS 15.

Consolidated cash flow statement under IFRS 15

As a result of the adoption of IFRS 15, certain reclassifications are required in relation to the following cash flow movements between relevant balance sheet accounts. There has been no change in the net cash generated from operations as a result of these reclassifications or restatement of these balance sheet accounts.

- As identified in adjustment A, on transition to IFRS 15 on 1 January 2018, the Group has recognised assets from costs to obtain a contract. Movements in the operating cash flow note reflect the relevant movements in the assets, which have been included within the movement in receivables.
- As identified in adjustment B, the Group has reclassified deferred income in the balance sheet. This reclassification has not impacted the consolidated cash flow statement.

Consolidated statement of changes in equity restatement under IFRS 15

No reconciliation of the restated consolidated statement of changes in equity is presented, as the only changes for the relevant period are presented as follows:

- Consolidated statement of changes in equity as at 1 January 2017: recognition of the restated retained earnings figure as presented in the restated consolidated balance sheet at this date.
- Consolidated statement of changes in equity as at 31 December 2017: recognition of the restated retained earnings figure as presented in the restated consolidated balance sheet at this date.

ALTERNATIVE PERFORMANCE MEASURES AND KEY PERFORMANCE INDICATORS UNDER IFRS 15

There is no material impact to alternative performance measures or key performance indicators on transition to IFRS 15.

PARENT COMPANY BALANCE SHEET AT 31 DECEMBER 2018

	Notes	2018 £ million	2017 £ million
Fixed assets			
Intangible assets	4	**2.4**	2.4
Tangible assets	5	**1.6**	1.6
Investments	6	**366.6**	351.8
		370.6	355.8
Current assets			
Stocks	7	**2.3**	1.6
Debtors	8	**22.1**	23.0
Cash at bank and in hand		**10.6**	13.4
		35.0	38.0
Creditors: amounts falling due within one year	9	**(95.9)**	(98.3)
Net current liabilities		**(60.9)**	(60.3)
Total assets less current liabilities		**309.7**	295.5
Creditors: amounts falling due after more than one year	10	**(1.7)**	(1.0)
Defined benefit pension plan surplus	3	**2.0**	0.9
Defined benefit pension plan deficit	3	**(0.5)**	(3.0)
Net assets		**309.5**	292.4
Capital and reserves	16		
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		**255.8**	238.7
Shareholders' funds – equity		**309.5**	292.4

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 2018, the profit for the year amounted to £55.7 million (2017 £22.5 million).

The notes on pages 161 to 177 form part of these financial statements.

Signed on behalf of the Board

Paula Bell
Director
7 March 2019

PARENT COMPANY STATEMENT OF CHANGES IN EQUITY

	Notes	Attributable to the equity holders of the parent Company				£ million
		Called up share capital	Share premium account	Capital redemption reserve	Profit and loss account	Total equity
At 1 January 2017		20.4	20.2	13.1	229.8	283.5
Profit for the year		–	–	–	22.5	22.5
Other comprehensive income[1]		–	–	–	3.5	3.5
Total comprehensive income		–	–	–	26.0	26.0
Share-based payment		–	–	–	1.7	1.7
Equity dividends	15	–	–	–	(18.8)	(18.8)
At 1 January 2018		**20.4**	**20.2**	**13.1**	**238.7**	**292.4**
Profit for the year		**–**	**–**	**–**	**55.7**	**55.7**
Other comprehensive income[2]		**–**	**–**	**–**	**1.7**	**1.7**
Total comprehensive income		**–**	**–**	**–**	**57.4**	**57.4**
Share-based payment		**–**	**–**	**–**	**2.1**	**2.1**
Tax credit on share incentives		**–**	**–**	**–**	**0.1**	**0.1**
Employee share ownership trust	16	**–**	**–**	**–**	**(1.8)**	**(1.8)**
Equity dividends	15	**–**	**–**	**–**	**(40.7)**	**(40.7)**
At 31 December 2018		**20.4**	**20.2**	**13.1**	**255.8**	**309.5**

1. The amount included in other comprehensive income for 2017 of £3.5 million represents re-measurement gains on the net defined benefit pension liability of £4.3 million, net of a tax charge of £0.8 million.
2. The amount included in other comprehensive income for 2018 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.

The notes on pages 161 to 177 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 Northwood Park, Gatwick Road, Crawley, West Sussex, RH10 9XN, United Kingdom.

BASIS OF ACCOUNTING

The financial statements have been prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework (FRS 101).

In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU (EU Adopted IFRS), but makes amendments where necessary in order to comply with the Companies Act 2006 and 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 fixed 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.
- 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.

The following exemptions have been taken in these financial statements, as granted by IFRS 1 'First-time adoption of IFRS':

- Business combinations – business combinations that took place prior to 1 January 2014 have not been restated.
- Use of previous GAAP carrying amounts as at date of transition as a deemed cost for investment in subsidiaries.

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

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 2020 and 2021 financial years. They have also considered the principal risks and uncertainties that the Company faces and its current financial position and are satisfied that the Company has adequate financial resources to continue in operational existence for the foreseeable future, a period of not less than 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 or interpretations effective from 1 January 2018 that have been applied by the Company which have resulted in a significant impact on its results or financial position. IFRS 9 'Financial Instruments' and IFRS 15 'Revenue from Contracts with Customers' were effective from 1 January 2018 and have had an immaterial impact on the Company's results and financial position.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

1. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

IFRS 15 REVENUE FROM CONTRACTS WITH CUSTOMERS

The Company adopted IFRS 15 on 1 January 2018 using the fully retrospective transition method, requiring restated comparatives.

The cumulative effect of the adoption of IFRS 15 has resulted in an increase to net assets of £0.1 million as at 1 January 2018. This reflects the capitalisation of incremental costs incurred to obtain a contract, being sales commissions previously expensed as incurred, net of the associated deferred tax impact. These assets are presented within debtors as assets recognised from costs to obtain a contract. There is no impact to the profit and loss account.

The impact on the 2017 financial statements is immaterial, therefore, the adjustment will be reflected in the balance sheet and the profit and loss account in 2018.

The impact of IFRS 15 on the Group financial statements is presented in note 37 of Notes to the consolidated financial statements on page 156.

BUSINESS COMBINATIONS AND GOODWILL

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 depreciation on a systematic basis over a period chosen by the directors, it's 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. The profit for the year would have been £0.6 million lower had goodwill been amortised in the year.

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 of all other assets, less residual value, on a straight line basis over their estimated useful lives 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

The carrying values of tangible fixed assets are reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable.

IMPAIRMENT OF ASSETS

Tangible assets with finite useful lives 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.

1. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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

A lease is an agreement whereby the lessor conveys to the lessee in return for a payment or series of payments the right to use an asset for an agreed period of time.

Operating leases are leases where the lessor retains substantially all the risks and rewards of ownership of the asset and are not finance leases. Operating lease rentals are charged to the income statement on a straight line basis over the period of the lease.

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.

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 Company'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 Company does not recognise contingent liabilities but discloses them.

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. To measure the expected credit losses, trade debtors have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of trade debtors over a period of 12 months before 31 December 2017 and the corresponding historical credit losses experienced within this period.

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 usually have an original maturity of three months or less.

Trade creditors

Trade creditors are non-interest bearing and are stated at the original invoiced amount.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

1. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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 retained earnings. Consideration received for the sale of such treasury shares is also recognised in equity.

Derivative financial instruments and hedge accounting

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.

Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to those of the host contracts.

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 liability or asset 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 liability or asset, taking account of any changes in the net defined benefit pension liability 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 licenses 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 most 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 the sale of services, revenue is 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, either based on a measure of progress towards complete satisfaction of the performance obligation or at periodic intervals. Progress is measured with reference to the actual cost of services provided as a proportion of the total cost of services expected to be provided under the contract. Where the professional service has a predetermined 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 from multi-component and bundled orders that includes both products and services is accounted for as two or more separate performance obligations only where the commercial substance is that the individual components operate independently of each other, because they are capable of being distinct and are separately identifiable from other promises in the context of the contract with the customer.

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 2018.

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. These liabilities are reported on the balance sheet within trade and other payables 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. Grants that compensate the Company for the acquisition of an asset are presented by deducting them from the acquisition cost of the related asset in accordance with IAS 20 'Accounting for Government Grants and Disclosure of Government Assistance'.

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 2018 and 31 December 2017, no amounts have met the recognition criteria.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

1. SIGNIFICANT ACCOUNTING POLICIES CONTINUED

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.

SHARE-BASED PAYMENT

The cost of equity-settled transactions with employees is measured by reference to the fair value at the date at which they are granted. The fair value is determined using the Hull-White trinomial model.

The cost of equity-settled transactions is recognised as a cost to the Company or as an addition to the cost of investment in the subsidiary in which the relevant employees work, over the vesting period of the equity-settled transactions with a corresponding adjustment to reserves. Any payments received from the Company's subsidiaries in respect of these share-based payments result in a reduction in the cost of investment.

No expense is recognised for awards that do not ultimately vest, except for awards where vesting is conditional upon a market condition, which are treated as vesting irrespective of whether or not the market condition is satisfied, provided that all other vesting conditions are satisfied.

Where an equity-settled award is cancelled, it is treated as if it had vested on the date of cancellation and any expense not yet recognised for the award is recognised immediately.

The Company has an employee share trust for the granting of certain share incentives to employees. Shares are held by the employee share trust, 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, associates and joint ventures, 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 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 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) and recognition of deferred tax assets (note 12). Please refer to note 2 of Notes to the consolidated financial statements on page 123 for detailed disclosures.

APPLICABLE NEW STANDARDS AND INTERPRETATIONS NOT APPLIED

IFRS 16 LEASES

See note 2 of Notes to the consolidated financial statements on page 125 for an explanation of the impact of IFRS 16.

2. EMPLOYEES

Please refer to the Report on Directors' Remuneration on pages 74 to 95 and note 36 of Notes to the consolidated financial statements on page 156 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:

	2018 Number	2017 Number
Manufacturing	37	37
Product development	50	44
Selling and marketing	45	41
Administration	30	30
	162	152

Employee benefit costs were:

	2018 £ million	2017 £ million
Remuneration	12.3	12.2
Social security costs	1.6	1.3
Pension and other related costs	1.6	1.4
Expense of share-based payment	0.7	0.5
	16.2	15.4

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 2019 are £5.1 million. This includes the contributions agreed with the funded plans' trustees in accordance with UK legislation. The triennial valuation as at 1 April 2015 was in deficit, whereas the IAS 19 accounting valuation is in surplus, therefore, the Company has agreed to pay £5.0 million per annum into the Staff Plan from 1 July 2016, over a seven-year period, in order to clear the funding deficit as assessed.

If the contributions currently agreed are insufficient to pay the benefits due, the Company will need to make further contributions.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

3. PENSIONS CONTINUED

GMP EQUALISATION

On 26 October 2018, the High Court ruled on the Lloyds Bank GMP Inequalities case. In response to this, an allowance of £3.1 million has been 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 has been charged to the income statement in the year and relates to the Staff Plan. There is no impact on the Cash Plan.

The Staff Plan was contracted-out between 17 May 1990 and 5 April 1997, and therefore has accrued GMP benefits for all members who were active during that period. From the data available as at 31 March 2018, which was provided for the formal valuation of the Staff Plan as at that date, we have estimated the amount of the GMP liability in the Plan applicable for each member for this period of service.

In estimating the impact of equalising these benefits, we have considered the possible range of results that could arise from the various different possible methods given the circumstances of the Plan. In particular, we note that:

- no decision has been made on the methodology to be adopted to equalise GMPs, but we would expect the cost to be broadly in line with "method D2" (or "method C2", which is similar) considered by the Lloyds Bank judgement;
- legal opinion is not yet available on how historical claims will be dealt with; at this stage we have included allowance for full back-payments on pensions in payment, but no allowance for payments in respect of past transfers and deaths; and
- financial assumptions, demographic assumptions, and benefits are consistent with those disclosed below.

Based on these considerations, we have included an allowance of 15 per cent of the estimated GMP liability affected by the equalisation process. We have therefore adopted the process below to calculate the allowance:

1. Calculate proportion of Plan's obligations relating to Post-1988 GMP
The proportion of the Plan's liabilities on an accounting basis that relate to Post-1988 GMP is estimated as 14 per cent, based on the valuation data as at 31 March 2018. Overall, this implies that approximately 14 per cent of the Plan's total IAS 19 obligations relate to Post-1988 GMPs.

2. Estimate the proportion of GMPs relating to benefits that need to be equalised (post-1990 GMPs)
The requirement to equalise relates only to benefits accrued after 17 May 1990. We estimate the obligation for GMPs accrued after this date on a pro rata basis as seven-ninths of the Post-1988 GMP obligation.

3. We have estimated the cost of removing GMP inequalities in the Plan is 15 per cent of post-1990 GMP obligation, giving a figure of £3.1 million.
This estimate of 15 per cent is informed by the actuary's experience of working with schemes that have already undertaken a process to remove GMP inequalities. We have not considered the specific circumstances of the scheme in detail, on the grounds that this would be disproportionate.

ii) Amounts in the financial statements

The assets and liabilities on the balance sheet are as follows:

	2018 £ million	2017 £ million
Schemes in net asset position		
UK defined benefit pension plan – Cash Plan	**0.9**	0.9
UK defined benefit pension plan – Staff Plan	**1.1**	–
	2.0	0.9
Schemes in net liability position		
UK defined benefit pension plan – Staff Plan	**–**	(2.5)
UK unfunded plan	**(0.5)**	(0.5)
	(0.5)	(3.0)
Net pension plan surplus/(deficit) on the balance sheet	**1.5**	(2.1)

3. PENSIONS CONTINUED

a) The assets and liabilities in each plan

	2018 £ million	2017 £ million
Staff Plan		
Quoted		
Equities	**41.9**	48.6
Government bonds	**4.1**	4.3
Corporate bonds	**3.2**	4.0
Unquoted		
LDI funds	**31.7**	36.8
Cash benchmarked bonds	**75.0**	75.8
Hedge funds	**18.7**	19.8
Insured annuities	**2.1**	2.5
Property	**1.1**	1.1
Cash and other	**14.1**	8.1
Fair value of plan assets	**191.9**	201.0
Present value of defined benefit pension plan obligations	**(190.8)**	(203.5)
Surplus/(deficit) in the plan on the balance sheet	**1.1**	(2.5)
Cash Plan		
Quoted		
Equities	**3.3**	3.4
Government bonds	**2.7**	3.2
Unquoted		
Insured annuities	**0.1**	0.1
Cash and other	**1.6**	1.7
Fair value of plan assets	**7.7**	8.4
Present value of defined benefit pension plan obligations	**(6.8)**	(7.5)
Surplus in the plan	**0.9**	0.9
Total net surplus/(deficit) recognised	**2.0**	(1.6)
Unfunded plan		
Present value of unfunded obligations	**(0.5)**	(0.5)
Net pension plan surplus/(deficit) on the balance sheet	**1.5**	(2.1)

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.

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.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

3. PENSIONS CONTINUED

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

	2018 £ million	2017 £ million
Plan administration expenses	**0.4**	0.3
Current service cost	**0.1**	0.1
Amount charged to operating costs	**0.5**	0.4
Past service cost (GMP equalisation)	**3.1**	–
Net interest on the net defined benefit pension liability	**–**	0.2
Net charge to the profit and loss account	**3.6**	0.6

c) Analysis of the amount recognised directly in the statement of comprehensive income

	2018 £ million	2017 £ million
Re-measurement (loss)/gain on plans' assets	**(10.6)**	8.1
Actuarial gain/(loss) arising from experience	**2.3**	(0.6)
Actuarial gain arising from the demographic assumptions	**1.4**	4.3
Actuarial gain/(loss) arising from changes in financial assumptions	**9.0**	(7.5)
Re-measurement of the net defined benefit pension liability	**2.1**	4.3

d) Movements in the present value of funded defined benefit obligations

	2018 £ million	2017 £ million
At 1 January	**211.0**	210.4
Current service cost	**0.1**	0.1
Past service cost	**3.1**	–
Interest cost	**5.2**	5.8
Benefit payments	**(9.1)**	(9.1)
Actuarial (gain)/loss arising from experience	**(2.3)**	0.6
Actuarial gain arising from the demographic assumptions	**(1.4)**	(4.3)
Actuarial (gain)/loss arising from changes in financial assumptions	**(9.0)**	7.5
Present value of funded defined benefit pension plans' obligations	**197.6**	211.0

e) Movements in the fair value of plans' assets

	2018 £ million	2017 £ million
At 1 January	**209.4**	200.1
Interest income on plans' assets	**5.2**	5.5
Employer contributions	**5.1**	5.1
Benefit payments	**(9.1)**	(9.1)
Plan administration expenses	**(0.4)**	(0.3)
Re-measurement (loss)/gain on plans' assets	**(10.6)**	8.1
Fair value of plans' assets	**199.6**	209.4

3. PENSIONS CONTINUED

f) The key financial assumptions

The assumptions used for both plans using a weighted average were as follows:

	2018 %	2017 %
Inflation – RPI	**3.2**	3.1
Inflation – CPI	**2.1**	2.0
Rate of increase in pensionable salaries	**2.1**	2.0
Rate of increase for pensions in payment pre 2001 service	**3.7**	3.6
Rate of increase for pensions in payment 2001 to 5 April 2005 service	**3.1**	3.0
Rate of increase for pensions post 5 April 2005 service	**2.1**	2.1
Rate of increase in deferred pensions	**2.1**	2.0
Rate used to discount plan liabilities	**2.8**	2.5

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 will live on average for a further 22.5 years (2017 22.7 years) if they are a male and for a further 24.5 years (2017 24.6 years) if they are female. For a member who retires in 2038 (2017 in 2037) at age 65 the assumptions are that they will live on average for a further 23.9 years (2017 24.1 years) after retirement if they are male and for a further 26.0 years (2017 26.1 years) after retirement if they are female.

iii) Amount, timing and uncertainty of future cash flows

The approximate impact to the past service liabilities of changing these main assumptions is as follows:

- Reducing the discount rate by 0.1 per cent per annum would increase past service liabilities by £2.7 million (2017 £3.1 million)
- Increasing RPI inflation by 0.1 per cent would increase the plans' liabilities by £1.0 million (2017 £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 £9.0 million (2017 £10.3 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.

	2018	2017
Weighted average duration of the defined benefit obligation (years)	**15**	15
Maturity analysis of benefit payments (non-discounted amounts) £ million		
Maturity ≤ 1 year	**8.2**	7.7
Maturity > 1 ≤ 5 years	**33.9**	32.2
Maturity > 5 ≤ 10 years	**93.4**	92.5
Maturity > 10 ≤ 20 years	**80.9**	83.9
Maturity > 20 ≤ 30 years	**53.4**	58.4
Maturity > 30 years	**33.7**	38.8

Defined contribution plans

The Company contributes to defined contribution pension plans for employees. Employer contributions for 2018 were £0.6 million (2017 £0.6 million).

4. INTANGIBLE ASSETS

	Goodwill £ million
Cost	
At 1 January 2018 and 31 December 2018	**6.8**
Accumulated amortisation and impairment losses	
At 1 January 2018 and 31 December 2018	**4.4**
Net book value at 31 December 2017 and 31 December 2018	**2.4**

The carrying value of goodwill has been tested by reference to the value in use of the Networks & Security CGU. No impairment of goodwill was required.

The goodwill arose upon the acquisition of the Positioning Business within the Networks & Security CGU.

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

5. TANGIBLE FIXED ASSETS

				£ million
	Freehold land and buildings	Plant and machinery	Fixtures, fittings and equipment	Total
Cost				
At 1 January 2018	0.7	4.0	2.1	6.8
Additions	–	0.5	–	0.5
Disposals	–	(0.3)	(0.2)	(0.5)
At 31 December 2018	0.7	4.2	1.9	6.8
Accumulated depreciation and impairment				
At 1 January 2018	0.3	3.3	1.6	5.2
Depreciation charge for the year	–	0.4	0.1	0.5
Disposals	–	(0.3)	(0.2)	(0.5)
At 31 December 2018	0.3	3.4	1.5	5.2
Net book value at 31 December 2017	0.4	0.7	0.5	1.6
Net book value at 31 December 2018	0.4	0.8	0.4	1.6

6. INVESTMENTS

			£ million
	Shares in subsidiaries	Loans to subsidiaries	Total
Cost			
At 1 January 2018	1,095.3	3.7	1,099.0
Additions	13.6	–	13.6
Share-based payment	1.4	–	1.4
At 31 December 2018	1,110.3	3.7	1,114.0
Amounts provided			
At 1 January 2018	743.7	3.5	747.2
Provided in year	–	0.2	0.2
At 31 December 2018	743.7	3.7	747.4
Net book value at 31 December 2017	351.6	0.2	351.8
Net book value at 31 December 2018	366.6	–	366.6

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 £10.9 million were paid to subsidiaries (2017 £15.3 million) and loans of £2.7 million due from Spirent Communications SAS were capitalised (2017 no loans capitalised).

7. STOCKS

	2018 £ million	2017 £ million
Work in progress	0.6	0.3
Finished goods	1.7	1.3
	2.3	1.6

There were no stock write-downs recognised in the period (2017 nil) and there were no reversals of prior period stock write-downs (2017 nil).

No stock is carried at fair value less costs to sell (2017 nil).

8. DEBTORS

	2018 £ million	2017 £ million
Due within one year		
Trade debtors	**7.0**	7.7
Owed by subsidiaries	**9.6**	9.1
Other debtors	**0.7**	0.8
Prepayments	**2.8**	2.6
Current tax asset	**0.6**	0.4
Deferred tax (note 12)	**1.3**	2.4
Assets recognised from costs to obtain a contract	**0.1**	–
	22.1	23.0

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.

9. CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR

	2018 £ million	2017 £ million
Trade creditors	**1.4**	1.6
Owed to subsidiaries	**84.8**	82.1
Accruals	**4.5**	7.8
Deferred income	**4.4**	5.8
Other taxes and social security costs	**0.5**	0.3
Government grants	**0.3**	0.7
	95.9	98.3

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.

10. CREDITORS: AMOUNTS FALLING DUE AFTER MORE THAN ONE YEAR

	2018 £ million	2017 £ million
Deferred income	**0.9**	–
Government grants	**0.8**	1.0
	1.7	1.0

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

11. GOVERNMENT GRANTS

The following government grants are included within creditors:

	2018 £ million	2017 £ million
At 1 January	**1.3**	1.2
Received during the year	**–**	0.3
Released to the profit and loss account	**(0.2)**	(0.2)
At 31 December	**1.1**	1.3

	2018 £ million	2017 £ million
Current	**0.3**	0.3
Non-current	**0.8**	1.0
	1.1	1.3

A government grant has been received to accelerate and support research and development in the vulnerability of Global Navigation Satellite Systems.

12. DEFERRED TAX

The movements in the deferred tax asset is as follows:

					£ million
	Temporary differences	Tax losses	UK pension plans	Credits	Total
At 1 January 2017	0.2	0.6	2.1	–	2.9
Charged in the year	–	1.1	–	0.1	1.2
Deferred tax on defined benefit pension plan	–	–	(1.7)	–	(1.7)
At 1 January 2018	**0.2**	**1.7**	**0.4**	**0.1**	**2.4**
Charged in the year	**–**	**(0.4)**	**–**	**–**	**(0.4)**
Deferred tax on defined benefit pension plan	**–**	**–**	**(0.7)**	**–**	**(0.7)**
At 31 December 2018	**0.2**	**1.3**	**(0.3)**	**0.1**	**1.3**

The Company has tax losses of £23.9 million (2017 £23.9 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 (2017 £823.3 million) for which no deferred tax asset has been recognised on the balance sheet. These capital losses have no expiry date.

£0.0 million (2017 £0.4 million) of the deferred tax asset is due after one year.

13. CONTRACT BALANCES

The following table provides information about debtors and contract liabilities from contracts with customers. The Company does not have any contract assets.

	Note	2018 £ million	2017 £ million	2016 £ million
Trade debtors	8	**7.0**	7.7	7.5
Contract liabilities – Deferred income		**5.3**	5.8	5.0
Revenue recognised in the period from amounts included in contract liabilities at the beginning of the period		**5.8**	5.0	5.1

The timing of revenue recognition, invoicing and cash collections results in trade debtors and deferred income on the balance sheet.

13. CONTRACT BALANCES CONTINUED

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) we perform 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 8.

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, are expected to be recognised as revenue in the future as follows:

	2018 £ million	2017 £ million
Within 1 year	**1.2**	1.1
Greater than 1 year	**0.9**	1.2
	2.1	2.3

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.

14. OPERATING LEASE COMMITMENTS

At the balance sheet date, the Company had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	2018 £ million	2017 £ million
Within one year	**0.2**	0.1
In the second to fifth years	**0.5**	0.5
	0.7	0.6

NOTES TO THE PARENT COMPANY FINANCIAL STATEMENTS CONTINUED

15. DIVIDENDS

	2018 £ million	2017 £ million
Declared and paid in the year		
Equity dividend on Ordinary Shares		
Final dividend 2017 of 1.73 pence per Ordinary Share (2016 1.80 pence)	**10.5**	11.0
Special dividend 2017 of 3.60 pence per Ordinary Share	**22.0**	–
Interim dividend 2018 of 1.34 pence per Ordinary Share (2017 1.27 pence)	**8.2**	7.8
	40.7	18.8
Proposed for approval at AGM (not recognised as a liability at 31 December)		
Equity dividend on Ordinary Shares		
Final dividend 2018 of 2.08 pence per Ordinary Share (2017 1.73 pence)	**12.7**	10.5
Special dividend 2017 of 3.60 pence per Ordinary Share	**–**	22.0
	12.7	32.5

The directors are proposing a final dividend in respect of the financial year ended 31 December 2018 of 2.08 pence per Ordinary Share (2017 1.73 pence), which will absorb an estimated £12.7 million of shareholders' funds (2017 £10.5 million). The final dividend will be paid on 3 May 2019 to Ordinary shareholders who are on the Register of Members at close of business on 15 March 2019. Payment will be made to ADR holders on 10 May 2019. No liability is recorded in the financial statements in respect of these dividends.

Dividends are determined in US dollars and paid in pounds sterling. The exchange rate for determining the amount of the final dividend to be paid for 2018 was $1.31: £1 (2017 $1.39: £1).

16. CAPITAL AND RESERVES

Changes during the year in the issued Ordinary Share capital were as follows:

	Number of Ordinary shares million
Issued and fully paid Ordinary Shares of 3 1/3 pence each at 1 January 2018 and 31 December 2018	**611.7**

There has been no material increase in the issued Ordinary Share capital, whether by exercise of share incentives or otherwise, between 31 December 2018 and 7 March 2019, the date on which these financial statements have been signed.

Please refer to note 31 of the Notes to the consolidated financial statements on page 151 for disclosures relating to the nature and purpose of each reserve within equity.

16. CAPITAL AND RESERVES CONTINUED

INVESTMENT IN OWN ORDINARY SHARES

During the year, 1.5 million shares were purchased and placed into the Employee Share Ownership Trust at a cost of £1.8 million and 1.5 million shares were also transferred from the Employee Share Ownership Trust to satisfy options exercised under the Spirent employee share plans.

At 31 December 2018, the ESOT held 0.6 million Ordinary Shares (2017 0.6 million Ordinary Shares) to satisfy awards under various share incentive plans. At 31 December 2018, the Spirent Sharesave Trust held 0.5 million Ordinary Shares (2017 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 1.1 million Ordinary Shares (2017 1.1 million Ordinary Shares), at 31 December 2018 was £1.3 million (2017 £1.1 million).

CAPITAL REDEMPTION RESERVE

During 2018, the Company did not cancel any Ordinary Shares (2017 nil) and did not make any transfers to the capital redemption reserve (2017 nil).

EMPLOYEE SHARE PLANS

The Company operates a number of employee share incentive plans which are described in note 32 of Notes to the consolidated financial statements. The following share incentives over Ordinary Shares under these plans have been granted and remain outstanding, held by employees of the parent Company.

The following information relates to outstanding share incentives at 31 December 2018:

	2018					2017		
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]	23.03.18-23.05.25	89	89	-	6.3	17	0.8	8.4
Spirent Long-Term Incentive Plan[2]	16.06.19-20.05.28	-	-	3.4	8.4	–	2.6	9.9
				3.4			3.4	

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.

17. SUBSIDIARIES

A list of subsidiaries, including the name, country of incorporation, registered office address and proportion of ownership interest is given on pages 178 and 179 of this Annual Report.

FULL LIST OF SUBSIDIARY UNDERTAKINGS

A full list of subsidiaries and companies in which Spirent Communications plc has an interest of more than 20 per cent at 31 December 2018. 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 100191	Held directly
Bowthorpe Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Cambridge Analytical Group Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Earlynow Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Epitiro Group Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Metrico Wireless Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
PG International Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Shipbrick Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	54.55 per cent held directly, 45.45 per cent held indirectly
Spirent Capital Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Communications (International) Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Communications (Scotland) Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Communications (SW) Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Financial Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Financing Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	
Spirent Holdings Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Investment Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly
Spirent Sharesave Trust Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	Held directly

Company Name	Registered in	Registered office address	Notes
Spirent Systems Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	100 per cent 'A' shares held indirectly 100 per cent 'B' shares held directly
Spirent Systems No 2 Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	
TFDC Limited	England	Northwood Park, Gatwick Road, Crawley, West Sussex RH10 9XN	
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 560037 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 Communciations Korea Inc	South Korea	2F, 16 Gangnam-daero 95-gil, Seocho-gu, Seoul 06526	
Spirent Communications Taiwan Limited	Taiwan	10F, No 66, Sec 1, Neihu Road, NeiHu District, Taipei City 11493	
Jolata, Inc	US (Delaware)	3500 South Dupont Highway, Dover, Delaware 19901	26 per cent held indirectly*
Netcom Systems Holding 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	

Note
* Spirent Communications plc holds 26 per cent of the issued share capital in Jolata, Inc through one of its subsidiaries; this has been treated as an associate company in these financial statements. Jolata, Inc was dissolved on 31 January 2019.

FINANCIAL HISTORY

$ million

	2018	Restated[1] 2017	Restated[1] 2016	2015	2014
Summary income statement					
Continuing operations					
Revenue	**476.9**	454.8	457.9	477.1	457.2
Cost of sales	**(132.4)**	(129.8)	(133.6)	(145.3)	(140.9)
Gross profit	**344.5**	325.0	324.3	331.8	316.3
Product development	**(96.9)**	(103.0)	(111.7)	(118.3)	(115.4)
Selling and marketing	**(123.9)**	(116.8)	(125.4)	(127.2)	(113.5)
Administration	**(46.6)**	(46.3)	(40.7)	(44.2)	(41.4)
Other items	**(19.6)**	(15.2)	(87.6)	(32.0)	(22.3)
Operating profit/(loss)	**57.5**	43.7	(41.1)	10.1	23.7
Share of loss of associate	**–**	–	(4.5)	(0.4)	–
Net finance income/(costs)	**1.3**	0.3	(0.4)	(0.1)	0.4
Gain on divestment	**2.4**	2.6	–	–	–
Profit/(loss) before tax	**61.2**	46.6	(46.0)	9.6	24.1
Tax	**(5.4)**	(17.6)	3.7	3.9	(3.5)
Profit/(loss) for the year	**55.8**	29.0	(42.3)	13.5	20.6
Summary balance sheet					
Intangible assets	**158.0**	163.6	169.8	251.6	273.3
Property, plant and equipment	**36.1**	42.3	47.3	51.1	52.2
Working capital (excluding cash and deferred tax)	**33.2**	10.2	18.9	8.8	13.9
Operating assets	**227.3**	216.1	236.0	311.5	339.4
Investment in associate	**–**	–	–	4.6	–
Net funds including long-term cash	**121.6**	128.4	96.2	102.1	99.8
Provisions and other liabilities	**(14.0)**	(6.8)	(6.8)	(11.3)	(8.3)
Deferred tax	**22.0**	22.9	32.8	25.0	18.0
Defined benefit pension plan deficit	**(1.6)**	(6.5)	(15.8)	(19.8)	(14.5)
Net assets	**355.3**	354.1	342.4	412.1	434.4
Total equity	**355.3**	354.1	342.4	412.1	434.4
Summary cash flows					
Cash flow from operating activities	**60.2**	69.3	42.7	60.4	41.7
Net interest received	**1.3**	0.6	0.3	0.4	0.6
Net capital expenditure	**(10.6)**	(13.5)	(17.1)	(25.5)	(31.6)
Free cash flow	**50.9**	56.4	25.9	35.3	10.7
Acquisitions and disposals and investment in associate	**1.8**	(2.7)	(2.7)	(6.7)	(85.9)
Share capital, share repurchase and ESOT	**(2.5)**	–	–	0.1	(16.4)
Dividends paid	**(54.8)**	(24.6)	(24.2)	(23.5)	(22.2)
Transfer from long-term deposit and loan repayment	**–**	–	–	(0.1)	–
Net (decrease)/increase in cash and cash equivalents	**(4.6)**	29.1	(1.0)	5.1	(113.8)

					$ million
	2018	2017	2016	2015	2014
Other information – continuing operations					
Expenditure on property, plant and equipment	**12.0**	14.9	17.3	26.5	33.8
Depreciation	**16.5**	18.0	19.1	25.0	19.7
Product development	**96.9**	103.0	111.7	118.3	115.4
Share information					
Earnings/(loss) per share from continuing operations (cents)					
Basic	**9.14**	4.75	(6.93)	2.18	3.35
Diluted	**9.05**	4.71	(6.93)	2.17	3.35
Adjusted basic[2,3]	**10.86**	7.55	5.29	5.00	5.82
Dividend per Ordinary Share (cents)	**4.49**	4.08	3.89	3.89	3.89
Special dividend per Ordinary Share (cents)	**–**	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 – continuing operations					
Revenue[4]					
Networks & Security	**285.1**	261.0	262.2	239.2	
Lifecycle Service Assurance	**112.8**	109.2	99.2	112.2	
Connected Devices	**79.0**	84.6	96.5	125.7	
	476.9	454.8	457.9	477.1	457.2
Adjusted operating profit[4]					
Networks & Security	**56.4**	43.9	47.2	34.6	
Lifecycle Service Assurance	**17.4**	17.9	11.2	17.7	
Connected Devices	**10.5**	5.2	(4.4)	(4.4)	
Corporate – non-segmental	**(7.2)**	(8.1)	(7.5)	(5.8)	(6.3)
Adjusted operating profit[2]	**77.1**	58.9	46.5	42.1	46.0
Exceptional items	**(13.1)**	(6.7)	(4.8)	(12.5)	(4.1)
Acquisition related costs	**–**	–	–	(0.1)	(3.8)
Acquired intangible asset amortisation	**(3.7)**	(6.3)	(12.9)	(14.8)	(12.7)
Goodwill and acquired intangible asset impairment	**–**	–	(69.1)	(3.8)	(1.0)
Share-based payment	**(2.8)**	(2.2)	(0.8)	(0.8)	(0.7)
Operating profit/(loss)	**57.5**	43.7	(41.1)	10.1	23.7
Geographical information – continuing operations					
Revenue by market					
Americas	**265.4**	248.6	254.1	268.1	245.0
Asia Pacific	**159.1**	160.2	149.3	148.2	142.5
Europe, Middle East and Africa	**52.4**	46.0	54.5	60.8	69.7
	476.9	454.8	457.9	477.1	457.2

Notes
1. Balance sheet has been restated for the adoption of IFRS 15 on 1 January 2018, as per note 37 of Notes to the consolidated financial statements. Deferred compensation balance has been reclassified from trade and other payables to defined benefit pension plan deficit, as per note 2 of Notes to the consolidated financial statements.
2. Before exceptional items, acquisition related costs, acquired intangible asset amortisation, goodwill and acquired intangible asset impairment and share-based payment.
3. Before gain on divestment, impairment of investment in associate, items in note 2, tax effect of items in note 2, revaluation of deferred tax assets due to US tax reform (in 2017) and prior year tax.
4. Restated operating segment information is not available for corresponding amounts prior to 2015.

ALTERNATIVE PERFORMANCE MEASURES

The performance of the Group is assessed using a variety of alternative performance measures which are presented to provide users with additional financial information that is regularly reviewed by management. The alternative performance measures 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 alternative performance measures reflect the underlying performance of the Group and provide a more meaningful comparison of how the Group is managed and measured on a day-to day basis. Such alternative performance measures should not be viewed in isolation or as an alternative to the equivalent GAAP measure.

The alternative performance measures 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 on pages 22 and 23.

ORDER INTAKE

Order intake represents requests 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.

Order intake is a non-GAAP measure and as such should not be considered in isolation or as a substitute for GAAP measures of operating performance.

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.

Book to bill is a non-GAAP measure and as such should not be considered in isolation or as a substitute for GAAP measures of operating performance.

ADJUSTED OPERATING PROFIT

Adjusted operating profit is reported operating profit excluding exceptional items, 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 believe 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 year to year.

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 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, amortisation of acquired intangible assets, share-based payment, gain on divestment, tax on adjusting items, significant one-off tax impacts, for example revaluation of deferred tax assets due to US tax reform in 2017 and 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 EPS in note 11 of Notes to the full year consolidated financial statements.

FREE CASH FLOW
Free cash flow is cash flow generated from operations, less tax and net capital expenditure, after interest paid and/or received.

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 the 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 48.

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 profits into cash and ultimately to generate funds for future investment.

SHAREHOLDER INFORMATION

FINANCIAL CALENDAR 2019

7 March 2019	Full Year results and final dividend announcement
14 March	Final dividend – ex-dividend date
15 March	Final dividend – record date
1 May	Annual General Meeting
3 May	Final dividend – payment date (Ordinary shareholders)
10 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 2019	Financial year end
February/March 2020	2019 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/otc-pink/home.

ANNUAL GENERAL MEETING

The Company's 2019 Annual General Meeting (2019 AGM) will be held at 12.30pm on Wednesday 1 May 2019 at the offices of FTI Consulting, 200 Aldersgate, Aldersgate Street, London EC1A 4HD.

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. Equiniti also provide 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 (Fifth Generation)	The next major phase of mobile telecommunications standards beyond the current 4G/IMT-Advanced standards.
5G New Radio (5G NR)	5G NR is a new air interface being developed for 5G. An air interface is the radio frequency portion of the circuit between the mobile device and the active base station. The active base station can change as the user is on the move, with each changeover known as a handoff.
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.
Code Division Multiple Access (CDMA)	A digital cellular technology standard which allows numerous signals to occupy a single transmission channel, thus increasing network capacity; used in 2G and 3G radio communications.
Data Center	A centralised location where computing resources critical to an organisation are maintained in a highly controlled environment.
Enhanced 911 (E911)	A support for wireless phone users to dial 911 to request help in an emergency that allows the location of the user to be known to the call receiver.
Enhanced Multimedia Broadcast Multicast Service (eMBMS)	eMBMS offers LTE service providers an effective way to lower cost per bit when delivering the same content simultaneously to multiple end users.
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.
Evolution-Data Optimised (EV-DO or EVDO)	A telecommunications standard for the wireless transmission of data through radio signals, typically for broadband internet access. EV-DO is an evolution of the CDMA2000 (IS-2000) standard that supports high data rates and can be deployed alongside a wireless carrier's voice services.
Frequency division duplex (FDD)	A technique where separate frequency bands are used at the transmitter and receiver side.
Global Navigation Satellite Systems (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.
Internet Protocol Multimedia Subsystem (IMS)	A standardised next-generation architecture for telecoms operators who want to provide mobile and fixed multimedia services.
Jamming	The intentional emission of radio frequency signals to interfere with the operation of GNSS receiver by saturating it with noise or false information.
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.
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.

GLOSSARY

Multiple-Input Multiple-Output (MIMO)	A wireless technology that employs multiple radio antennas on both the transmitter and receiver to improve the data transmission speeds and capacity of wireless networks.
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.
Observed Time Difference of Arrival (OTDOA)	A positioning feature in which user equipment measures the time difference between some specific signals from several base stations and reports these time differences to a specific device in the network.
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 kilohertz to about 300,000 megahertz.
Software-Defined Network (SDN)	An approach to networking in which control is decoupled from hardware and given to a software application called a controller.
Spoofing	An attempt to deceive a GNSS receiver's estimate of its position or time by broadcasting counterfeit GNSS signals, structured to resemble a set of normal GNSS signals, or by rebroadcasting genuine signals captured elsewhere or at a different time.
Time Division Duplex (TDD)	TDD refers to duplex communication links where uplink is separated from downlink by the allocation of different time slots in the same frequency band.
Universal Mobile Telecommunications System (UMTS)	The most common 3G wireless technology globally, which uses wideband code division multiple access on its underlying air interface and offers support for data transfer rates from hundreds of kilobits per second to tens of megabits per second.
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.
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.
Voice over Wi-Fi (VoWi-Fi)	Transmission of IP-based voice communication (VoIP) over a Wi-Fi network.
Wireless Local Area Network (WLAN)	A wireless distribution method for two or more devices that use high-frequency radio waves and often includes an access point to the internet. A WLAN allows users to move around the coverage area, often a home or small office, while maintaining a network connection.

CONTACT DETAILS

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