

We solve electronic
challenges for
a sustainable
world



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Find out more at www.ttelectronics.com/investors/

Front cover image: Airbus A330neo.



Our purpose

We solve electronic challenges for a sustainable world.

TT engineers advanced electronics which benefit our planet and its people for future generations. We do this by designing, manufacturing and working in a way that is cleaner, smarter and improves wellbeing.

Our focus on engineering electronics that work reliably in challenging and performance critical environments helps our customers bring advances that benefit our planet and its people. We apply these principles both to ourselves, in the way that we work and interact with our communities; and through our innovative products and services with our customers. The result is long-term sustainable value for our customers, our people, communities and the planet.

We engineer and manufacture power, sensing and connectivity solutions which enable a more sustainable world. We are working towards sensible sustainability targets by the end of this year to incorporate in our Key Performance Indicators to better measure our performance.

[Read more on page 14–15](#)

We help solve our customers' electronic challenges by providing solutions that are cleaner, smarter, and improve wellbeing. Our power control solutions for aerospace applications contribute to lighter and more environmentally friendly aircraft. The industry-wide "Clean Sky" initiative and the associated economic benefits from increased fuel efficiency is driving demand for our products. We provide smart city infrastructure, including power management devices for smart metering technology which is driving a greater awareness and subsequent reduction in energy usage in business and home environments. We also support our customers with a range of medical solutions including laboratory analysis, minimally invasive procedures and medical diagnostic equipment which helps to improve wellbeing.

Our purpose continued



SUSTAINABLE DEVELOPMENT GOALS

We are aligned to the UN's 17 Sustainable Development Goals and we have set out the areas where our business and values are particularly focused. Each of these areas are closely aligned to our business purpose and where we feel we can have the greatest contribution based on what we do and where we operate.

Our operations are closely aligned to the following four Sustainable Development Goals:



Good Health and Wellbeing

The global challenge

Every two seconds someone aged between 30 to 70 years old dies prematurely from diseases such as cardiovascular disease, chronic respiratory disease, diabetes or cancer. Great progress has been made against several leading causes of death and disease.¹

TT's contribution

Our products and services help to diagnose and treat disease earlier, contributing to better life outcomes for patients. We help manufacture laboratory equipment which is at the cutting edge of medical innovation and disease prevention for the future, helping future generations live longer, healthier lives.



Quality Education

The global challenge

Achieving inclusive and quality education for all reaffirms the belief that education is one of the most powerful and proven vehicles for sustainable development. 103 million young people worldwide lack basic literacy skills, and more than 60 per cent of them are women.²

TT's contribution

TT supports the need for quality education for all as this helps to create smarter solutions to enable a more sustainable world. We train and develop our people and have a progressive approach to diversity and inclusion. We are passionate about encouraging more young people to consider education and careers in our industry and promote STEM initiatives, apprenticeships and internships (read more on page 46).



Industry, Innovation and Infrastructure

The global challenge

Investments in infrastructure – transport, irrigation, energy and information communication technology are crucial to achieving sustainability. Manufacturing is also an important driver of economic development and employment.³

TT's contribution

TT is a global employer of c.4,800 people including manufacturing and research and development related roles. We provide electronics that enable smart meters, helping global citizens be more efficient and conscientious with their energy usage.



Climate Action

The global challenge

The climate change emergency is real. There is no country that is not experiencing the dramatic effects of climate change. Greenhouse gas emissions are more than 50 per cent higher than in 1990. Global warming is causing long-lasting changes to our climate system, which threatens irreversible consequences if we do not act.⁴

TT's contribution

Our products and services contribute towards a more sustainable world. We provide power solutions that enable aircraft to be lighter and more fuel efficient and we are working on innovative next generation technology that will support the market-wide "Clean Sky" initiative. We are conscious of our impact on the environment in the way in which we operate and are working to reduce our impact.

1 Source: www.undp.org/content/undp/en/home/sustainable-development-goals/goal-3-good-health-and-well-being.html

2 Source: www.undp.org/content/undp/en/home/sustainable-development-goals/goal-4-quality-education.html

3 Source: www.undp.org/content/undp/en/home/sustainable-development-goals/goal-9-industry-innovation-and-infrastructure.html

4 Source: www.undp.org/content/undp/en/home/sustainable-development-goals/goal-13-climate-action.html

Headline performance

Revenue	Underlying operating profit ¹
£478.2m	£40.0m
2018: £429.5m	2018: £33.4m
+4% ² (9% at constant currency)	+17% ³

Underlying EPS ¹	Operating profit
18.7p	£18.8m
2018: 16.2p	2018: £16.5m
+13% ³	9% ³

EPS	Free cash flow ⁵
8.5p	£9.7m
2018: 8.0p	2018: £8.5m
1% ³	+14%

Operating cash flow	Cash conversion
£35.9m	98%
2018: £25.1m	2018: 88%
+43%	

Net debt ⁴	Dividend
£(69.1)m	7.0p
2018 ⁶ : £(41.7)m	2018: 6.5p
	+8%

Strategic highlights

- Strategy continues to drive growth, enhance margin and improve quality of business
- Aerospace, defence and medical revenues up 22% organically now 47% of Group revenues
- New customer wins with multi-year recurring revenues; improved order book visibility for the third year in succession
- New self-help programme launched to underpin further margin progression, improved efficiency and reduced carbon footprint
- Successful capital deployment: core technology acquisitions with cross-selling success, and continued R&D investment

Financial highlights

- 4% organic revenue growth; 9% growth at constant currency
- Underlying operating profit and PBT both materially increased; underlying EPS CAGR of 21% since 2015
- 8.4% underlying operating margin, +60 basis points
- ROIC of 11.3%; up 10 basis points to 11.6% before the impact of IFRS 16
- Strong cash conversion of 98% and ongoing investment for growth
- UK pension scheme triennial valuation completed – fully funded on an actuarial basis
- Full year dividend up 8% to 7.0p

1 Excluding the effect of restructuring and other non-recurring costs and acquisition related costs.
 2 Organic growth at constant currency calculated by comparing current year actual results to the prior year results retranslated at current year actual exchange rates.
 3 Growth at constant currency calculated by comparing current year actual results to the prior year results retranslated at current year actual exchange rates.
 4 Net debt before impact of IFRS 16 is £(51.5) million.
 5 Net cash flow from operating activities less cash flow from investing activities (excluding acquisitions and disposal proceeds and tax arising thereon) less interest paid. See note 8 on page 130 for further information.
 6 FY 2019 not restated for impact of IFRS 16.



47%
 Group revenue from aerospace, defence and medical customers

4
 New aerospace, defence and medical customers won

[Read more page 14](#)



1 star
 TT rated as a 1 star great place to work

[Read more page 46](#)



22%

Organic revenue growth in aerospace, defence and medical revenues

Sensing solutions for a smarter world



6%

Increase in R&D investment to £13.5 million (constant currency)

New self-help programme launched to underpin the journey to double-digit margins

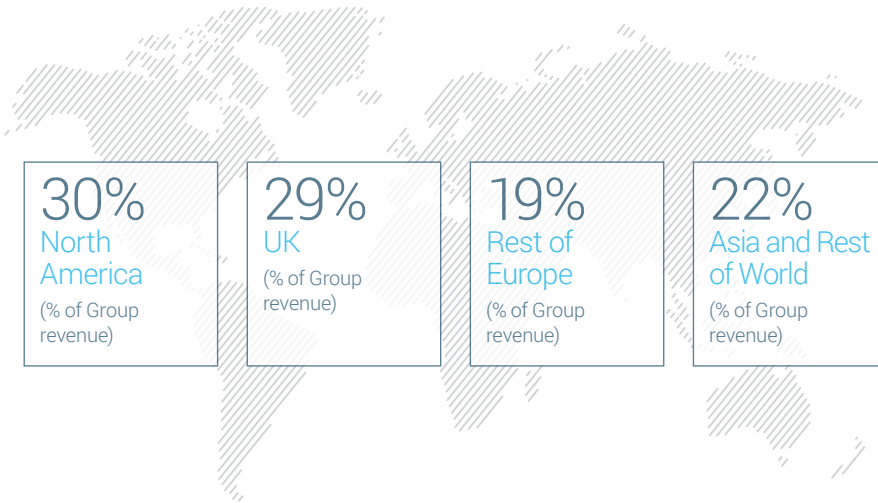
[Read more page 14](#)



Continue reading about our purpose on [pages 1-2](#)

We are well positioned to serve our international customer base

Our global reach



8

Countries where we operate

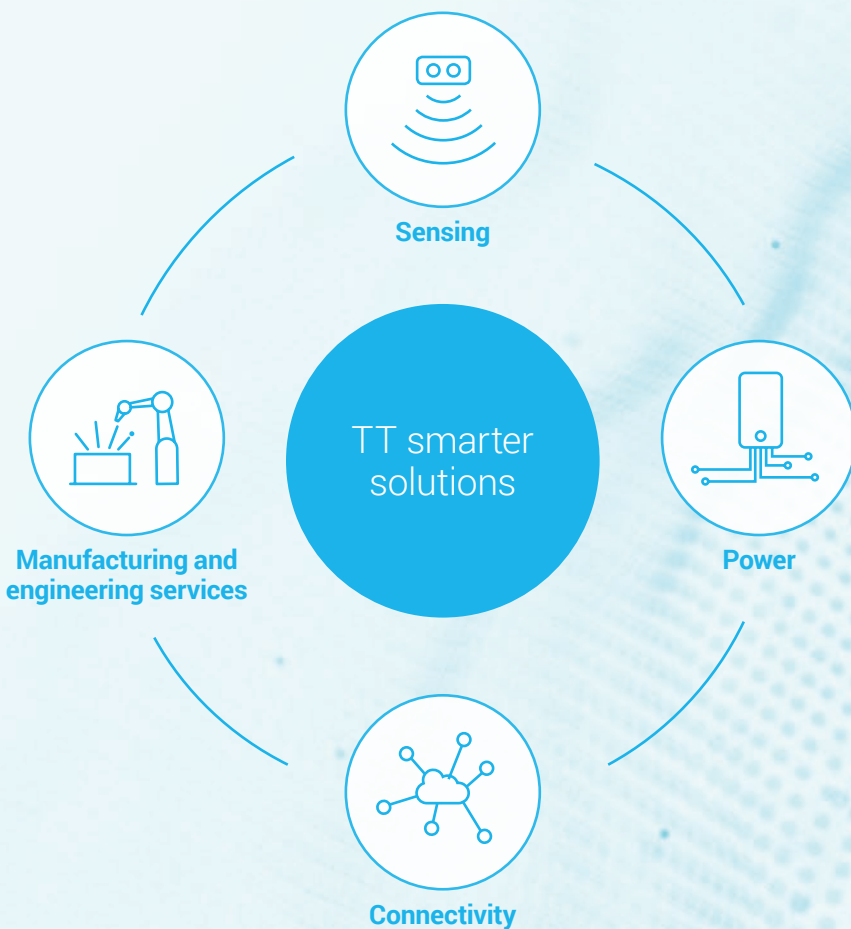
28

Key locations

c.4,800

Employees*

* Average employee numbers through 2019.



Our capabilities

We design and manufacture electronics that sense, manage power and connect to other devices; our solutions are often mission-critical, operating in harsh environments. We:

- Support growth of the aviation sector by improving reliability and environmental efficiency
- Bring tomorrow's medical technologies to life for advanced disease detection and treatment
- Enable factory efficiency and automation for a more productive world

We provide solutions for the drive towards "electronics everywhere" across our markets.

[Read more page 22–23](#)

Our strategy

[See our business model on pages 18–19](#)

Solving electronic challenges for a sustainable world

We create sustainable value by:

1. Positioning ourselves in structural growth markets
2. Creating differentiated capabilities
3. Working with our customers to solve their toughest electronic challenges

We advance our strategy through our five strategic priorities:



Strategic business development



Operational excellence



Building a sustainable business



R&D and value-added product solutions



Value-enhancing acquisitions

Our divisions

[See more on our divisions on pages 32–37](#)

Power and Connectivity

The Power and Connectivity division designs and manufactures power application products and connectivity devices which enable the capture and wireless transfer of data. We collaborate with our customers to develop innovative solutions to optimise their electronic systems.

29%

of Group revenue

Global Manufacturing Solutions

The Global Manufacturing Solutions division provides manufacturing services and engineering solutions for our product divisions and to customers that often require a lower volume and higher mix of different products. We manufacture complex integrated product assemblies for our customers and provide engineering services including designing testing solutions and value-engineering.

45%

of Group revenue

Sensors and Specialist Components

The Sensors and Specialist Components division works with customers to develop standard and customised solutions including sensors and power management devices. Our solutions improve the precision, speed and reliability of critical aspects of our customers' applications.

26%

of Group revenue

Our markets

[See more on our markets on pages 24–31](#)

47%

TT now has 47% of revenues from aerospace, defence and medical markets, 22% organic growth.

24%
of Group revenue

Medical

- Advanced surgical devices
- Imaging and direct patient care
- Laboratory automation and diagnostics

[Read more page 26](#)

23%
of Group revenue

Aerospace and defence

- Commercial and military aircraft
- Space and satellite
- Defence systems and vehicles

[Read more page 28](#)

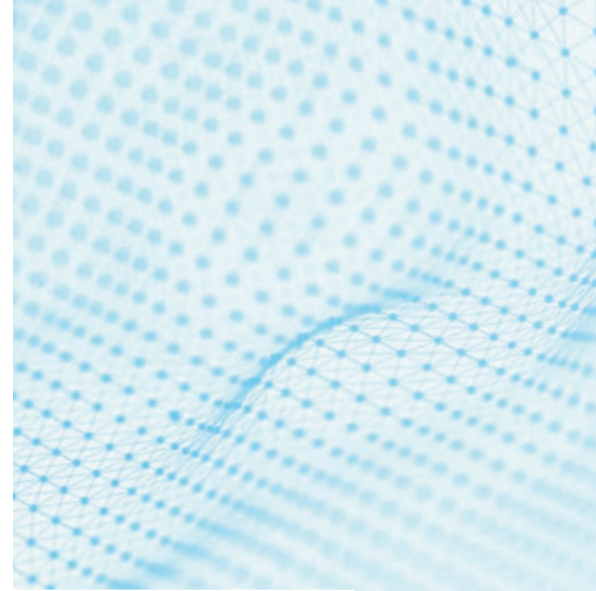
42%
of Group revenue

Industrial

- Automation and control
- Energy and smart devices
- Infrastructure

[Read more page 30](#)

Residual proportion of Group revenue relates to Transportation markets.



2019 was another strong year for TT

We have delivered good growth and continued profit improvement despite macro challenges in some of our markets. Our strong organic performance has been complemented by two capability enhancing acquisitions in our core markets of aerospace, defence and medical, which now represent 47% of our revenue.



TT has a bright future having undergone significant transformation since I joined the Board in May 2015.”

Neil Carson
Chairman

Strategic development

TT has demonstrated that the strategy we set out in 2015 continues to yield benefits and improve the quality of our business. We have delivered good revenue and profit growth which has been enabled by the transformation the business has undergone over the last five years. TT is now a sustainable, higher quality, better balanced business that has continued to perform well despite a more mixed macroeconomic backdrop in some of our markets. By focusing on solving our customers' electronic challenges for a sustainable world, we have grown revenues 4 per cent organically, and we have improved the profitability of the Group once again. We have continued to build leading positions in markets with structural growth drivers where there is increasing electronic content and we have added to our capabilities in our core markets of aerospace, defence and medical with two acquisitions, Power Partners (March 2019) and the Power Solutions business in Covina (announced in November 2019, completed in January 2020).

Our clear strategy and focus on our five strategic priorities has been instrumental in our success. Our power, sensing and connectivity solutions help to enable a more sustainable world. Demand from our customers for more sustainable solutions across our markets is driving growth for the business. Investments made in business development have resulted in our ability to secure a number of new contract wins and growth with our existing key accounts, particularly in aerospace, defence and medical markets which grew 22 per cent organically. Our R&D investment has ensured that we are well placed to benefit from the long-term structural growth drivers in our market despite short-term softening we have seen in our industrial market. We have also increased our engineering efforts on next generation technology for more sustainable aircraft travel in the future alongside some of our key customer partners. Please see pages 10 to 15 for more details on our successes this year. The Board believes that our strategic focus ensures that the business fulfils its potential for all of our stakeholders.

Our people

Our employees at TT are fundamental to the success of the businesses and on behalf of the Board, I would like to thank everyone for their hard work and dedication across our global operations. We are delighted to have added new employees to the TT family following the acquisitions of Power Partners and the Power Solutions business in Covina.

This year the Board was pleased to visit Bedlington and Hartlepool. The Board was impressed with the work the team have done in consolidating our European industrial power and connectivity product manufacturing into our Hartlepool facility and the redevelopment of the Bedlington site to create a centre of excellence for our specialist power and sensing capabilities. We enjoyed meeting some of the Stadium employees at Hartlepool that were welcomed into the TT family in 2018 and hearing about the new opportunities we have been exploring as a combined business. This year, we have also put in place a new employee engagement process to ensure that the voice of employees is considered in Board decision-making. Spending more

Investment proposition

We have positioned TT for organic growth ahead of the market with opportunity to progress our operating margin. By prioritising strong cash performance, with a target of 80%+ cash conversion, we are able to continue to invest in R&D to support growth while improving ROIC and maintaining a progressive dividend policy. We will continue to support our strategy with targeted, complementary acquisitions where we have a track record of successful integration and value creation.

Organic growth ahead of the market

+4%

2018: 6%

R&D investment to support growth

£13.5m

+6% at constant currency

Underlying operating margin progression¹

8.4%

up 60bps

Cash conversion of 80%+

98%

2018: 88%

Improving ROIC*

11.6%

up 10bps

Targeted, complementary acquisitions

2 acquisitions

March 2019 and January 2020

Progressive dividend policy

+8%

to 7.0p

¹ Please see note 8 on page 130 for details on alternative performance measures

* Before the impact of IFRS 16

Please see the Financial Review on pages 38–41 for more information.

time hearing from our employees gives me confidence that we are developing the right talent in the organisation to ensure the sustainability of TT in the future. Please see pages 47 to 48 for more details.

Board changes

During the year, Michael Baunton retired as Non-executive director having served on the Board since 2010. During Michael's involvement in TT, the business transformed from an automotive focused Group to a technology-rich electronics business. On behalf of the Board, I would like to thank Michael for his contribution to TT.

We were delighted to welcome Anne Thorburn to the Board in July. Anne brings many years of experience at Board level in listed companies including those operating in life sciences and medical markets where TT has a growing presence.

At the end of 2019, it was announced that I would be standing down as Chairman as a result of my increasing external commitments. This represented a difficult decision for me personally, as I

have thoroughly enjoyed my time with TT, having witnessed the significant progression made by the business in the past few years. See page 60 for more details and for an overview of Board activities in the year.

Shareholder returns and dividend

During the year I also met with some of our largest shareholders. We discussed how significantly the business has transformed since I became Chairman in 2015 and how we were positioning TT for continued future success. We have paired continued delivery of in year financial performance with longer term strategic positioning. We are ensuring the sustainability of the business in markets with long-term structural growth drivers where the need for our high reliability specialist electronics is increasing. We are leading designers and manufacturers of multiple products that look to minimise environmental impact such as power controls solutions for aerospace and defence applications that contribute to lighter and more environmentally friendly aircraft. We take responsibility for the way in which we run our business and the products we produce seriously and believe that

electronic technology has a huge role to play in building a world where people have a good quality of life and are living within the means of our planet.

The Board is proposing a final dividend of 4.9 pence per share. This, when combined with the interim dividend of 2.1 pence per share, gives an increased total dividend of 7.0 pence per share for the full year (2018: 6.5 pence per share), an increase of 8 per cent.

Looking forward

TT has a bright future having undergone significant transformation since I joined the Board in May 2015. When I step down from the Board in 2020, I will leave feeling confident that TT is now a higher-quality, better-balanced business that has proven to be robust in more mixed market conditions.



Neil Carson
Chairman
3 March 2020



Our performance in 2019 is further evidence that TT is delivering sustainable value for our stakeholders

During the year we delivered good revenue growth alongside continued profit improvement. We continue to be conscious of our impact on our stakeholders and have aligned the business to deliver value for our customers, employees, communities and shareholders.



Our power, sensing and connectivity solutions help to enable a more sustainable world."

Richard Tyson
Chief Executive Officer

2019: another year of strong financial performance

TT has again delivered a strong financial performance in 2019, with good revenue growth, profit improvement and margin enhancement as well as good cash conversion despite a more mixed market backdrop in some of our markets. We are demonstrating that the transformation of the business to focus on markets with structural growth drivers is leading to a higher-margin, better-balanced business capable of sustaining a strong financial performance. Group revenue for 2019 was £478.2 million (2018: £429.5 million), up 4 per cent organically. Acquisitions contributed revenue of £25.8 million and there was a £7.6 million favourable foreign exchange impact. We saw good growth from our aerospace, defence and medical customers and revenues from these customers grew 22 per cent organically, now representing 47 per cent

of our total business. The Group's order book is strong, with an increased proportion of recurring revenues and order visibility has improved for the third year in succession.

Underlying operating profit¹ increased by 17 per cent at constant currency to £40.0 million (2018: £33.4 million). Acquisitions contributed £1.9 million. Statutory operating profit was £18.8 million (2018: £16.5 million), an increase of 14 per cent due to the improved trading performance, partially offset by increased restructuring costs. Statutory profit before tax was £15.1 million (2018: £14.6 million), up 3 per cent. The Group's profit improvement was driven by the Power and Connectivity and Global Manufacturing Solutions divisions which more than offset the impact of softer markets in the primarily industrial facing Sensors and Specialist Components

Strategic highlights

- Strategy continues to drive growth, enhance margin and improve quality of business
- Aerospace, defence and medical revenues up 22% organically, now 47% of Group revenues
- New customer wins with multi-year recurring revenues; improved order book visibility for the third year in succession
- New self-help programme launched to underpin further margin progression, improved efficiency and reduced carbon footprint
- Successful capital deployment: core technology acquisitions with cross-selling success, and continued R&D investment

¹ Please see note 8 on page 130 for details on alternative performance measures



US aerospace and defence acquisition

New power supply business in Covina, US



The business is a designer and manufacturer of power supplies for the US aerospace and defence market. We acquired the business from Excelitas Technologies Corp for \$17.7 million (£13.7 million) on a cash free debt free basis. The acquisition extends our capabilities for power supplies and power converters in our core aerospace and defence markets. It adds to capabilities developed from our R&D and engineering focus in the UK and power capabilities in the medical and industrial markets from the acquisitions of Power Partners and Stadium over the last two years.

The Covina power supply business brings strong margins and a robust growth profile driven by designed-in and mostly sole-sourced positions on major aerospace and defence programmes. The high-quality customer base will provide an opportunity to cross-sell our existing capabilities.

We will invest in the business to further improve its growth prospects and engineering capability.

The acquisition completed on 3 January 2020.

division. Decisive cost action taken in the first half of 2019 has helped to protect margins in this division. The synergy actions arising from the 2018 acquisition of Stadium have now been completed with further run rate benefits expected in 2020.

Underlying operating profit margin for the Group has improved by 60 basis points to 8.4 per cent (2018: 7.8 per cent). Return on invested capital was 11.3 per cent and 11.6 per cent before the impact of IFRS 16, an increase of 10 basis points on a like-for-like basis (2018: 11.5 per cent). We delivered another year of good cash conversion of 98 per cent (2018: 88 per cent) and free cash flow of £9.7 million (2018: £8.5 million). Operating cash flow was £35.9 million (2018: £25.1 million).

Please see note 8 on page 130 for details on alternative performance measures and Additional Information on page 172.

Particularly strong performances in aerospace, defence and medical focused business areas more than offset industrial market weakness.

The Group's strong operating performance was driven by growth in Power and Connectivity and Global Manufacturing Solutions which more than offset a slowdown in Sensors and Specialist Components as a result of softer industrial market demand.

The **Power and Connectivity** division performed strongly, with good growth and significant margin enhancement in the year. Revenues were up 2 per cent organically to £138.2 million (2018: £115.5 million). There was a £1.2 million favourable foreign exchange impact. The growth was driven by increased revenue from existing customers in aerospace, defence and medical. These markets now account for over 50 per cent of the division and grew 14 per cent organically. Acquisitions made a £19.5 million contribution to revenue.

Underlying operating profit was £16.5 million (2018: £11.2 million), up 45 per cent at constant currency. There was a £2.0 million profit contribution from acquisitions. Underlying operating profit margin improved to 11.9 per cent (2018: 9.7 per cent). The growth in underlying operating profit was driven by operational leverage from increased revenues and efficiency improvements, including the closure of three sites associated with the 2018 acquisitions of Stadium and Precision. Delivery of the synergy plan for the Stadium acquisition is now complete and combined with synergies from the acquisition of Precision delivered £2 million of cost savings in 2019

[Read more on pages 32–33](#)



TT is continuing on its path to a higher-quality, better-balanced business as a result of our investment in aerospace, defence and medical markets.”

Global Manufacturing Solutions

delivered very strong revenue growth coupled with improved order visibility, reflecting the value our customers place on our manufacturing and engineering capabilities. Revenues were up by 12 per cent organically to £213.2 million (2018: £181.8 million), driven by growth with customers in aerospace, defence and medical markets following our business development success in these markets over the last two years. There was a £2.2 million favourable foreign exchange impact. Acquisitions made a £6.3 million contribution to revenue in the division.

Underlying operating profit increased to £15.4 million from £11.3 million in 2018, up 34% at constant currency. There was a £0.1 million loss from acquisitions. Underlying operating profit primarily grew as a result of operational leverage on increased revenues and continued operational improvement, particularly in our UK operations. Underlying operating margins improved by 100 basis points to 7.2 per cent (2018: 6.2 per cent). The sustained step up in the margin of the division is a result of the transformation of the business from a manufacturing focus on printed circuit board assemblies to increasingly providing value-added services to our customers. We have invested in engineering teams to enable the manufacture of complex assemblies and to provide more sophisticated testing and engineering services, which account for 55% of revenues. By providing value-added services that benefit our customers, we are developing deeper and longer-term customer relationships and reducing churn in the revenue stream.

[Read more about this on pages 34–35](#)

During the year, the **Sensors and Specialist Components** division was impacted by softer market conditions and inventory de-stocking across its markets. Consequently, revenues were £126.8 million (2018: £132.2 million), down 7 per cent on an organic basis. There was also a favourable £4.2 million foreign exchange impact. This follows very strong mid-to-high single digit organic revenue growth in 2017 and in 2018.

Underlying operating profit was £15.3 million (2018: £18.5 million), down 19 per cent at constant currency. The underlying operating profit margin was 12.1 per cent (2018: 14.0 per cent). The reduction largely reflected the lower revenues and cost headwinds. We accelerated actions to improve the efficiency of our cost base including optimising our footprint and fixed labour costs. We have closed one facility and a further facility is in the process of being closed, with production being consolidated within the existing footprint. The total cash cost of this programme is expected to be circa £3.5 million. These actions realised c. £2 million of savings in the year. The underlying operating profit margin was 12.5 per cent in the second half, following the decisive cost action taken in the first half. We continue to review the range of self-help actions that are open to us in the business.

[Read more on pages 36–37](#)

Solving electronic challenges for a sustainable world Our strategy

We create sustainable value by:

- positioning ourselves in structural growth markets
- creating differentiated capabilities
- working with our customers to solve their toughest electronic challenges.

The trend for “electronics everywhere”, represents a structural growth dynamic in our global markets. In industrial markets, automation and robotics have become commonplace; in medical markets, technology is taking medical surgery to a new level; in aerospace and defence, new aircraft platforms are launching with electronics at the heart of the drive for fuel efficiency; and in transportation, in the rail infrastructure market electronic solutions are being used to help improve efficiency and deliver preventative maintenance programmes. TT provides solutions to address our customers’ challenges in all these markets. Our technology and products are used in a huge range of applications from smart infrastructure to medical scanners and the latest generation fighter jets.

We design and manufacture electronics that sense, manage power and connect to other things; our solutions are often mission-critical, operating in harsh environments. Our sensing capabilities enable the capture of data to inform decisions and support data analytics and artificial intelligence. Our power electronics support the efficient use of power and the protection of circuits from the risk of variation in power. Our connectivity solutions allow our customers to share data and bring together systems to optimise insight, efficiency and performance of entire electronic systems.

We have focused our resources and investments where our capability aligns with the greatest market opportunity, and where we have decades of industry expertise and strong customer relationships to collaborate in areas that are valued by our customers. We are creating strong and differentiated capabilities and are committed to solving our customers’ toughest electronics challenges by engineering smarter solutions together.

Underpinning all of this and fundamental to the success of our business is the engagement of our employees and we are committed to making TT a great place to work. We look after our employees and prioritise safety above all else. We want our employees to go home safely to their families every day after work. We also recognise the effects of mental health on our workforce and have over 85 trained mental health first aiders across the business.

We are committed to developing our people and recognising performance. We continue to work to attract new talent into our organisation and invest in interns and apprentices across the business. One of our UK sites won an award during the year for their apprentice programmes and we place great importance on fostering potential talent in our business. We recognise employees through our Be Inspired recognition scheme and during 2019 we had over 2,600 employees nominated under the scheme for displaying the “TT Way”, showcasing the best examples across the Group. We also aim to ensure

that all employees are included in our pay for performance schemes, be it our site-based profit share schemes or our annual incentive schemes. We believe in the value of employees having performance and development conversations with their managers to help ensure that employees can be their best every day and fulfil their potential. During the year we have taken and will continue to take steps to improve performance conversations and have introduced a new five-point performance scale.

Our strategy is designed to grow TT and create value for our stakeholders including customers, employees, the communities in which we operate and shareholders. Fundamental to the success of our business is the engagement of our employees and we are committed to making TT a great place to work.

We have identified five strategic priorities to focus the Group and enable us to fulfil our potential.

See pages 18–19 for more on our business model and strategy

Strategic business development

Our targeted business development activities identify customers with whom we can build strategic partnerships. We have identified key customer accounts where we have the greatest opportunity to expand our relationships, including introducing teams from other TT divisions. We have a sales council which helps ensure we go to market as “One TT” and we have reorganised our marketing function to support this approach. We have also developed lead coaches across the Group to support members of our sales community and ensure we approach new sales opportunities in a way that maximises our chances of success. This has resulted in new customer wins, increased sales to existing customers and cross-selling successes.

Results of our strategy

Since 2015, the Group has been undergoing a significant transformation and is now a fundamentally different and improved business with a sustainable future.

TT is continuing on the path to becoming a higher quality, better balanced Group with increasing exposure to the structural growth markets of aerospace, defence and medical.

Read more online at www.ttelectronics.com/investors

2015

2019

Aerospace, defence and medical markets
Percentage of Group revenue from

25% —————> 47%

Organic revenue growth from

(3)% —————> 4%

Underlying operating profit margin from

4.3% —————> 8.4%

Return on invested capital from

9.0% —————> 11.6%

1 Star

TT rated by employees as a 1 star great place to work

(Benchmarked by Best Companies Ltd)



Our performance in 2019 is further evidence that TT is delivering sustainable value for our stakeholders continued

Our success is reflected in the very strong growth we have delivered in our Global Manufacturing Solutions division, where we first developed this approach. Across the Group, our top three medical customers grew 18 per cent in the year and we won four new customers in our focus markets of aerospace, defence and medical. We successfully qualified a power supply from our newly acquired Power Partners business onto a medical product for one of our largest customers in Global Manufacturing Solutions, demonstrating early cross-selling success between these businesses. Aerospace and defence customer wins include a contract awarded by L3 Harris Technologies to support a substantial electronics manufacturing programme for a key military platform where we are preparing for contract volumes to ramp up through 2020 and 2021.

[Read more on pages 16–17](#)

R&D and value-added product solutions

During the year, we increased our R&D spend to £13.5 million, up 6 per cent at constant currency. Investment is focused on three areas where we see the greatest opportunity for growth:

- Power solutions for aerospace and medical applications.
- Connectivity for the industrial Internet of Things (IoT).
- Specialist sensing capabilities.

[Read more on pages 16–17](#)

In June 2019 we launched a new prototype power convertor for aerospace applications at the Paris Airshow, demonstrating our product solution capabilities and the ability to move up the value chain. We have been balancing our near-term customer new product introduction priorities with engineering efforts that focus on longer-term initiatives and during the year we secured funding to develop next generation power technology for the aerospace market. We are working alongside Innovate UK and a global engine manufacturer to help develop technology that can be used in more sustainable aircraft travel of the future, contributing to cleaner, quieter air travel.

Operational excellence

We strive to deliver operational excellence at each of our sites, wanting our customers to recognise TT for outstanding service. Following the successful transformation of some of our lowest performing sites in 2018, we continued to deploy our resources in sites where our operational performance has been below TT benchmark levels, particularly in the UK. We see more opportunity to improve our operational performance and drive excellence through our cross divisional operations, supply chain and health and safety councils.

We have worked on optimising our cost base and our environmental impact, by reducing our footprint. In the year, we closed four sites, consolidating operations into our existing manufacturing footprint, so improving the efficiency of the Group.

We have initiated a new self-help programme to underpin the journey to double-digit margins, reducing the fixed cost base of the business, as well as improving the Group's environmental impact. The total cash cost of these projects is expected to be circa £14 million, comprising restructuring costs and capital expenditure, with full year run-rate benefits of £5–6 million in 2022.

We operate a zero-harm strategy and remain determined to continuously improve our safety performance. In 2019, we reduced the number of three day lost time accidents from 17 to four following analysis of issues, shared experiences and a re-doubling of efforts. We have also increased our efforts around near miss reporting, preventative measures and behaviour-based safety training.

[Read more on pages 16–17](#)

Value-enhancing acquisitions

We announced two acquisitions in the year, extending our power supply capabilities in the US across our core markets of aerospace, defence and medical. We acquired Power Partners, a small power supply provider in March 2019. The acquisition extends our technology roadmap for power products

while improving our medical market access. We have already had a power supply designed by Power Partners approved for use with one of Global Manufacturing Solution's largest medical customers for use in pharmaceutical lab equipment.

In November 2019, we announced the acquisition of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California. The acquisition completed on 3 January 2020. The business expands our capabilities in power conversion while giving us enhanced access to the large and attractive US aerospace and defence market. We are focused on opportunities that will extend our existing capabilities in our core markets of aerospace, defence and medical. We continue to develop our acquisition pipeline and review acquisition opportunities that will add complementary capabilities, customers and market access.

[See the case study on page 11 for more information](#)

We continue to develop our acquisition pipeline and review sensible acquisition opportunities that will add complementary capabilities, customers and market access to TT. We are primarily focused on opportunities that will extend our existing capabilities in our core markets of aerospace, defence and medical.

Building a sustainable business

TT engineers advanced electronics that benefit our planet and its people for future generations. We do this by designing, manufacturing and working in a way that is cleaner, smarter and improves wellbeing. Our focus on engineering electronics that work reliably in challenging and performance critical environments helps our customers bring advances that benefit our planet and its people. We apply these principles to ourselves, in the way that we work and interact with our communities and through our innovative products and services for customers. The result is long-term sustainable value for our customers, our people and our local communities.

Our People, Social, Environmental and Ethics Committee (PSEE) has an expanded remit, replacing our long-standing Corporate Social Responsibility Committee, which is chaired by the CEO and attended by a Non-executive director. The Committee drives TT's sustainability strategy in the best interests of our employee, community, customer and investor stakeholders.

We engineer and manufacture power, sensing and connectivity solutions to enable a more sustainable world and we are working towards sensible sustainability targets to incorporate into our Key Performance Indicators to better measure our performance.

We are actively reviewing our operational footprint to improve the efficiency of the Group by optimising our cost base and our environmental impact. Our environmental strategy is focused around the areas we have assessed to have the greatest environmental impact, namely energy usage, waste management and water usage.

- **Energy usage:** Electricity is the largest component of our energy usage. Our target is to become carbon neutral on scope 1 and 2 emissions by 2035. As part of this, we are looking to switch our sites to green energy electricity tariffs, in geographies where they are available, as our energy contracts come up for renewal.
- **Waste management:** Our current waste management focus is around reducing our direct and indirect single plastic usage. During the year TT sites signed a "pledge on plastic" to reduce single use plastic. This pledge was endorsed by the Executive Management Board. We are looking at our waste to landfill and recycled waste and are targeting to reduce our waste to landfill and increase what we recycle.
- **Water usage:** We are conscious of the water we use during our production processes and are working to reduce this where possible. Examples include using wastewater generated by facilities for irrigation.

We are leading designers and manufacturers of products which help to minimise environmental impacts. Our power control solutions for aerospace and defence applications contribute to lighter and more environmentally friendly aircraft. As a result of the "Clean Sky" initiative, and the associated economic benefits from increased fuel efficiency, demand for our products has been increasing. We also produce power management devices for smart metering technology, which is driving a greater awareness of and subsequent reduction in energy usage in the business and home environments.

Update on the impact of Covid-19 (Coronavirus)

TT operates two manufacturing facilities in China. One in Suzhou with c.650 employees and one in Dongguan with c.200 employees. In addition, we have two small support facilities in Shenzhen and Hong Kong. In 2019, these facilities accounted for 25 per cent of the Group's revenues.

Following the coronavirus outbreak at the turn of the year, our primary concern has been the well-being of our employees and managing their safe return to work following the lunar holiday. Both of our facilities closed for the lunar new year holiday as normal and were mostly closed for normal production until 10 February, as directed by the Chinese authorities. During this period, we implemented our business continuity and crisis management plans, responding daily to local authority guidance.

Our Suzhou facility was given special permission to continue production throughout the extended lunar holiday to supply some critically needed medical diagnostic products for use in combating the virus. At this time, under strict government control, we operated at c. 20 per cent capacity instead of being shut completely. Both facilities re-opened on 10 February and experienced a slower than normal capacity ramp-up but as of March 2020 were operating at c.95 per cent capacity. We are continuing to prioritise actions and precautions to ensure the safety and wellbeing of our employees returning to work in the facilities.

We are carefully monitoring our supply chain of around 900 suppliers in China. At this time, to the best of our knowledge, 99 per cent of our suppliers have recommenced operations but with varying degrees of capacity.

Our employees and local leadership have been exemplary during this difficult period. The outstanding efforts of our teams have enabled the business to continue to operate, deliver critical equipment and be returning to normality at the earliest possible time. Our thoughts remain with our employees and their families and those directly impacted by this situation.

Outlook

Our performance in 2019 is the latest evidence of the significant business transformation we have achieved over the last five years. We have delivered a strong performance with another year of good revenue growth, double-digit profit improvement and further margin enhancement despite the macro challenges in some of our markets.

TT is continuing its path to a higher-quality, better-balanced business as a result of our investment in aerospace, defence and medical markets. Our power, sensing and connectivity solutions help to enable a more sustainable world. We have added to our technology and capabilities with the US acquisitions of Power Partners and the Covina power supply business.

We are well placed to make progress in 2020 and beyond. However, the duration and impact of the coronavirus remains uncertain, and based on the current situation we anticipate that it could impact underlying operating profit by up to £3 million in 2020. We are focused on making further strategic progress, and our new self-help programme underpins the journey to double-digit margins.



Richard Tyson
Chief Executive Officer
3 March 2020

Our strategic priorities

We have focused our investment to support our strategy around our five strategic priorities.



Strategic business development

We are focused on ensuring our business development function is fit for purpose as TT builds momentum with new product launches and developing strategic partnerships with our customers. We have continued our efforts around training and developing our people to promote a solutions-based sales approach and will focus on continuing to develop strategic customer relationships.



R&D and value-added product solutions

As TT moves to be a higher margin, higher value, and increasingly product focused business, the requirement for value-added product solutions, innovation and R&D is increasing. By deploying additional resources in our R&D function, we will prioritise increasing the effectiveness of our R&D spend and accelerate our ability to move up the value-chain where our customers support us doing so to develop smarter solutions together.

Future priorities

- Continue to provide tools, training and development to customer facing employees
- Developing our marketing function and digital resources for engineers
- Continued prioritisation of key customer accounts where we see the greatest opportunity for cross-selling
- Clear focus around engineering investment in three core capability areas: power solutions for aerospace and medical applications; connectivity for the industrial IoT; and specialist sensing capabilities
- Continued customisation of platform products that have already been launched alongside new product development
- Continue to access funding for next generation technology development alongside nearer term new product introduction

Highlights

- Organic revenue growth remained in mid-single digits at 4 per cent despite a mixed macroeconomic environment in some of our markets
- New customer wins in aerospace, defence and medical, including two new aerospace customers for our power solutions
- Good growth in key accounts, including 18 per cent growth in our top three medical accounts
- Increased R&D spend to £13.5 million during the year, up 6 per cent at constant currency
- Launched a new prototype power convertor for aerospace applications at the Paris Airshow in June 2019, moving up the value chain and extending our capabilities
- Funding secured for next generation power technology development alongside Innovate UK and an OEM engine manufacturer to develop technology for more sustainable aircraft of the future

Link to KPIs

- Organic revenue
- Underlying operating profit margin
- Underlying EPS
- Return on invested capital
- Engagement score
- R&D spend
- Organic revenue growth
- Underlying operating profit margin
- Underlying EPS
- Cash conversion
- Return on invested capital
- Engagement score
- R&D spend



Operational excellence

We want our customers to recognise TT for our excellent service. Alongside continuing our BE Lean activities, we are focused on optimising our operations and taking sensible actions to improve our procurement effectiveness.



Value-enhancing acquisitions

Targeted, complementary acquisitions provide an opportunity to accelerate our strategy and growth opportunities, providing enhanced capabilities and market access.



Building a sustainable business

Building a sustainable business is fundamental to the strategy of the Group. TT engineers advanced electronics which benefit us all now and will benefit future generations. We do this by designing, manufacturing and working in a way that is cleaner, smarter and improves wellbeing. We are conscious of the impact we have on the environment in which we operate and our impact across our customer, employee, shareholders and communities.

- New self-help programme launched to underpin the journey to double-digit margins; reduce the fixed cost base of the business; and improve the Group's environmental impact. Cash costs expected to be c.£14 million with full year run rate benefits of £5–6million in 2022
- Sharing operational best practice with Power Partners and the power supply business in Covina as part of our integration process

- Integration of Power Partners and the power supply business in Covina
- Delivery of cost synergies from existing acquisitions and cross-selling opportunities from expanded customer base and technology offering
- Continued development of our acquisition pipeline and review of sensible acquisition opportunities that would add complementary capabilities, customers and scope to TT

- Continue to focus on power, sensing and connectivity solutions which enable a more sustainable world
- Through the PSEE Committee which is chaired by the CEO and attended by a Non-executive director, we will drive TT's sustainability strategy in the best interest of our employee, community, customer and investor stakeholders
- Actively review our operational footprint to improve the efficiency of the Group by optimising our cost base and our environmental impact (see pages 50–52 for our environmental strategy)

- Self-help actions to improve our operational performance has led to improvements in profitability and margin
- Synergy from operational optimisation following the acquisition of Stadium is now complete
- Proactive steps taken in Sensors and Specialist Components to optimise the cost base following market softness protecting margins

- Acquired Power Partners in March 2019 for \$1.6 million (£1.2 million) on a cash free debt free basis, with an additional performance-based amount of up to \$1.3 million (£1.0 million) payable over two years. The business extends our medical power supply capabilities in the US
- Acquired power supply business in Covina which completed in January 2020 for \$17.7 million (£13.7 million) extending our aerospace and defence power supply capabilities in the US

- Achieved a reduction in our carbon footprint of 16 per cent through initiatives including introduction of LED lighting and sensors
- Improved business efficiency by rationalisation of three sites of c.37,000 square footage, reducing our carbon footprint
- Made good progress developing our sustainability strategy and collecting data to benchmark our performance from next year

- Underlying EPS
- Cash conversion
- Return on invested capital
- Safety performance
- Engagement score
- R&D spend

- Underlying EPS
- Return on invested capital
- R&D spend

- Organic revenue
- Underlying operating profit margin
- Underlying earnings per share
- Cash conversion
- Return on invested capital
- Safety performance
- Engagement score
- R&D spend

Our business model and strategy

Our resources and relationships:

Our people and culture

Engagement with our employees is at the heart of our “BE TT” strategy which stands for “Build Expertise”. Our culture is built on the “TT Way”. Our people are highly experienced, often with leading expertise in their field. We work together to foster a company we can all be proud of.

See pages 46–49

Our engineering capability

We work closely with our customers to align our engineering resources to the right applications and markets where our differentiated capabilities are valued by our customers and can be used to bring advances that benefit both our planet and its people.

See pages 22–23

Our business development organisation

We have invested in training and tools to give our business development organisation the best opportunity to grow existing customer relationships and win new customers.

See pages 16–17

A global manufacturing footprint

We have a global manufacturing footprint across the UK, US, and Asia that complements our customers.

See page 6

Access to our customers

We want to be known for excellent customer service. We have built credibility with our customers over many years and work in partnership to solve their electronic challenges.

See pages 16–17

Leveraging our attributes and unlocking their potential

We drive value by:

- Engaging, training and supporting our employees.
- Fostering a culture that matches our values.
- Targeted investment in our five strategic priorities.
- Effectively utilising our global manufacturing footprint.

Capital re-investment

TT is a cash generative business.

The cash we generate is used to reinvest in the business, including in our engineering expertise, business development and nurturing our talent. We further allocate our capital to growing our business through acquisitions; we service our pension liabilities; and we pay a progressive dividend to shareholders.

Our strategy:

Our focused strategy enhances our potential, optimising our business performance to create sustainable value for each of our stakeholder groups.

1. Clear market focus

We are focused on building leading positions in areas of the market where there are structural growth drivers, and the trend for “electronics everywhere” is driving demand for our solutions.

2. Creating differentiated capabilities

We concentrate our time and resources on market areas where our industry expertise and R&D investment creates strong and differentiated capabilities valued by our customers.

3. Engineering smarter solutions with our customers

We are committed to solving electronic challenges for a sustainable world, designing, manufacturing, and working in a way that leads to a world that is cleaner, smarter, and improves wellbeing.

Our strategic priorities:

We focus our investment around our strategic priorities:



Strategic business development



R&D and value-added product solutions



Operational excellence



Value-enhancing acquisitions



Building a sustainable business

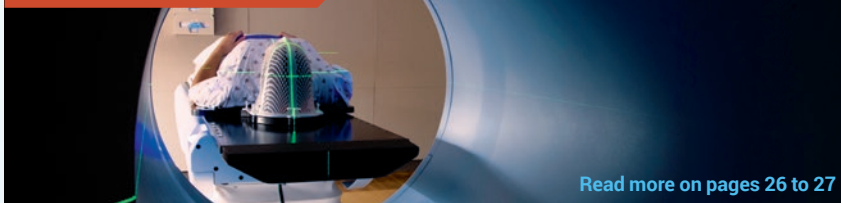
See pages 16–17

We leverage our attributes to unlock TT's potential and solve electronic challenges for a sustainable world.

How we generate revenue

Our markets

Medical



[Read more on pages 26 to 27](#)

Aerospace and defence



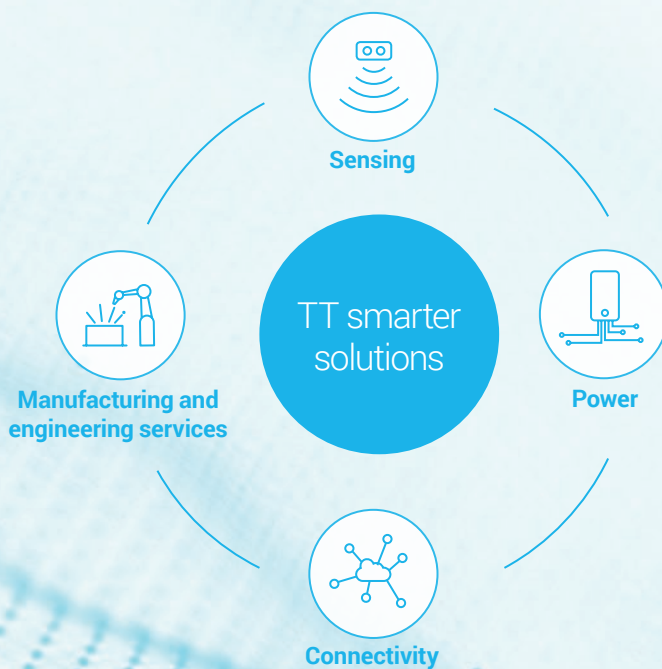
[Read more on pages 28 to 29](#)

Industrial



[Read more on pages 30 to 31](#)

We go to market with clear capabilities



Creating value for our stakeholders

TT is a business that delivers long-term sustainable value for our customers, our people, our communities and our investors and we align our strategy to maximise value for all our stakeholders.

Customers

We work with our customers to transform their product ideas into tangible solutions using our leading electronic engineering expertise.

4%

Organic revenue growth
2018: 6%

[See pages 38–41](#)

Employees

We reward and support our people globally, both financially and through personal and professional development. We were benchmarked as a 1 star great place to work by Best Companies Ltd.

1 Star

Great place to work

[See pages 46–49](#)

Communities

We manage our business activities to minimise the environmental impact of our operations and support the local communities we operate in.

>5,300

"hours for giving" to good causes,
up more than 10%

[See pages 50–53](#)

Shareholders

Our strategy is structured to ensure long-term business sustainability, driving growth and value for our shareholders and our other stakeholders. We have a progressive dividend policy.

18.7p

Underlying EPS up 13%
at constant currency

[See pages 38–41](#)

Key performance indicators

Our strategic priorities



Strategic business development



R&D and value-added product solutions



Operational excellence



Value-enhancing acquisitions



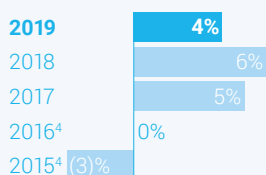
Building a sustainable business

Financial

Organic revenue growth (%)

4%

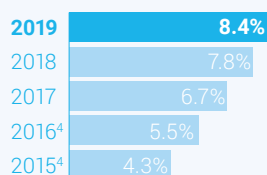
2018: 6%



Underlying operating profit margin (%)

8.4%

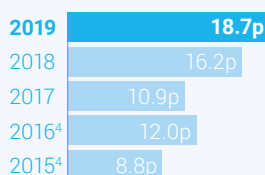
2018: 7.8%



Underlying earnings per share (EPS) (p)

18.7p

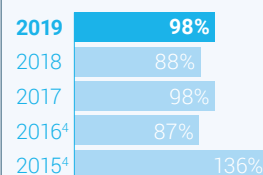
2018: 16.2p, up 13%¹



Cash conversion (%)

98%

2018: 88%



Strategic priorities



Description

Organic revenue growth measures the revenue from continuing Group operations in the current year and is the percentage change from the prior year. The effects of currency movements, divestments and acquisitions made during the current or prior financial year have been removed.

Underlying operating profit margin is calculated as underlying operating profit divided by revenue.

Underlying EPS is calculated as underlying profit after tax for the year, divided by the weighted average number of shares in issue during the year.

Cash conversion is defined as underlying operating cash flows, expressed as a percentage of underlying operating profit.

Relevance

Our organic revenue growth measures the underlying growth of the business and is an indicator of our ability, over the longer term, to position ourselves in structural growth markets.

Our underlying operating profit margin is an indicator of our ability, over the longer term, to extract fair value for our differentiated products and services while maintaining an appropriate cost base in the business.

This is relevant to determining corporate profitability for shareholders. Underlying EPS is a measure used as one of the performance conditions in the Group's Long-Term Incentive Plan. [Read more on remuneration pages 74–98](#)

Cash conversion measures how effectively we convert profit into cash and tracks the management of our working capital and capital expenditure.

Performance

We have maintained good organic growth despite a challenging macroeconomic backdrop and mixed market conditions, demonstrating the robustness of our business model and a higher level of sales from less cyclical markets including in aerospace, defence and medical industries.

Our underlying operating profit margin has improved again, despite softness in our highest margin and predominantly industrial facing Sensors and Specialist Component division. Both our Power and Connectivity and Global Manufacturing Solutions divisions saw strong margin progression reflecting operational leverage from higher sales and efficiency improvements.

Underlying EPS has increased by 11 per cent due to underlying operating profit growth from organic improvement and the contribution from acquisitions. Since 2015, EPS has improved by a CAGR of 21 per cent.

Our continued focus on generating cash has resulted in another year of strong cash conversion, particularly in the second half and while investing for growth.

¹ Constant currency.

² Excluding IFRS 16, ROIC was 11.6 per cent, up 10 bps.

³ Sales include revenues from the Sensors and Specialist Components and Power and Connectivity divisions. It does not include sales from the Global Manufacturing Solutions division as this division does not consume R&D.

⁴ 2015 and 2016 have not been restated for the disposal of the Transportation division.

The focus we have on our KPIs has been instrumental in delivering a transformed business over the last five years. TT is a higher margin, higher quality business that is growing strongly, providing solutions for our customers' electronics challenges for a more sustainable world. We have an engaged and motivated workforce that prioritises a culture of safety above all else. We are focused on delivering our KPIs to drive sustainable value for our employees, customers, communities and investors. We have introduced underlying operating profit margin as a new KPI to focus on our ability to extract value for the differentiated products and services we provide alongside maintaining an appropriate cost base for the business.

Non-financial																																											
Return on invested capital (%) ²	Safety performance (No. of incidents)	Engagement score	R&D spend (% of sales ³)																																								
11.3%	4	4.82 (2018)	5.1%																																								
2018: 11.5%	2018: 17 (76%)	Next survey in 2020	2018: 5.1%																																								
<table border="1"> <tr><td>2019</td><td>11.3%</td></tr> <tr><td>2018</td><td>11.5%</td></tr> <tr><td>2017</td><td>10.6%</td></tr> <tr><td>2016⁴</td><td>10.3%</td></tr> <tr><td>2015⁴</td><td>9.0%</td></tr> </table>	2019	11.3%	2018	11.5%	2017	10.6%	2016 ⁴	10.3%	2015 ⁴	9.0%	<table border="1"> <tr><td>2019</td><td>4</td></tr> <tr><td>2018</td><td>17</td></tr> <tr><td>2017</td><td>7</td></tr> <tr><td>2016⁴</td><td>13</td></tr> <tr><td>2015⁴</td><td>29</td></tr> </table>	2019	4	2018	17	2017	7	2016 ⁴	13	2015 ⁴	29	<table border="1"> <tr><td>2019</td><td>interim pulse surveys</td></tr> <tr><td>2018</td><td>4.82</td></tr> <tr><td>2017</td><td>4.73</td></tr> <tr><td>2016⁴</td><td>4.59</td></tr> <tr><td>2015⁴</td><td>4.54</td></tr> </table>	2019	interim pulse surveys	2018	4.82	2017	4.73	2016 ⁴	4.59	2015 ⁴	4.54	<table border="1"> <tr><td>2019</td><td>5.1%</td></tr> <tr><td>2018</td><td>5.1%</td></tr> <tr><td>2017</td><td>4.6%</td></tr> <tr><td>2016⁴</td><td>4.0%</td></tr> <tr><td>2015⁴</td><td>4.0%</td></tr> </table>	2019	5.1%	2018	5.1%	2017	4.6%	2016 ⁴	4.0%	2015 ⁴	4.0%
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Strategic priorities																																											
Description																																											
<p>Return on invested capital is defined as underlying operating profit for the year divided by monthly average invested capital for the year. Average invested capital excludes provisions, tax balances and financial assets and liabilities, including cash, borrowings and pension.</p>	<p>Safety performance is quantified as the number of occupational injuries resulting in three or more days' absence.</p>	<p>We use our employee survey to measure how our employees feel about working for TT, using a scale of one (low) to seven (high) against eight factors (as surveyed by Best Companies Ltd).</p>	<p>R&D spend is defined as the cash spent on R&D in the Power and Connectivity and Sensors and Specialist Components divisions divided by the revenues from these divisions. The Global Manufacturing Solutions division does not consume R&D.</p>																																								
Relevance																																											
<p>This measures how efficiently we use our assets to generate returns, with the target of exceeding the cost of holding the assets.</p>	<p>This KPI allows us to compare our performance with that of our peers. We use a UK benchmark, published by the Health and Safety Executive, and apply this to all our facilities worldwide, reflecting our commitment to raising standards globally. The Board consider our safety culture and performance in their discretionary consideration on incentive payments.</p>	<p>Employee engagement is at the heart of our strategy. We want our employees to be proud to work for TT. Our values are set out in the "TT Way". The Board consider corporate culture and engagement in their discretionary consideration on incentive payments. Read more on the TT Way pages 46–49 and more on remuneration pages 74–98</p>	<p>This KPI is an indicator of operational performance, as we continue to invest in R&D to generate new products and extend our capabilities.</p>																																								
Performance																																											
<p>Our like-for-like 10bps improvement in ROIC is a result of good profit growth coupled with continued capital discipline.</p>	<p>We have seen a good improvement in our safety performance this year by focusing on near misses, preventative measures and behaviour-based training. 86% of our sites achieved zero harm during the year and we continue to focus on achieving zero harm in every site.</p>	<p>We continue to see strong levels of engagement across the Group following our recognition as a 1 Star great place to work in late 2018. During 2019 we decided to conduct a survey every 18–24 months to allow more time to benchmark progress and implement changes. We conducted "pulse surveys" to provide an interim indication of progress being made. The Board visited several facilities during the year and one of our Non-executive directors sits on our PSEE Committee to ensure the Board is engaged with the voice of our employees. Read more on page 47</p>	<p>We remain focused on core areas of R&D investment around power solutions for aerospace and medical applications; connectivity for the industrial IoT; and specialist sensing capabilities. We have increased the cash spend by 6 per cent at constant currency.</p>																																								

Our capabilities



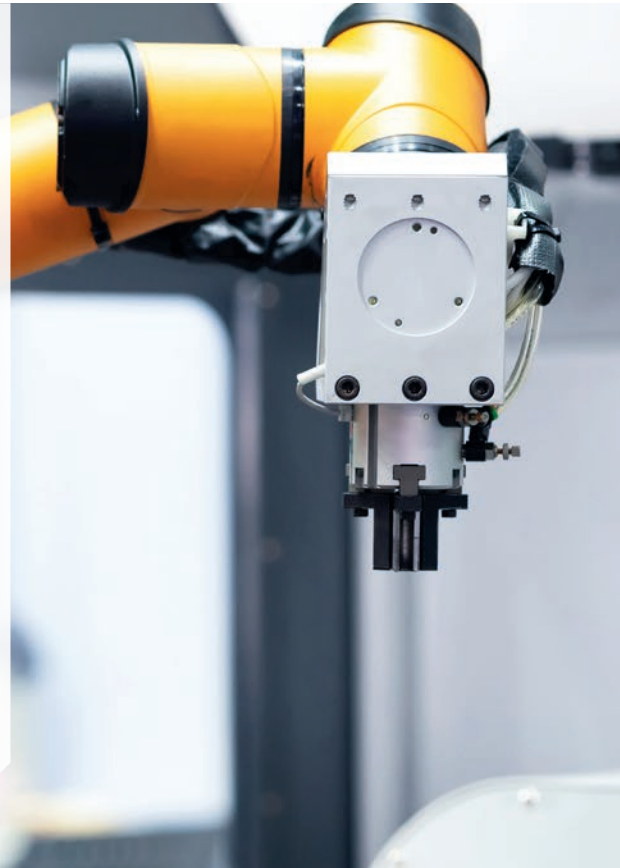
Sensing

Our sensors measure power, flow, temperature and position in electronic devices and provide a smart response, informing our customers when processes are working efficiently or alerting them to an issue. This makes our sensors increasingly important in our next generation data-driven world, with autonomous machines and the IoT bringing sensor technology to the forefront of electronics design. By sensing power within an electronic circuit, our devices can help protect electronic devices from malfunctioning, maintaining product safety and brand reputation for our customers.

Our sensors can be programmed to manage minute positioning of a robotic arm for exceptional accuracy in automated factories. In medical applications, our sensors can use light to detect whether liquid is moving through a drip to a patient and can be used to alert hospital staff enabling safer patient monitoring.

Primary markets served by our sensing capabilities

- Industrial
- Aerospace and defence
- Medical



Power

Our power capabilities help drive increased efficiency across a range of power management applications. We design and deliver power solutions that convert direct or alternating current from one voltage level to another, providing an energy-efficient method of managing power through a circuit. Power conversion by switching can be more than 75 per cent more efficient than other methods of regulating voltage¹. By regulating and controlling the power in a circuit, our capabilities allow us to manage the heat generated when providing solutions that are smaller in size, lower in weight and packaged to guarantee peak performance in the harshest of environments.

This is especially crucial where power is a scarce resource, such as on an

aeroplane. As we continue to move towards “more electric aircraft”, increased electronics need more power and that power has to be managed more effectively.

Our long heritage in power componentry has proved a key differentiator, as we have started to design and build entire power supplies which can be used in a wide variety of critical applications, including powering navigation systems on both commercial and military aircraft.

Primary markets served by our power capabilities

- Aerospace and defence
- Medical
- Industrial

¹ Andy Howard “How to Design DC-to-DC Converters”.





Connectivity

Our connectivity capabilities allow data to be monitored and managed wirelessly enabling greater efficiency for our customers who are able to remotely track and monitor their assets or processes and also potentially monetise the data collected. Our hardware can be used in industrial and medical applications including automation, robotics, security, asset tracking, smart home technologies and pharmaceutical inventory management.

Our solutions are developed as a platform enabling customisations for our customers specific requirements, improving their speed to market. Our platform devices are designed

to seamlessly upgrade to 5G and therefore benefit from the increased data rates and reliability that this architecture will allow.

Our connectivity sensors and wireless hub can be used on the underside of train carriages to detect the movement of the train along the track, identifying and communicating any discrepancies in movement which allows remote monitoring of the track condition and enables timely preventative maintenance action to be taken.

Primary markets served by our connectivity capabilities

- Industrial
- Medical



Manufacturing and engineering services

Our complementary manufacturing and engineering services sit alongside our product offerings. We provide manufacturing and engineering services for our product divisions as well as customers, using our world-class global manufacturing locations. Our differentiation lies in our ability to manufacture highly complex assemblies for products used in highly regulated markets such as medical laboratory equipment and aircraft braking systems.

Our manufacturing capabilities are supported by our talented engineers who can design bespoke testing equipment for our customers to ensure the product meets critical functional requirements with extreme accuracy. We also provide value-engineering services, helping customers as they initially prototype a new product introduction to design the product for cost-optimised manufacturing while maintaining the highest levels of quality and reliability.

Primary markets served by our manufacturing and engineering services

- Aerospace and defence
- Industrial
- Medical

Global trends driving structural growth in our markets

Market	Trend description	
<p>Medical</p>  <p>Read more on pages 26–27</p>	<p>Trends in the healthcare industry continue to be positive as global incomes rise and the demand for improved healthcare increases globally. Themes that are supporting the healthcare market include ageing populations, developing healthcare infrastructure and people being more proactive in looking for preventive care through new technologies such as genetic mapping, in-vitro diagnostics and connected healthcare services. These themes are driving a growing medical device market globally which demands innovation and new technologies.</p>	<p>The overall medical device market is expected to experience continued growth of 5.4% annually⁷ as adoption of new medical technologies from continued investment and R&D drive returns for the full supply chain. Additionally, IoT and connectivity remain a core area of growth within the medical market where patients seek quick diagnostics through wearables. Telemedicine and clinical research organisations are adopting connectivity solutions to support demands from clinical-trials for new drugs and medical devices. The healthcare IoT and Connectivity market is estimated to grow at c.28% to 2024.¹⁴</p>
<p>Aerospace and defence</p>  <p>Read more on pages 28–29</p>	<p>The commercial aerospace market has attractive growth drivers; air passenger numbers are increasing, and successive platforms are being designed with ever greater electronic content as customers are demanding more efficient and cleaner air travel. The need for more environmentally friendly air travel to reduce CO₂ emissions is supported by industry wide initiatives such as “Clean Sky” led by the European commission. Boeing’s new 787 Dreamliner uses 20% less fuel than previous models and its 777X under development is expected to be the largest and most fuel-efficient twin-aisle airplane¹. As a result, the electrification of aircraft will continue in the long term which increases</p>	<p>the demands for advanced engineering solutions including new engine technologies and more efficient power systems.</p> <p>The defence industry is also undergoing a number of structural growth drivers supported by the need for modernisation and demands for advanced technology. The US Department of Defence budget is more than \$700bn² while the UK Ministry of Defence budget is c.£37bn³ and both are expected to grow. This provides opportunities for those operating in the defence supply chain. We are also seeing continued growth in the space industry which requires high-reliability electronic solutions.</p>
<p>Industrial</p>  <p>Read more on pages 30–31</p>	<p>In 2019, our industrial markets experienced short-term weakness on the back of global uncertainty around policy and trade. The slow-down in industrial activity can be seen as the PMIs across Europe, the US and Asia experienced headwinds and showed a downward trend. However, the long term viability of the industrial market focused around the need for improved manufacturing efficiency through new technologies such as automation, IoT, connectivity and robotics remains</p>	<p>attractive with long-term structural growth drivers. These advancements provide the benefits of reduced costs while increasing quality of products and flexibility to market. The market opportunity for improvements in the industrial sector through more advanced technology is estimated to be over \$1 trillion.¹⁰</p>

Sources:

- 1 Boeing 2019 Environmental Report
- 2 US Congressional Budget Office 2019.
- 3 rusi.org/commentary/end-defence-austerity-2019-spending-round-and-uk-defence-budget
- 4 Aircraft Electrical Systems Market by System, MarketsandMarkets 2019.
- 5 Defence News 2018.
- 6 Space Industry is the Market of the Future, ASDNews 2018
- 7 Fortune Business Insights Medical Device Markets, 2019
- 8 Surgical Robots Market, Kenneth Research 2019.
- 9 Global Laboratory Automation Systems Market, ResearchAndMarkets.com 2019.
- 10 The trillion-dollar opportunity for industrials, McKinsey & Company 2018.
- 11 Newton Evans, 2017
- 12 Global Smart Factory Industry 2019 Market Research Report, Market Reports World 2019.
- 13 MHI Deloitte Industry Report 2019
- 14 Research and Markets Global IoT in Healthcare Market 2020

Our response

\$600bn

The global addressable market for medical devices is expected to grow at a CAGR of 5.4% and reach over \$600 billion by 2025⁷

10.4%

The global surgical robots market growth is expected grow at a CAGR of 10.4% to 2025⁸

8%

The global laboratory automation systems market is expected to reach to grow at a CAGR of 8% to 2026⁹

TT's involvement is to work with our customers who are at the forefront of the increased demands and growth in the medical sector using our range of highly-engineered solutions across patient monitoring, laboratory equipment and diagnostic equipment. We continue to demonstrate our commitment in this market through organic and acquisition investment. In 2019, we acquired Power Partners Inc., located near Boston which focuses on power solutions for the healthcare market. We also have the capabilities to deliver connectivity for healthcare equipment following our acquisition of Stadium in 2018.

We continue to expand our capabilities and our offering in healthcare which has seen year over year growth through our focused business development actions. This has led to double digit growth with our largest medical customers.

\$41.7.bn

Market Worth \$41.7 Billion by 2025 and growing at a 5.7% CAGR⁴

£37bn

The US DoD Budget is over \$700bn² and the UK MoD is £37bn³

5–6%

The global space industry is projected to grow annually at 5–6%⁶

We are providing innovative solutions and systems which are proven to have high-reliability for mission critical products for our customers who are responsible for commercial aircraft, defence platforms and space programmes. We are investing in our business development capabilities in aerospace and defence and have won a number of contracts for the F-35 defence programme during the year. We have also targeted our R&D investment to take advantage of opportunities in this market both in the near term and for next generation technology.

We have established an R&D centre at the University of Nottingham and partnered with a global OEM engine manufacturer and Innovate UK to develop next generation engine technology for more advanced power solutions and cleaner aircraft in the future.

In November 2019, we announced the acquisition of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California. The acquisition completed on 3 January 2020. The business expands our capabilities for providing advanced power solutions to our customers while giving us enhanced access to the large and growing US market.

\$1tr

Improvements in the industrial sector through technology is estimated to be worth over \$1 trillion¹⁰

\$13.8bn

The market for smart grid investment is expected to grow from \$6.4 billion in 2018 to \$13.8 billion in 2024, driven primarily by smart devices¹⁰

+9%

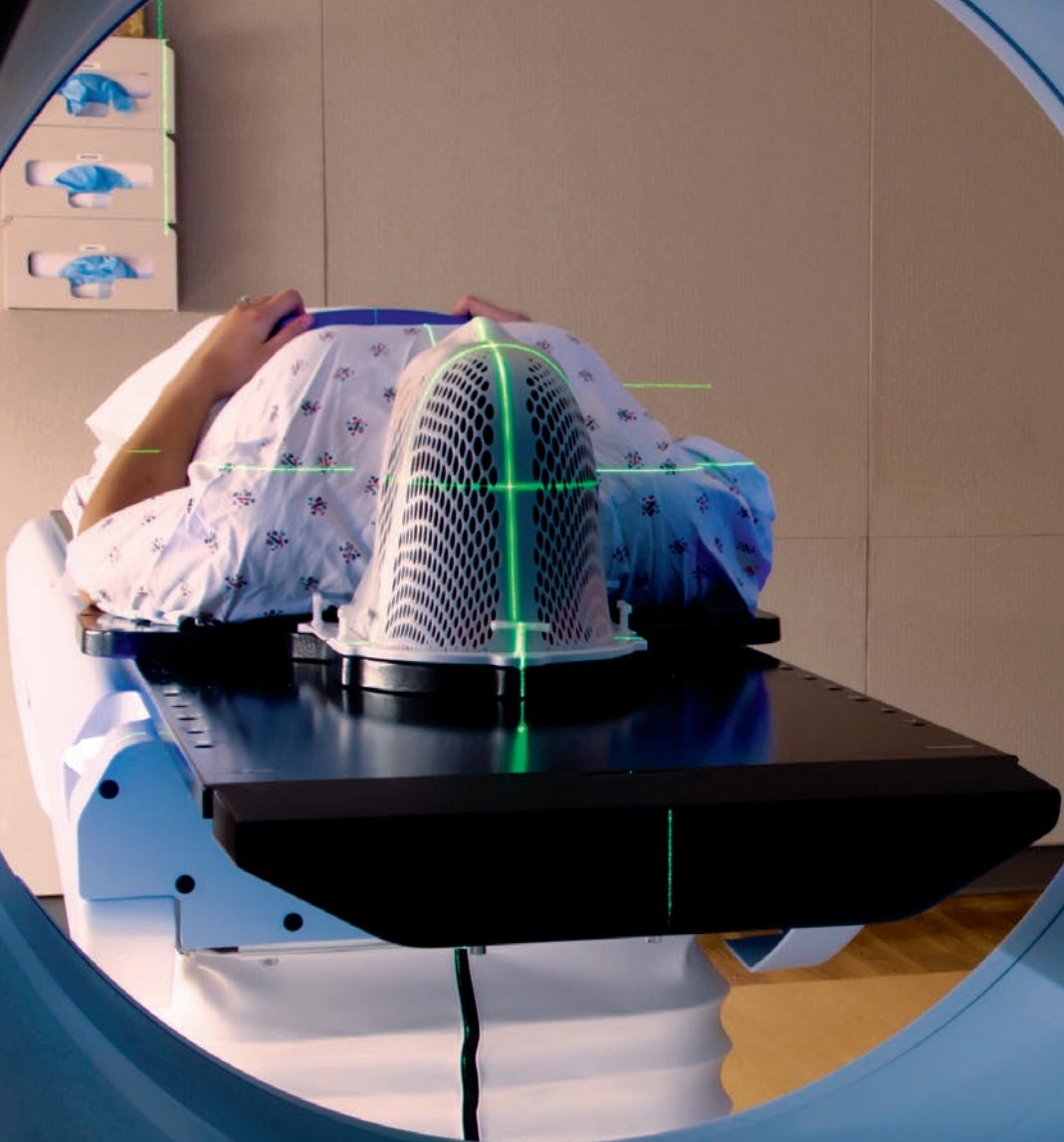
The global smart factory and factory automation market is expected to grow at c. 9% annually¹³

We have focused our R&D investment around connectivity for the industrial IoT and specialist sensing capabilities, some of which have applications in industrial markets such as our highly accurate position sensors for robotic automation. We have started to see good traction for our connectivity devices in the market following the acquisition of Stadium in 2018 including working with customers on potential solutions for cold chain monitoring and wireless home alarm products. Cold chain monitoring is where sensors and controlling devices are used to track and monitor temperature to maintain a consistent environment for perishable food and medicine throughout the supply chain.

Our business development efforts have been focused on areas where the short-term headwinds in the market have been offset by favourable market conditions. During the year, we won three new industrial customers in Asia, including one customer in the solar power industry, supporting their product capabilities to convert light into electricity.

Medical

Improving wellbeing with life-changing technology



24%

of Group revenue

We work with some of the world's leading medical equipment developers and manufacturers. Our customers rely on our experience in high-precision and high-reliability applications for their life-critical medical devices and equipment and we support independent design firms and contract manufacturers from design to production.

TT provides solutions to the medical market including advanced surgical devices; imaging and direct patient care; laboratory analysis and diagnostics.

[Read more on pages 16–19 for the structural growth drivers behind the demand for our solutions](#)



Medical and life science companies trust us to support them with their applications, relying on our years of expertise and specialist manufacturing facilities which ensure we meet or exceed the highest requirements of medical certifications required by our customers. Our products contribute to improved wellbeing of people today and in the future, creating products for medical technologies that improve health outcomes. Ensuring healthy lives and promoting wellbeing for all at all ages is important to building prosperous societies. We manufacture products that help treat cancer, including radiation therapy and oncology pathology equipment which were identified by the World Health Organisation as being priority medical devices in the treatment of cancer.¹

Following the acquisition of Precision in 2018, we extended our medical capabilities with new product offerings for “in-body” surgical devices including defibrillators, neuro-stimulation and pacemakers, as well as medical surgical navigation devices. Medical professionals are being supported by medical technology to improve productivity and reduce the requirements for larger, more invasive procedures in favour of a growing number of “in-body” surgeries. Minimally invasive surgery utilises surgical techniques that limit the size and number of cuts or incisions during an operation with the help of small tools, cameras and lights. These procedures are much safer in nature as compared to traditional open surgery as it results in fewer complications, quicker recovery, minimal blood loss and shorter hospital stays.

[Read more about TT's solutions for the medical market online at www.ttelectronics.com/markets/medical-electronics/](http://www.ttelectronics.com/markets/medical-electronics/)



¹ WHO list of priority medical devices for cancer management, 2017.

Aerospace and Defence

Delivering cleaner skies for the future



23%
of Group revenue

We offer high-reliability aerospace and defence technologies for safety-critical applications used in harsh environments. Our experience and expertise in design and manufacturing has led us to build long-term partnerships with our customers. Our products and technologies deliver peak performance, endurance and dependability.

TT provides solutions for commercial and military aircraft; space and satellite and defence systems and vehicles. We have a presence on all major commercial aircraft platforms as well as strong positions on defence platforms and business jets. Our products on platforms gives us good visibility of future revenue streams. Platforms that are driving our growth include the A220, A320neo, A330neo, A350XWB, B787, F-35 and KC-390.

Read more on pages 16–19 for the structural growth drivers behind the demand for our solutions

Demand for our products on aircraft is being driven by the “Clean Sky” industry wide initiative with the demand for more sustainable air travel driving demand for our products. Many of our solutions are

focused around managing power effectively and efficiently on an aircraft with our solutions often critical to the power challenges our customers face in the restricted power environment of an aircraft. Our power solutions are more efficient than previous platforms as well as reducing the size and weight of our solutions resulting in greater fuel efficiency. It is estimated that a 1 per cent reduction in the weight of an aircraft improves fuel consumption by around 0.75 per cent.¹

Our solutions are located across the aircraft from flight actuation systems to fuel pumps. Our power and hybrid microcircuits provide power management for the digital engine control unit known as “the brain” of the engine which controls all aspects of engine performance. Our solution controls the processing power needed to enable the engine to perform at maximum efficiency for any given condition with minimum pilot intervention.

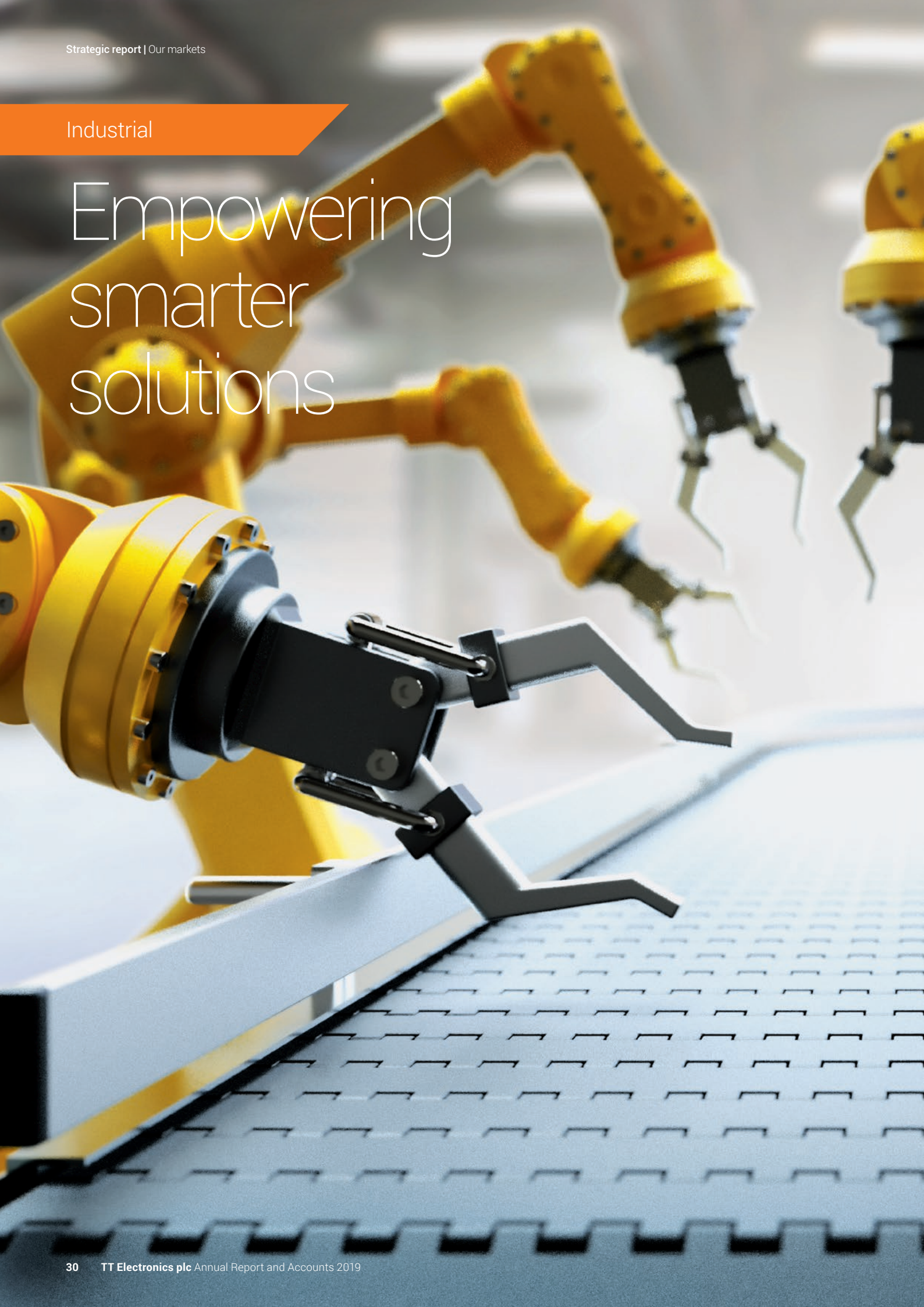
Read more about TT’s solutions for the aerospace and defence market online at www.ttelectronics.com/markets/aerospace-electronics/

¹ Encyclopedia of Energy Engineering and Technology, Barney L. Capehart, 2007



Industrial

Empowering smarter solutions



42%
of Group revenue

From global multinational enterprises to specialist manufacturers, industrial customers choose TT Electronics as their systems solution partner for the most challenging applications.

We help our customers add value to their solutions using our industry expertise and focused R&D to improve productivity, connectivity, reliability and precision.

TT provides solutions to industrial markets including for automation and control; energy and smart devices; and infrastructure.

[Read more on pages 16–19 for the structural growth drivers behind the demand for our solutions](#)

We serve industrial markets with each of our three capabilities, sensing, power and connectivity. Demand for our solutions is being driven by the move towards smarter solutions that save on time, power and waste. The growing adoption of smarter solutions servicing the industrial IoT market provides an exciting opportunity for TT. Our products can be used in cold chain monitoring to sense and monitor the temperature of perishable food items or pharmaceutical products during transportation. The demand for these solutions is driven by the increasing demand for temperature-sensitive drugs, better food quality and the need to reduce food waste.

Our solutions also improve efficiency of factory environments with our sensors used in factory automation. We provide sensors for speed and position control and we have over two decades of experience in this area of the market. Not only is there an increasing use of robotics within factory environments, but each robot requires an increasing number of sensors to be faster, more accurate and to perform more complex operations with increased dexterity. Our highly reliable, highly accurate sensors provide our customers with higher resolution which results in greater precision alongside analogue and digital outputs to make it easier for our customers to integrate our sensors into their systems.

[Read more about TT's solutions for the medical market online at www.ttelectronics.com/markets/industrial-electronics/](http://www.ttelectronics.com/markets/industrial-electronics/)



Power and Connectivity

The Power and Connectivity division designs and manufactures power application products and connectivity devices which enable the capture and wireless transfer of data. We collaborate with our customers to develop innovative solutions to optimise their electronic systems.

In summary

Revenue

£138.2m

2018: £115.5m¹
+20% (+18% at constant currency)

Underlying operating profit¹

£16.5m

2018: £11.2m
+47% (+45% at constant currency)

Underlying operating profit margin²

11.9%

2018: 9.7%
220 bps (210 bps at constant currency)

Percentage of Group revenue

29%

2018: 23%

Organic revenue growth

2%

2018: (4)%

c.1,500

Employees (year average)

14

Locations

Capabilities

- Power
- Connectivity

Key offerings

- Power solutions
- Connectivity devices

- 1 Note: Prior period restated for the transfer of the Malaysian Magnetics business to Power and Connectivity division. In 2018 the Malaysian Magnetics business generated revenue of £17.5 million and underlying operating profit of £2.8 million.
- 2 Excluding restructuring costs, asset impairments and acquisition related costs (see note 7 on page 129).



Overview of 2019

The Power and Connectivity division performed strongly, with good growth and significant margin enhancement in the year. Revenues were up 2 per cent organically to £138.2 million (2018: £115.5 million). There was a £1.2 million favourable foreign exchange impact. The growth was driven by increased revenue from existing customers in aerospace, defence and medical. These markets now account for over 50 per cent of the division and grew 14 per cent organically. Acquisitions made a £19.5 million contribution to revenue.

Underlying operating profit was £16.5 million (2018: £11.2 million), up 45 per cent at constant currency. There was a £2.0 million profit contribution from acquisitions. Underlying operating profit margin improved to 11.9 per cent (2018: 9.7 per cent). The growth in underlying operating profit was driven by operational leverage from increased revenues and efficiency improvements, including the closure of three sites associated with the 2018 acquisitions of Stadium and Precision. Delivery of the synergy plan for the Stadium acquisition is now complete and combined with synergies from the acquisition of Precision delivered £2.0 million of cost savings in 2019.

The division continues to benefit from the structural growth drivers associated with the increasing electrification of aircraft and we won two new aerospace and defence customers in the period. Following a continued focus on key account management, we grew our revenues with three of our largest aerospace and defence customers by 36 per cent. We have targeted our R&D investment on the next generation of power solutions working across components, sub-assemblies and complete products. During the year we launched our first prototype power conversion unit at the Paris Airshow, following investment in 2018. We are actively working on several industry, government and customer funded projects focused on new technology for the next generation of more sustainable aircraft, developing electrical solutions that will contribute to cleaner, greener and quieter aircraft of the future alongside our key aerospace and defence customers.

We made progress with our connectivity offerings, including tracking devices for assets in the construction industry and medical wearable devices for use in European care homes. We also secured a cross-selling win with a Global Manufacturing Solutions customer for human machine interface solutions for a high-end, British automotive customer.

We have bolstered our power supply capabilities with two acquisitions. We acquired Power Partners in March 2019, a small US based power supply provider, which accelerates our technology roadmap for power products while improving our US medical market access. We are already pursuing revenue synergy opportunities with power solutions for existing TT customers. In November 2019, we announced the acquisition of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California. This acquisition completed on 3 January 2020 and expands our capabilities in power conversion, while giving us enhanced access to the large and attractive US aerospace and defence market.

At the start of the year we transferred our Malaysian Magnetics business from the Sensors and Specialist Components division to the Power and Connectivity division bringing together all our electromagnetics design and manufacturing capabilities in one division. This has enabled a joined-up approach for their routes to market and the optimisation of our manufacturing footprint strategy. This follows the accreditation of our Malaysian facility for aerospace and defence work, and the transfer of some of our product lines from our facility in North Devon, UK to Malaysia to create the capacity required for future growth.

Global Manufacturing Solutions

The Global Manufacturing Solutions division provides manufacturing services and engineering solutions for our product divisions and to customers that often require a lower volume and higher mix of different products. We manufacture complex integrated product assemblies for our customers and provide engineering services including designing testing solutions and value-engineering.

In summary

Revenue

£213.2m

2018: £181.8m
+17% (+16% at constant currency)

Underlying operating profit¹

£15.4m

2018: £11.3m
+36% (+34% at constant currency)

Underlying operating profit margin²

7.2%

2018: 6.2%
+100bps (+90bps at constant currency)

Percentage of Group revenue

45%

2018: 42%

Organic revenue growth

12%

2018: 8%

c.1,500

Employees (year average)

6

Locations

Capabilities

- Manufacturing and engineering services

Key offerings

- Design for manufacture
- Manufacturing assembly and systems integration
- Reliability and functional testing
- Value engineering

¹ Excluding restructuring costs, asset impairments and acquisition related costs (see note 7 on page 129).

Overview of 2019

Global Manufacturing Solutions delivered very strong revenue growth coupled with improved order visibility, reflecting the value our customers place on our manufacturing and engineering capabilities. Revenues were up by 12 per cent organically to £213.2 million (2018: £181.8 million), driven by growth with customers in aerospace, defence and medical markets following our business development success in these markets over the last two years. There was a £2.2 million favourable foreign exchange impact. Acquisitions made a £6.3 million contribution to revenue in the division.

Underlying operating profit increased to £15.4 million from £11.3 million in 2018, up 34% at constant currency. There was a £0.1 million loss from acquisitions. Underlying operating profit primarily grew as a result of operational leverage on increased revenues and continued operational improvement, particularly in our UK operations. Underlying operating margins improved by 100 basis points to 7.2 per cent (2018: 6.2 per cent). The sustained step up in the margin of the division is a result of the transformation of the business from a manufacturing focus on printed circuit board assemblies (PCBA) to increasingly providing value-added services to our customers. We have invested in engineering teams to enable the manufacture of complex assemblies and to provide more sophisticated testing and engineering services, which account for 55% of revenues. By providing value-added services that benefit our customers, we are developing deeper and longer-term customer relationships.

The strong growth is a result of investments made in strategic business development where we have been focused on targeting the right customers in the right markets. We have identified customers that have good structural growth drivers in their own markets and that value the complex engineering services we provide. During the year, we saw particularly strong growth from an aerospace and defence braking systems customer on a single aisle commercial aircraft, following our contract win in 2017.

Our top medical customers grew 18 per cent in the year and we won two new aerospace, defence and medical customers with multi-year, multi-million-pound revenue streams. Customer wins include a contract awarded by L3 Harris Technologies to support a substantial electronics manufacturing programme for a key military platform, where we are preparing for the contract to ramp up in 2020 and 2021.

We have seen good cross-divisional collaboration, including with Power Partners, acquired this year. We have had a power supply designed by Power Partners approved by one of Global Manufacturing Solution's largest medical customers for use in pharmaceutical lab equipment. We see further opportunity from integrating products from our Power and Connectivity division, particularly in aerospace, defence and medical markets.

Sensors and Specialist Components

The Sensors and Specialist Components division works with customers to develop standard and customised solutions including sensors and power management devices. Our solutions improve the precision, speed and reliability of critical aspects of our customers' applications.

In summary

Revenue

£126.8m

2018¹: £132.2m
(4)% ((7)% at constant currency)

Underlying operating profit¹

£15.3m

2018: £18.5m
(17)% ((19)% at constant currency)

Underlying operating profit margin¹

12.1%

2018: 14.0%
(190)bps ((180)bps at constant currency)

Percentage of Group revenue

26%

2018: 35%

Organic revenue growth/(decline)

(7)%

2019: 8%

c.1,800

Employees (year average)

8

Locations

Capabilities

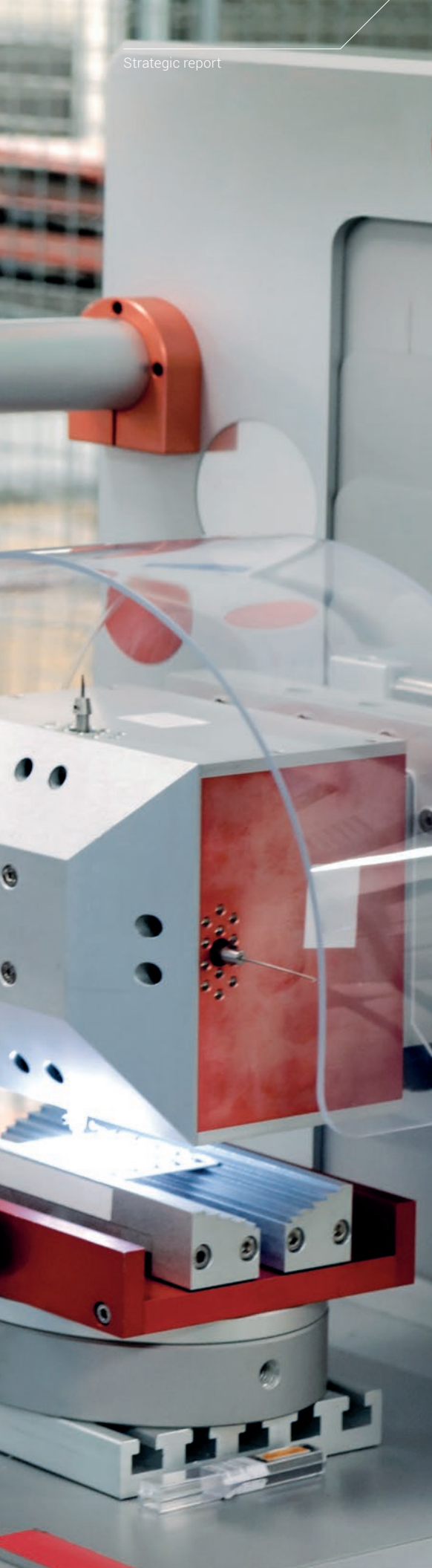
- Sensing
- Power

Key offerings

- Optoelectronics
- Sensing and power management devices

¹ Note: Prior period restated for the transfer of the Malaysian Magnetics business to Power and Connectivity division. In 2018 the Malaysian Magnetics business generated revenue of £17.5 million and underlying operating profit of £2.8 million.

² Excluding restructuring costs, asset impairments and acquisition related costs (see note 7 on page 129).



Overview of 2019

During the year, the Sensors and Specialist Components division was impacted by softer market conditions and inventory-destocking across its markets. Consequently, revenues were £126.8 million (2018: £132.2 million), down 7 per cent on an organic basis. There was also a favourable £4.2 million foreign exchange impact. This follows very strong mid-to-high single digit organic revenue growth in 2017 and in 2018.

Underlying operating profit was £15.3 million (2018: £18.5 million), down 19 per cent at constant currency. The underlying operating profit margin was 12.1 per cent (2018: 14.0 per cent). The reduction largely reflected the lower revenues and cost headwinds. We accelerated actions to improve the efficiency of our cost base including optimising our footprint and fixed labour costs. We have closed one facility and a further facility is in the process of being closed, with production being consolidated within the existing footprint. The total cash cost of this programme is expected to be circa £3.5 million. These actions realised c.£2 million of savings in the year. The underlying operating profit margin was 12.5 per cent in the second half, following the decisive cost action taken in the first half. We continue to review the range of self-help actions that are open to us in the business.

As a result of the weaker market conditions for sensing and power management devices we have taken the decision to put on hold the planned joint venture with Uniroyal. Uniroyal remain a key supply partner and we are focused on developing our existing relationship.

Although there has been short term market softening, the long-term structural growth drivers for sensing and power management devices in applications such as robotic automation, energy, smart devices and infrastructure remain attractive. We have refocused our R&D investments around these core growth areas. De-stocking in the supply chain continues, and once completed we expect demand to return to more normal levels.

We have seen good growth in the period with a global industrial customer for our sensors which provide solutions for accurate information sensing for cash and card transactions. In the year we have won positions with new and existing customers, including a contract with a US defence prime to provide a custom sensor used in power management for a precision guidance mechanism. This arose from a cross-selling opportunity identified following the acquisition of Precision in 2018. New contracts were also won with aerospace and defence customers, primarily for avionic and engine controls on aircraft.



Strong organic financial performance bolstered by acquisitions

We are demonstrating that the transformation of the business to focus on markets with structural growth drivers has led to a higher-margin, better-balanced business capable of sustaining a strong financial performance.

We are demonstrating that the transformation of the business to focus on markets with structural growth drivers has led to a higher-margin better-balanced business capable of sustaining a strong financial performance. Group revenue for 2019 was £478.2 million (2018: £429.5 million), up 4 per cent organically. Acquisitions contributed revenue of £25.8 million and there was a favourable £7.6 million foreign exchange impact. We saw good growth from our aerospace, defence and medical customers and revenues from these customers grew 22 per cent organically, now representing 47 per cent of our total business. The Group's order book is strong, with an increased proportion of recurring revenues and improved order visibility for the third year in succession.

Underlying operating profit¹ increased by 17 per cent at constant currency to £40.0 million (2018: £33.4 million). Acquisitions contributed £1.9 million. Statutory operating profit was £18.8 million (2018: £16.5 million), an increase of 14 per cent due to the improved trading performance, partially offset by increased restructuring costs.

Statutory profit before tax was £15.1 million (2018: £14.6 million), up 3 per cent. The Group's profit improvement was primarily driven by the Power and Connectivity and Global Manufacturing Solutions divisions which more than offset the impact of softer markets in the primarily industrial facing Sensors and Specialist Components division. Decisive cost action taken in the first half has helped to protect margins in this division. The synergy action arising from the 2018 acquisition of Stadium has now been completed with further run rate benefits expected in 2020.

Underlying operating profit margin for the Group has improved by 60 basis points at constant currency to 8.4 per cent (2018: 7.8 per cent). Return on invested capital was 11.3 per cent and 11.6 per cent excluding the impact of IFRS 16, an increase of 10 basis points (2018: 11.5 per cent). We delivered another year of good cash conversion of 98 per cent (2018: 88 per cent) and a free cash inflow of £9.7 million (2018: £8.5 million). Please see the Chief Executive's strategic review on pages 6–9 for detail on the divisional performance.



We have again delivered a strong financial performance with another year of good revenue growth, double-digit profit improvement and further margin enhancement, despite more mixed market conditions."

Mark Hoad
Chief Financial Officer

Financial headlines

- 4% organic revenue growth; 9% growth at constant currency
- Underlying operating profit and PBT both materially increased; underlying EPS CAGR of 21% since 2015
- 8.4% underlying operating margin, +60 basis points
- ROIC of 11.3%; up 10 basis points to 11.6% before the impact of IFRS 16
- Strong cash conversion of 98% and ongoing investment for growth
- UK pension scheme triennial valuation completed – fully funded on an actuarial basis
- Full year dividend up 8% to 7.0p

¹ Please see note 8 on page 130 for details on alternative performance measures.

Results for the year ended 31 December 2019

£million unless otherwise stated	Underlying ¹			Statutory		
	2019	2018	Change	Change constant fx	2019	2018
Remuneration structure						
Revenue	478.2	429.5	11%	9%	478.2	429.5
Operating profit	40.0	33.4	20%	17%	18.8	16.5
Operating profit margin (%)	8.4%	7.8%	60ps	60bps		
Profit before tax	36.3	31.5	15%	12%	15.1	14.6
Earnings per share (pence)	18.7p	16.2p	15%	13%	8.5p	8.0p
Return on invested capital ²	11.3%	11.5%				
Cash conversion ³	98%	88%				

1 Excluding the effect of restructuring and other non-recurring costs and acquisition related costs.

2 Rolling 12 month underlying operating profit return on average invested capital. Excluding IFRS16, ROIC is 11.6%, up 10 bps.

3 Underlying operating cash flow (Underlying EBITDA less net capital expenditure excluding property disposals, capitalised development expenditure, working capital and non-cash movements) divided by underlying operating profit. See note 8 on page 130 for more information.

Other financial matters

Exchange rates

The exchange rates used to translate the key non-Sterling flows and balances were:

	2019		2018		2017	
	Average	Closing	Average	Closing	Average	Closing
US\$	1.27	1.32	1.34	1.27	1.29	1.35
Chinese RMB	8.79	9.23	8.84	8.74	8.73	8.81

Non-underlying items

Statutory operating profit was £18.8 million (2018: £16.5 million), up 14 per cent.

Non-underlying items are presented separately in the income statement where the Directors believe that they require separate disclosure by virtue of their nature, size or incidence in order to obtain a clear and consistent presentation of the Group's underlying business performance.

Profit from continuing operations in the year increased by 7 per cent to £13.9 million (2018: £13.0 million) after a charge for items excluded from underlying profit of £21.2 million (2018: £16.9 million). This comprised restructuring and other costs of £13.2 million (2018: £4.9 million) primarily related to headcount reduction and footprint rationalisation in the Sensors and Specialist Components division, as well as to support delivery of the Stadium synergy plan (see note 8 for more information). There was also £1.0 million linked to pension projects. In addition, acquisition and disposal costs were £8.0 million (2018: £12.0 million),

including £3.1 million of cash costs related to the acquisitions made in the year, integration costs and costs associated with aborted M&A activities. Non-cash acquisition costs totalled £4.9 million, including £4.5 million of amortisation of acquired intangibles. Profit from discontinued operations was £3.4 million (2018: £0.4 million), primarily relating to the release of tax provisions.

Interest

The net interest expense of £3.7 million (2018: £1.9 million) increased by £1.8 million, in part reflecting higher average net debt associated with the acquisitions of Stadium and Precision, increased levels of working capital during the year, as well as a £1.0 million increase due to the adoption of IFRS 16. Underlying profit before tax increased by 12 per cent at constant currency to £36.3 million (2018: £31.5 million).

Tax and earnings per share

There was a tax charge in the period of £1.2 million (2018: £1.6 million) with an underlying tax charge of £5.8 million (2018: £5.3 million) and a credit on items excluded from underlying profit of £4.6 million. This resulted in an effective

underlying tax rate of 16.0 per cent (2018: 16.8 per cent). For details of our tax strategy and governance please see our website (www.ttelectronics.com/legal/tax_principles_strategy/). Basic underlying earnings per share increased by 15 per cent to 18.7 pence (2018: 16.2 pence) and by 13 per cent at constant currency.

Cash performance

The cash performance was very good with underlying operating profit turned into good operating cash flow with cash conversion of 98 per cent (2018: 88 per cent). Capital and development expenditure totalled £18.2 million, (2018: £18.9 million) equivalent to 1.3 times owned asset depreciation and amortisation (2018: 1.4 times). For the full year there was a working capital outflow of £3.1 million (2018: outflow £2.1 million), although working capital levels through the year were somewhat higher than they have been historically due to carrying Brexit buffer inventory for an extended period, as well as additional in inventory to support growth and contract wins. Net interest and taxation paid reduced to £7.7 million (2018: £8.4 million).

Strong organic financial performance bolstered by acquisitions continued

Dividends

The Board has a progressive dividend policy, which is primarily driven by underlying earnings cover, while also taking into consideration other factors such as the underlying growth of the business, its capital requirements, pension obligations and the Group's balance sheet position and cash generation. The Group's risk profile is also important to its dividend decision and, in this context, the Board continues to consider the Group's principal risks, which are set out on pages 44 to 45.

The Group's Parent Company operates as a holding company, primarily deriving its net income from dividends paid by its subsidiary companies. At 31 December 2019, TT Electronics plc had significant distributable reserves, amounting to at least £226.0 million (2018: £94.4 million). The Parent Company Balance Sheet is set out on page 162.

Having taken into account the above factors, the Board is proposing a final dividend of 4.9 pence per share. This, when combined with the interim dividend of 2.1 pence per share, gives an increased total dividend of 7.0 pence per share for the full year (2018: 6.5 pence per share), an increase of 8 per cent. Payment of the dividend will be made on 15 May 2020 to shareholders on the register on 24 April 2020.

IFRS 16 Leases

The Group implemented IFRS 16 Leases with effect from 1 January 2019. On adoption of the new standard, the Group recognised £18.0 million of right of use assets and £21.3 million of lease liabilities. The impact on the income statement in the year has been to increase underlying operating profit by £0.8 million and interest expense by £1.0 million. Comparative information for the prior year has not been restated.

Pensions

The Group has historically operated one significant defined benefit scheme in the UK and much smaller defined benefit schemes in the US. The Stadium Group (1974) pension scheme was merged into the TT Group scheme in March. All of these schemes are closed to new members and are closed to future accrual.

The net accounting surplus under the Group's defined benefit pension schemes increased to £16.6 million (2018: £16.5 million). The improvement in the position of the schemes was due to changes in the mortality assumptions and increase in the value of the Scheme assets due to investment performance, along with total payments of £8.6 million made to the UK schemes for the merger of the Stadium Group (1974) pension scheme which was merged into the TT Group scheme in March. The deficit contributions included a payment of £3.4 million on the merger of the Stadium Group (1974) scheme into the TT Group scheme to align funding levels.

The triennial valuation of the TT UK defined benefit scheme was completed during the year. As at April 2019, the scheme was fully funded (£0.3 million surplus) on a technical provisions basis. This compares with a deficit of £46.0 million as at April 2016. This significant improvement in the funding position has come from a combination of asset returns, deficit contributions and liability management exercises such as the 2018 Pensions Increase Exchange. The Company has re-confirmed with the trustees to continue the deficit contribution plan as we target self-sufficiency and further de-risking. Planned contributions amount to £5.3 million in 2020, £5.5 million in 2021, £5.7 million in 2022 and £4.4 million in 2023.

Given the material nature of the UK scheme, the Group has developed a comprehensive strategy to manage the financial risk associated with it. The strategy consists of:

- maintaining a long-term working partnership with the Trustee to ensure strong governance of risks within the UK scheme. The UK scheme is a long-term undertaking and is managed accordingly, in order to provide security to members' benefits and value for money to the Group;
- a prudent investment strategy is pursued by seeking risk-rewarded long-term returns while removing the majority of liability mismatching unrewarded risks. As such, the Group has in place financial hedging that removes the majority of interest rate yield and inflation risk. At the current level there is no significant impact on the deficit of a 10bps fall in yields which would otherwise be circa £9 million increase if the hedge were not in place, thereby reducing volatility. This strategy has been in place for a number of years, protecting the UK scheme's position since December 2013 when yields commenced a prolonged decline; and
- the Group recognises that seeking rewarded risk returns in its investment strategy could lead to short-term fluctuations in funding levels depending on market conditions. The Group considers that by maintaining a good relationship with the Trustee, it will be able to utilise flexibility in the funding regime to even out the impact of short-term market underperformance to enhance predictability of Group pension contributions. This creates a suitable balance between the needs of the UK scheme, the Group, and the Members.

The assets and liabilities of the Group's UK defined benefit schemes are summarised below, alongside the total Group pension deficit:

£million	2019	2018
Fair value of assets	575.5	533.9
Liabilities	(554.3)	(513.1)
UK scheme	21.2	20.8
Overseas schemes (deficit)	(4.6)	(4.3)
Total Group surplus	16.6	16.5

Financial risk management and treasury policies

The Group's main financial risks relate to funding and liquidity, interest rate fluctuations and currency exposures. A central treasury department that operates according to objectives, policies and authorities approved by the Board, manages these risks. The overall policy objective is to use financial instruments to manage financial risks arising from the underlying business activities and therefore the Group does not undertake speculative transactions for which there is no underlying financial exposure. More details are set out in note 22 to the Consolidated Financial Statements.

Funding and liquidity

The Group's operations are funded through a combination of retained profits, equity and borrowings. Borrowings are generally raised at Group level from a group of relationship banks and then lent to operating subsidiaries. The Group maintains sufficient available committed borrowing facilities to meet any forecasted funding requirements.

Net debt at the end of the year was £69.1 million (2018: £41.7 million), with available undrawn committed and uncommitted facilities of £109.3 million. Excluding IFRS 16, net debt was £51.5 million. During the year we acquired Power Partners Inc. for an initial cash consideration of \$1.6 million (£1.2 million). An additional \$1.3 million (£1.0 million) may become payable subject to business performance over the next two years.

The main financial covenants in the long-term bank facilities restrict net debt to below 3.0 times underlying EBITDA and underlying EBITDA is required to cover net finance charges, excluding interest on pensions, by 4.0 times. The bank covenant calculation excludes the impact of IFRS 16. Net debt is calculated at average exchange rates and a pro-forma adjustment is made for a full year's contribution from acquisitions.

	Covenant	December 2019
Net debt/underlying EBITDA	<3.00	0.9 times
Underlying EBITDA/net finance charges	>4.00	15.7 times

Re-financing

In December 2018 the Group entered into an agreement to extend its multi-currency revolving credit facility, taking the maturity date out from May 2021 to November 2023, removing short-term re-financing risk associated with any potential debt market disruption associated with Brexit. In addition, the facility size was increased from £150 million to £180 million.

The rationale for preparing the financial statements on a going concern basis is set out on page 62.



Mark Hoad
Chief Financial Officer
3 March 2020

Risk management for the successful delivery of our strategy

Risk management

The Board of Directors is responsible for risk management and internal controls, supported by the Audit Committee and informed by the executive Risk Committee. The Board defines risk appetite and monitors the management of significant risks to ensure that the nature and extent of significant risks taken by the Company are aligned with overall goals and strategic objectives. The Risk Committee supports the Board and the Audit Committee in monitoring the exposure through regular reviews, including reviewing the effectiveness of

risk management processes and controls. The Internal Audit function is operated under a directed outsource arrangement to enhance the levels of resource and expertise available to the Group in specific areas, with its activities under the direction of the Executive Management Board. The Internal Audit function assists the Risk Committee by advising management on improvements to the overall risk management framework, facilitating the risk review process and providing independent experience and input to the process.

Risk management processes and internal control procedures are established within business practices across all levels of the organisation. Risk identification, assessment and mitigation are performed both “bottom-up” with more detailed assessment at operational level, as well as through “top-down” assessment of strategic and market risk at the Executive management and Board level.

Risk management and internal controls provide reasonable but not absolute protection against risk. The Board acknowledges and recognises that in the normal course of business the Group is exposed to risk and that it is willing to accept a level of risk in managing the business to achieve its strategic priorities. Risk appetite is not static and as part of its risk management processes, the Board regularly considers its risk appetite in terms of the tolerance it is willing to accept in relation to each principal risk based on key risk indicators to ensure it continues to be aligned with the Group’s goals and strategy.

Risk profile

At the direction of the Board, Executive management has performed a robust assessment of the principal risks facing the Group, taking into account those that would threaten the business model, future performance, solvency or liquidity, as well as the Group’s strategic objectives. This process includes a “bottom-up” analysis of key risks at a divisional level. All principal risks identified by this process may have an impact on our strategic objectives within the next six to twelve months. Executive management and the Risk Committee perform further analysis to prioritise these risks, with a focus on those principal elements posing the highest current risk to the achievement of the Company’s objectives or the ongoing viability of the business.

Risks assessed as higher priority are consolidated into a Group Risk Register. Risks included on the register are monitored closely by the Board, in terms of both prioritisation and mitigation strategies. It is recognised that, whilst these “top risks” represent a significant proportion of the Group’s risk profile,



Executive management and the Risk Committee continue to monitor the entire universe of potential risks to identify new or emerging threats as well as changes in risk exposure.

The assessment of principal risks during the year has identified that these risks have remained relatively stable in the year. This is reflected in the table of principal risks. The Group has long been conscious of our environmental, social and governance (ESG) agenda which has been reported to the Board through our Corporate Social Responsibility Committee which is attended by a Non-Executive Director. During the year, we expanded the remit of this committee and renamed it the People, Social, Environment and Ethics Committee (PSEE). We have identified that there is an increasing risk that a negative perception of our ESG profile could impact on our ability to attract new talent to the business, build relationships with our customers, positively impact the communities in which we operate in, and attract investment from potential shareholders. In 2018, we identified that the Taishan site (acquired as part of Precision) did not meet TT's governance standards. We took swift action to move production to our facility in Malaysia and close the facility to reduce our risk in this area.

We have added a new principal risk with the description "Sustainability, Environment, Health and Safety" to recognise the increasing risk that a negative perception of our ESG profile could negatively impact the business and reflect the focus on mitigating actions we have taken.

Macroeconomic environment

While there is an acknowledgement of continued uncertainty around geopolitical and macroeconomic risk during 2019 and into 2020, the Group continues to take appropriate mitigating actions to address this and hence this risk is considered to be unchanged.

The Executive management and the Board do not currently anticipate any significant impact on the Group's trading following the UK referendum on Brexit, given that trade between the UK and the EU accounts for a small proportion of Group revenues and material purchases.

We recognise however the potential for disruption in the event of a disorderly exit and as a result the following steps have been put in place:

- we have a clear understanding of the extended supply chain where we buy in the UK but the inventory originates from the EU;
- where there is scope to re-source we are putting those actions in place, using alternative logistics routes or different distribution partners if possible;
- we have engaged our customers on whether or not they are buffering production requirements already or they would like us to support them in doing so;
- all our UK businesses have enacted extra purchases of between one and three months of inventory to protect customer demand requirements. We would expect this to get worked back out of our inventory by the end of 2020, but may impact cash conversion at the half year;
- our analysis indicates we would not be significantly affected by any EU workers in UK plants being forced to return to their home countries.

No significant direct impact from increased tariffs between the US and China is anticipated. We are actively talking to our customers to see how our global footprint can offer opportunities to mitigate customers' own risks in relation to increased tariffs.

Update on the impact of COVID-19 (Coronavirus)

The Covid-19 virus is an emerging risk affecting the Group in 2020. We operate two primary facilities in China in Suzhou and Dongguan. Having enacted our business continuity management practices, both of these facilities re-opened on 10 February with local authority approval and were quickly operating at 95 per cent capacity. Our Suzhou facility remained open following Chinese authority approval to build critical medical lab analysis equipment for our customers required for the Hubei province. The duration and impact of Coronavirus on our business is uncertain.

Viability statement and prospects

In accordance with the UK Corporate Governance Code, the Directors have assessed the viability and long-term prospects of the Group over the period to December 2022, taking into account the Group's current position and the potential impact of the principal risks and uncertainties set out on pages 44–45 of the Strategic report. Based on this assessment, the Directors confirm that they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period to December 2022.

TT operates in markets with long-term structural growth dynamics which benefit from the trend for "electronics everywhere". We engineer and manufacture power, sensing and connectivity solutions to address our customers' challenges in the aerospace and defence, medical and industrial markets. By positioning ourselves in the right markets, by creating differentiated capabilities through our R&D investment, and by attracting and developing the right talent we have the right strategy to create sustainable value over the long-term.

The Directors have determined that the period to December 2022 represents an appropriate period over which to provide the viability statement as this aligns with the business cycle including product development and order intake trends.

While the Directors have no reason to believe the Group will not be viable over a longer period, given the inherent uncertainty involved, the Directors believe that this presents investors and other key stakeholders with a reasonable degree of confidence while still providing a longer-term perspective.

In making this statement, the Directors have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, the underlying mitigation planning, the assessment of future performance, solvency and liquidity, and the Group's internal controls environment.

In making the assessment of the Group's viability, the Directors have stress tested the Group's financial projections for the period covered by the viability statement, testing it for "business as usual" risks (such as profit growth and working capital variances), and severe but plausible events (occurring both individually and in unison), as well as a "reverse" stress-test to understand the conditions which could jeopardise the future viability of the Group including assessing against covenant testing and facility headroom. The Group's wide geographical and sector diversification helps minimise the risk of serious business interruption or catastrophic reputational damage. Furthermore, the business model is structured so that the Group is not overly reliant on any single customer, market or geography.

While this review does not consider all of the risks that the Group may face, the Directors consider that this stress-testing based assessment of the Group's prospects is reasonable in the circumstances of the inherent uncertainty involved.

Risk management for the successful delivery of our strategy continued

Principal risks and uncertainties

General			
Risk description	Potential impact	Mitigating action	Change in the year
General revenue reduction Reduction in demand and orders due to economic downturn or disruption to operations (pandemic or other business interruption event)	<ul style="list-style-type: none"> Decelerating sales growth affecting operating profit 	<ul style="list-style-type: none"> Monitor the wider economic conditions of our markets Timely financial reporting to monitor performance and provide a basis for corrective action when required Ongoing optimisation of our cost base Business continuity and crisis management planning Management structures in place to enable a rapid response to changing circumstances 	 <p>Increased risk – market volatility and political uncertainty due to global trade wars and Brexit continue into 2020. The duration and impact of Coronavirus on our business is uncertain.</p>
Commercial			
Contractual risks Potential liabilities from defects in performance-critical products that often operate in extreme environments	<ul style="list-style-type: none"> Reputational impact Deterioration in customer relationships Liability claims Reduction in revenues, profitability and cash generation 	<ul style="list-style-type: none"> Quality control procedures and systems in place and appropriate levels of insurance carried for key risk Group guidelines on acceptable levels of contractual liability are reinforced 	 <p>No change</p>
Research and development Delay in new product development which is intended to support revenue growth	<ul style="list-style-type: none"> Increased cost in product development Delay in achieving projected revenues Inability to meet the latest requirement due to step change in technology 	<ul style="list-style-type: none"> Close collaboration with key customers Active monitoring of costs and milestones Target R&D more effectively Implementation of standard project management disciplines 	 <p>No change</p>
Operational			
People and capability Ability to attract and retain high-quality and capable people	<ul style="list-style-type: none"> Loss of key personnel Potential business disruption Breakdown of communication and misalignment 	<ul style="list-style-type: none"> Remuneration structure designed to support retention Succession planning processes embedded within the businesses Campaigns to increase performance and development of communication between managers and employees to ensure alignment to objectives Using a feedback loop utilising surveys to encourage regular objectives and performance discussions 	 <p>No change</p>
Supplier resilience Potential failure of critical suppliers; product delivery delays; inability to meet customer commitments	<ul style="list-style-type: none"> Reduction in revenues, profitability and cash generation 	<ul style="list-style-type: none"> Regular review of key supplier financial health and product quality Monitoring of relevant commodity and precious metals pricing Review of spend patterns to identify opportunities 	 <p>Reduced risk</p>

Operational continued			
Risk description	Potential impact	Mitigating action	Change in the year
IT systems and information IT security breaches or disruption, unauthorised access or mistaken disclosure of information	<ul style="list-style-type: none"> Reputational impact, business disruption and potential deterioration in customer relationships 	<ul style="list-style-type: none"> Regular analysis of cyber security and data management IT strategy reviewed by management and the Board Data security policies updated in 2018 Investment through recruitment of additional IT and data specialists 	 <p>No change – continued increasing level of cyber and data security threat offset by continued investment in these areas.</p>
M&A and integration Realisation of financial benefit of acquisitions	<ul style="list-style-type: none"> Failure to realise the expected benefits of an acquisition or post acquisition performance of the acquired business not meeting the expected financial performance at the time acquisition terms were agreed could adversely affect the strategic development, future financial results and prospects of the Group 	<ul style="list-style-type: none"> Full financial and other due diligence is conducted to the extent it is reasonably achievable in the context of each M&A opportunity A detailed business case including forecasts is reviewed by the Board for each opportunity Integration risk and planning is reviewed and undertaken as part of every acquisition 	 <p>No change – Recent acquisitions have been integrated successfully and lessons learned activities undertaken.</p>
Sustainability, Environment, Health and Safety The manufacturing industry is inherently dangerous. Managing the impact on our employees, sites and the environment of these risks. Our manufactured products or other activities/ decisions of the Group may not be judged by our customers, employees, communities and investors as being sustainable	<ul style="list-style-type: none"> Incidents occurring due to unsafe manufacturing processes. Failure to manage the impact of these risks could negatively impact our employees, lead to regulatory fines, reputational damage and lost production. Failure to appropriately manage the environmental impact of our operations and products. Reputational impact and potential deterioration in our relationships with our stakeholders 	<ul style="list-style-type: none"> Health, Safety and Environmental Council responsible for company-wide best practice sharing, monitoring and improvements and strategy setting Regional best practice teams established PSEE Committee responsible for reporting Group progress against the development and monitoring of our strategy and associated KPI's. Processes and roadmaps in place to minimise the risk of incidents Continued investment in M&A, business development and new product introduction in areas where our solutions contribute to a more sustainable world (see more on page 14) 	 <p>New risk</p>
Legal			
Legal and regulatory compliance Intentional or inadvertent non-compliance with legislation including laws and regulations covering export control, anti-bribery and competition	<ul style="list-style-type: none"> Reputational impact Civil or criminal liabilities leading to significant fines and penalties or restrictions being placed upon our ability to trade Reduction in revenues, profitability and cash generation 	<ul style="list-style-type: none"> Cross-division export compliance group established and anti-bribery programme in place Approach involves risk assessment, policy, training, review and monitoring Whistleblower process in place to ensure issues can be raised, investigated and managed 	 <p>No change</p>

Our people



Our people deliver our leading electronic expertise. They are the foundation of TT.

Richard Tyson
Chief Executive Officer



1 star great place to work

The TT way

The principles of the “TT Way” are:



We do the right thing



We bring out the best in each other



We achieve more together



We champion expertise



We get the job done... well

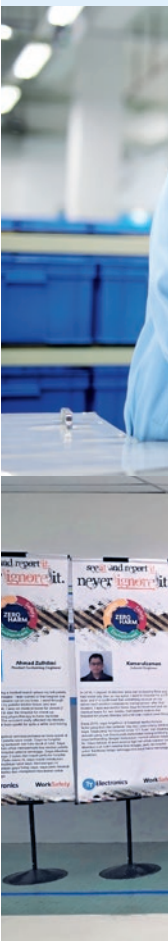
Culture

We promote the “TT Way”, the culture we aspire to alongside our strategy, to develop and guide the way we behave.

The “TT Way” culture is open, transparent and collaborative. At all levels of the organisation, we encourage and support a high degree of openness and equality which will continue to make TT a great place for our employees to work. We strive to maintain engagement with our employees at all stages, from application through to retirement. We approach interaction with openness, honesty and integrity, building strong relationships based on trust. Collaboration across the Group helps us share our learnings and expertise, improving the way we operate and serve our customers.

These values underpin the way we operate, and we strive to always act with integrity, transparency and professionalism. We look to do the right thing by our people, customers, suppliers, shareholders and for our local communities, where we work to ensure our actions have a positive impact on society and the environment. As an organisation, we hold ourselves to high ethical and business standards.

We promote employee wellbeing and health and safety at the workplace is at the heart of our “TT Way” behaviours. Our sustainability commitment to wellbeing extends beyond the medical products we design and manufacture. We are committed to improving the wellbeing of our employees by engaging our colleagues and communities around meaningful work and physical and mental wellbeing. Of paramount importance is the safety of our employees and safety is one of our key performance measures (read more on page 21). We were delighted to have substantially reduced the number of three-day lost time accidents this year and continue to work towards our goal of zero harm. Several of our sites were recognised internally for achieving zero harm throughout the year and our site in Kuantan, Malaysia received a national award for safety, recognising their safety roadmap as best practice. We recognise the importance of mental wellbeing and in addition to our first aiders across the site, we have trained more than 85 mental wellbeing first aiders to support employees struggling with their mental health. We also have dedicated ‘happy rooms’ at a number of our sites to provide a relaxed environment for our employees.





Promoting employee wellbeing and health and safety at the workplace is at the heart of our TT Way behaviours.”



People

Our employees are our expertise. Through training and developing our employees and working together, we unlock the potential of TT.

We had over 4,700 employees across TT as at 31 December 2019. 50 per cent of whom are female, and 50 per cent of whom are male.

The table below provides a detailed breakdown.

Employees (full time equivalent)	Male	Female
Main Board of Directors	5	2
Executive Management Board (EMB)	7	1
Senior Managers (Ex EMB)	24	5
Barbados	23	75
China	451	470
Malaysia	77	352
Mexico	480	588
Singapore	9	13
Sweden	12	2
Tunisia	29	10
United Kingdom	936	575
USA	307	283
Other	9	2
Total	2333	2370

Creating a positive working environment at all of our sites is of paramount importance to TT. We strive to build a supportive, diverse and engaging place to work, while nurturing a high-performance culture across the Group, built around the “TT Way”.

It is important to us that our employees, at all of our sites globally, feel part of our BE TT strategy, building expertise in TT. Engaged employees are critical to our success; our employees make TT the organisation it is today. We provide our employees with meaningful work, where our employees have the opportunity to grow their careers with TT and feel that they are contributing not only to TT, but to helping to solve electronic challenges for a more sustainable world.

“Building expertise” is at the centre of our growth strategy and we are committed to growing the expertise of our employees. Personal development is important to TT as well as furthering individual careers. We continue to invest and prioritise the training and development of our people, equipping them with the right skills to do their jobs well, enabling them to unlock their potential and the potential of TT.

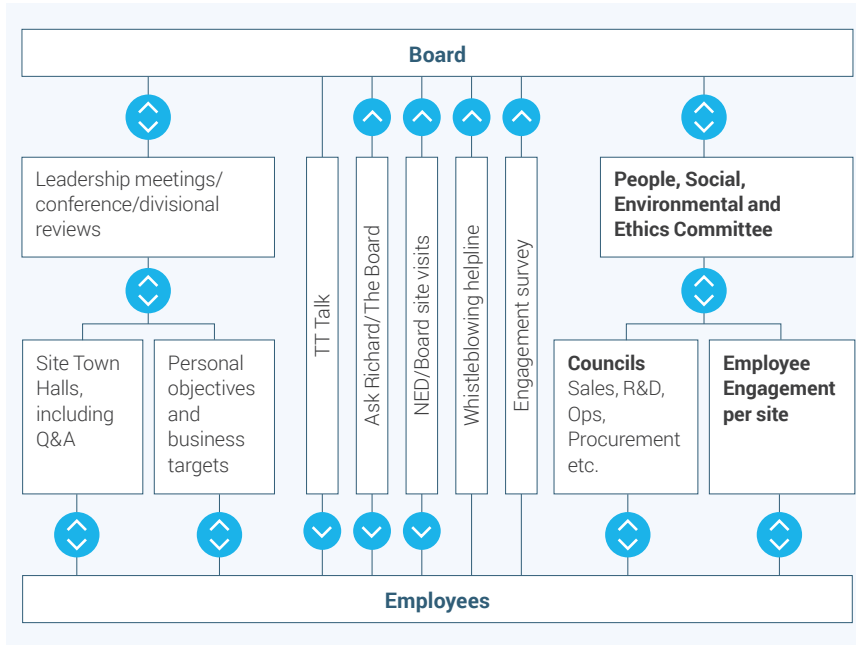
In order to support the development and growth of our employees, we have been investing in our talent pipeline, ensuring that line managers have career conversations with their direct reports and that employees have performance development reviews. In 2019, we launched a women’s business forum to help encourage and support female leaders within the business. We are also looking at addressing unconscious bias throughout our manager community. We have also prioritised diversity and inclusion within our leadership population to ensure that the right culture is being set throughout the organisation.

A key area for our training and development initiatives has been the continued focus on our sales and business development talent within the organisation. We continued to train our customer-facing employees with the strategies and processes to enable meaningful strategic engagements with our customers.

We communicate frequently and openly with our employees, and we have received strong feedback from employees, telling us they know how their role contributes to the strategy. We have a quarterly newsletter called “BE TT News” which is translated into our global languages and available both online and in hard copy around our sites. In this newsletter, we celebrate the successes around the business including new sales wins, health and safety milestones, community activities and new product introductions.

We held an employee engagement survey at the end of 2018 to gather feedback from our employees so we can constantly

Our people continued



learn and adapt to make TT a great place to work. Our response rate was 85% and well above the Best Companies Ltd benchmark. We are rated as a “One Star” company for engagement. During the year we undertook ‘pulse surveys’ to hear from our employees how the actions we have taken in response to the last survey have been implemented and to gather interim feedback. Overall the pulse surveys indicated a good level of awareness of the survey results and associated action plans with themes including reward, management, CSR, wellbeing and communication raised. We will continue to undertake full employee surveys on an 18–24 month time frame to allow time to embed the actions arising from each survey.

Engaged employees are crucial to attracting and maintaining the talent we need in the business to execute our strategy. During the year, we added dedicated internal recruitment managers for better identification and acquisition of talent into the business. We are committed to nurturing young talent within our industry and have a number of apprenticeships and interns across the Group. We support and promote apprentice schemes across TT, with apprentices in engineering, maintenance, operations, finance and business administration functions and the schemes are key to our talent

management and succession planning. Our site in Sheffield, UK was awarded “Highly Commended SME Employer of the Year” at the Apprenticeship Regional Awards 2019 for Yorkshire and Humber, recognising TT’s commitment to identifying and nurturing new talent. We develop our apprentices with support for formal qualifications including level 3 NVQ Apprenticeship in the UK and during the year, one of our apprentices in Barnstaple, UK won an award for Electrical Apprentice of the Year.

TT also prioritises engagement with the next generation of potential talent for our industry. Science, Technology, Engineering and Mathematics (STEM) are vital to the economic future, and STEM skills are more in demand than ever in the workplace. TT supports the development of future generations of engineers. We focus on supporting local STEM partnerships to promote careers in electronics and related fields. We also support initiatives that encourage more girls to study STEM subjects at school, and more women to enter our industry. During the year, our site in Carrollton, US, took part in National Engineering Week, an annual US celebration of the contribution to society that engineers make. In addition to a monetary donation to a local STEM programme, teams from the site took part in a robot building competition to engage future

generations about how exciting a career in engineering could be. At our Mexicali site in Mexico, the team delivered a workshop for final year university students to help prepare them for the transition from university to work. And at our site in Kuantan, Malaysia, employees took part in “TT lab 2019” – a two day event held with five local schools that reached over 700 students to demonstrate STEM activities including games and quizzes, talks on motivation, careers advice, academic qualifications and safety awareness.

Performance

Recognising the contribution and performance of our employees is important across all parts of the business. We do this in two ways. Firstly, we recognise employees through our Be Inspired recognition scheme to recognise teams and individuals that excel in demonstrating the “TT Way” behaviours. In 2019, we received over 2,600 nominations for these awards, over 10 per cent more nominations than in 2018, demonstrating high levels of engagement and the desire of our employees to recognise and support their colleagues. We highlighted five overall winners at the end of the year, one for each of our values, which showcases some of the performance behaviours we are most proud of as an organisation. The overall winners are awarded a monetary amount and a site celebration gifted to the site they work at. We also aim to ensure that all employees are included in our pay for performance schemes, be it our site-based profit share schemes or our annual incentive schemes. Site based performance schemes primarily reward local employees based on metrics around On-Time-To-Promise (OTTP) and profit.

Secondly, we believe in the value brought by employees having performance and development conversations with their managers to help ensure that employees can be their best every day and fulfil their potential. During the year we have taken and will continue to take steps to improve performance conversations and have introduced a new five-point performance scale to allow greater differentiation and opportunity for recognition.

Ethics

TT holds ethical standards in high regard, operating with integrity and to one standard worldwide. We do not tolerate corruption or bribery in any form, and are committed to maintaining the fundamental principles of fairness, honesty and common sense which lie at the heart of the Group's philosophy, values and corporate standards. We operate effective systems and processes to counter corrupt practices, including an anonymous "whistleblower" reporting facility through which individuals can notify us of concerns.

Whistleblowing issues are reported directly to management or through the Group's multi-lingual, anonymous ethics and integrity portal. Significant issues are reported to the Audit Committee and, in each instance, cases are investigated in detail and appropriate action taken.

Strong business ethics form the basis of our relationships with all of our key stakeholders, including employees, customers, partners and suppliers. Our Statement of Values and Business Ethics Code sets out the operating principles to which we adhere, which covers a diverse range of issues including anti-bribery, information assurance, intellectual property protection, fair competition, the working environment (including standards of behaviour expected from our employees), hospitality/entertainment and avoiding conflicts of interest.

Day-to-day oversight of ethics and compliance-related matters is undertaken by our People, Social, Environmental and Ethics Committee, under the leadership of the EVP HR which is supported by a dedicated Environmental, Health and Safety Committee. For any matters of particular concern, an Ethics Committee is convened on an "as needed" basis, constituted from members of the Executive Management Board.

Human rights

TT is committed to upholding the human rights of our workers and to treating them with dignity and respect as understood by the international community. Our Human Rights Code is contained within the Responsible

Business Alliance (formerly the Electronics Industry Citizenship Coalition) Code of Conduct (see below) and covers all workers including permanent, temporary, migrant, student, contract, direct and indirect. Our Code details expected labour standards and is supported by our Modern Slavery policy which can be found on our website: www.ttelectronics.com.

We do not tolerate practices which contravene international standards. Regulatory demands upon us vary considerably around the world; however, we have established a core structure to ensure that Group companies fully comply with legislative and regulatory requirements while permitting them to tailor their approach to particular local needs.

Everyone in TT is responsible for having due regard for human rights. Managers and supervisors must provide leadership that promotes human rights as an equal priority to other business issues. All employees are responsible for ensuring that their own actions do not impair the human rights of others, and are encouraged to bring forward, in confidence, any concerns they may have about human rights.

Compliance

TT places a strong emphasis on business integrity. We ensure that we operate in an environment in which innovation can flourish within a compliance and risk-focused culture.

During 2019, we have continued to work hard to develop a more integrated approach to governance, risk and compliance. Compliance with laws and regulation has been identified as one of our principal Group-level risks, and is monitored on a regular basis by the Risk Committee, with appropriate mitigations being adopted as required. Given the Group's focus on aerospace and defence, we have continued to develop and enhance our training programmes and policies in the areas of export controls. This programme of work complements an additional focus on enhancing cyber and information security policies and controls during 2019 together with compliance with

the General Data Protection Regulation, which was introduced across the EU in 2018.

Treating our people with respect, equal opportunities and diversity

TT is committed to employment policies that provide and promote equal employment opportunities for all our employees and applicants, and to maintaining a workplace that ensures tolerance, respect and dignity for all staff. No employee, applicant, contractor or temporary worker should be treated less favourably, victimised or harassed on the grounds of disability, sex, marital or civil partnership status, race, nationality, colour, ethnicity, religion or similar philosophical belief, sexual orientation, age or any distinction other than merit. A copy of our Gender Pay Gap report can be found on our website www.ttelectronics.com. Consideration is always given to human rights principles as part of the Group's working practices.

Modern slavery

TT is committed to acting ethically and with integrity in all of our business dealings. As part of this commitment, TT has adopted a zero-tolerance approach to modern slavery, whether in the form of servitude; forced, bonded, or indentured labour; slavery; human trafficking or any other activity that amounts to an unreasonable restriction on the free movement of workers.

Our business model is based on providing our customers with engineered products, services and expertise for performance-critical applications. In meeting our customers' requirements, we operate procurement programmes through global supply chains, involving a wide network of suppliers and distributors. It is recognised that within this structure (as with all other participants operating in our business sector), the potential exists for the human rights of individual workers to be violated. The Board has adopted a policy on modern slavery, setting out the standards we expect from all our employees, contractors, suppliers, distributors and other business partners. A copy of our modern slavery statement can be found on our website www.ttelectronics.com

Our environment

Our focus on engineering electronics that perform reliably in challenging and performance critical environments helps our customers bring advances that benefit both our planet and its people.

Over
£50,000

raised from 'Giving the TT way' programme

Mindful of our environment

Environmental issues, including climate change, are challenges affecting all of us. Businesses globally must work together with governments to address these challenges to protect our planet for future generations.

We are mindful of the environment in which we operate and monitor greenhouse gas emissions so we are aware of the impact we have on the environment. We engage employees to promote responsible environmental practices. We recognise that our activities have an impact on the environment and look to mitigate this impact wherever possible.

We help solve our customers' electronic challenges by providing solutions that are cleaner, smarter, and improve wellbeing. Our power control solutions for aerospace applications contribute to lighter and more environmentally friendly aircraft. The industry wide "Clean Sky" initiative and associated economic benefits from increased fuel efficiency is driving demand for our products. We provide smart city infrastructure, including power management devices for smart metering technology, which is credited with driving a greater awareness and subsequent reduction of energy usage in business and home environments. We also support our customers with a range of medical

solutions including laboratory analysis, minimally invasive procedures and medical diagnostic equipment which helps to improve wellbeing.

One of our strategic priorities is operational excellence and our focus is on optimising our operations and taking sensible actions to improve our procurement effectiveness. During the year, we reduced our footprint and optimised our operations which helped to reduce our environmental impact. We have always prioritised minimising our environmental impact and best serving our customers by running facilities that are close to our customers.



We are mindful of the environment in which we operate and monitor greenhouse gas emissions so we are aware of the impact we have on the environment."



In Kuantan, Malaysia, the team celebrated the country's 62nd Independence Day with a beach clean-up drive, removing plastic and other waste from the local environment.

Our environmental strategy is focused around the areas we have assessed to have the greatest environmental impact, namely energy usage, waste management and water usage.

Energy usage

Electricity is the largest component of our energy usage. Our target is to become carbon neutral on scope 1 and 2 emissions by 2035. As part of meeting this target, we are looking to switch our sites to green energy electricity tariffs as our energy contracts come up for renewal and in geographies where renewable tariffs are available.

To encourage energy efficiency, we have developed a corporate-wide Energy and Greenhouse Gas (Emission Scope I and II) Conservation Roadmap (EC/GhGR) for all facilities to focus on decreasing the quantity of energy used and implementing energy efficiency initiatives. We have an EC/GhGR Champion at each site to manage energy efficiency activities for the facility. The champion holds regular meetings with management teams to establish energy management plans and targets and to

review in-progress energy management projects. Each site has a "TT Electronics EC/GhG Reduction checklist". We hold in-house energy audits and work closely with our customers to develop products that help them meet their environmental objectives.

Our transparent approach to environmental performance reporting is evidenced by our voluntary participation in the CDP Climate Change questionnaire in 2019.

For the year ended 31 December 2019, the Group's greenhouse gas emissions (detailed below) were calculated using the latest factors for converting energy usage to carbon dioxide equivalent emissions published by DEFRA and the International Energy Agency.

Carbon dioxide equivalent (tonnes)

	2019	2018
Emissions resulting from operations and combustion of fuel ¹	1,479	1,042
Emissions resulting from the purchase of electricity, heat, steam or cooling	25,285	26,497
Total	26,764	27,539

¹ These figures represent all material emissions. Other greenhouse gases emitted as a result of the manufacturing process are not included within this figure since these represent a negligible proportion of our emissions overall.

The Group has chosen to adopt emissions per £1 million of revenue as its intensity ratio. For 2019, emissions were 56.1 tonnes of carbon dioxide equivalent per £1 million of revenue (2018: 64.1 tonnes). In this figure, we have included the full year of total emissions from the acquisitions made in 2018 and emissions from our fleet mileage which we are disclosing in 2019 for the first time.

Our environment continued

Our environment continued

Waste management

Our current waste management focus is around reducing our direct and indirect single plastic usage. During the year TT sites signed a “pledge on plastic” to reduce single use plastic which was endorsed by the Executive Management Board. As part of this pledge, stakeholder meetings have taken place and educational programmes have been launched to raise awareness on the detrimental use of single use plastic to our environment. Sites hold collection of single use plastic items and logistic teams have been engaged to look for ideas for where we can replace plastic with more sustainable alternative materials. We have recycling bins in

our facilities and have removed plastic bottles to replace with reusable water bottles, jugs and glasses to remove single use plastic cups. We are looking at our waste to landfill and recycled waste and are targeting to reduce our waste to landfill and increase what we recycle.

We are also focused on the waste in our environment outside of our facilities and various sites have engaged with their local communities to clean up and reduce waste. In Kuantan, Malaysia, the team celebrated the country’s 62nd Independence Day with a beach clean-up drive, removing plastic and other waste from the local environment.

Water usage

We are conscious of the water we use during our production processes and are working to reduce this where possible. Examples include using waste water generated by facilities for irrigation where possible. In our site in Juarez, Mexico, all the site’s waste water generated by the facility is being reused to irrigate green areas on the site. We have called this our “Green Desert Project” and our newly formed “Green Team” is focused on delivering the site’s commitment to protecting and improving the environment. The team has launched initiatives such as “Adopt a Tree” where new trees have been planted to improve water drainage and the environment for the local community.



The ‘Green Team’ in Juarez, Mexico have diverted all the site’s waste water generated by the facility to irrigate green areas of the site. They have also planted trees in the local area under their “Adopt a Tree” initiative.

Our communities

As a responsible global organisation with operations in many locations, TT Electronics is committed to making a sustainable, positive impact on the local communities in which we operate.

We have an international footprint comprising 28 key sites. At a number of our sites, we have been a local employer for many years, and we encourage our employees to play an active role in supporting the local community. Many of our employees are local to the site and we pride ourselves on providing meaningful work to the community. Many of our employees want to make a positive contribution to the community in which they live and work and we encourage sites to take part in initiatives that mean the most to their employees locally. In 2019, we ran more than 45 community and STEM events and our employees gave over 5,000 “hours for giving” to good causes.

Each of our sites choose a local charity to support throughout the year and in 2019 we raised over £50,000 through our programme “Giving the TT Way”. Activities include a wide range of initiatives including the Welsh and Surrey Three Peaks challenges, blood donation, purchasing school supplies, fancy dress days and cake sales. Our site in Kuantan, Malaysia celebrated the countries 62nd Independence Day with a mini walkathon, park and beach clean-up. The activity helped remove plastic and other waste from the community as well as raise awareness about recycling.



A team from Barnstaple, UK took part in the three-day Children’s Hospice Southwest charity bike ride. They completed a challenging 205-mile route which took them from St Austell, Cornwall to Bristol, Avon; visiting each of the three Children’s hospices in the region. The team raised over £6,000 for the charity.

We work closely with local schools and other educational establishments to give back to the local community using our skills and passion for engineering to encourage more young people to consider STEM careers. Many of our employees gave up their time to give talks, demonstrate engineering and attend careers fairs to excite young people in our communities about what a career in a STEM related field could offer.

The 2019 Strategic report, from page 1 to page 53 has been reviewed and was approved by the Board of Directors on 3 March 2020.

Richard Tyson
Chief Executive Officer

Mark Hoad
Chief Financial Officer



Neil Carson
Chairman

Chairman's introduction to governance

One of the key themes that we highlighted in last year's annual report was the concept of TT having produced strong delivery while investing for the future.

As you will have seen elsewhere in this report, the Group has done much in 2019 to maintain the positive momentum from previous years. This is evident from the strong set of results achieved in 2019, as well as in the delivery of key projects such as the acquisition, in January 2020, of Excelitas Technologies Corps' aerospace and defence power supply business in Covina, California, the establishment of the Advanced Technology Centre in collaboration with Nottingham University and the investment in key facilities such as Suzhou, Bedlington and Hartlepool to drive sustainable growth for the future.

Addressing the 2018 UK Corporate Governance Code

Another feature of last year's annual report was the Board's focus on meeting the reform agenda set out in the 2018 UK Corporate Governance Code. This issue has been a key priority for the Board in 2019 and in this section we have summarised how this has been integrated as a core part of our governance operations. As can be seen from the Strategic report, significant work has been undertaken this year in developing a revised purpose statement for the Group and the Board was heavily involved in the process of ensuring that this statement provided an effective link to our values and culture. Furthermore, the Board is aware of the fast-changing agenda on environmental and sustainability priorities for global

companies and has been actively involved in this initiative during 2019, which is described in more detail on page 14. Finally, we have worked hard to define how we have discharged both our duty to promote the success of the Company under section 172 of the Companies Act 2006 (see page 62) and our contribution to stakeholder engagement (see pages 64 to 65).

Engaging with our Employees

On this latter point, the Board visited two of our key facilities in 2019 (Bedlington and Hartlepool) in order to witness at first hand the progress being made to translate focused investment into tangible customer opportunities. The Board also had a management presentation from senior Executives from our world-class facility in Suzhou. In addition, a NED representative attends each People, Social, Environmental and Ethics (PSEE) Committee meeting in order to ensure that "employee voice" and wider stakeholder considerations are elevated (through the PSEE Committee) to the Board, so that Directors can take the pulse of key engagement issues. The PSEE Committee was established in 2019 with an expanded remit (beyond the previous CSR Committee) to provide a forum for detailed consideration of stakeholder issues. The framework for promoting NED engagement on "employee voice" issues was developed during a visit by Michael Baunton to our Perry facility in

2019, which was repeated during visits by Anne Thorburn to Rogerstone and Barnstaple as part of her induction programme. Further information on our employee engagement framework is set out on page 48.

The Board

Michael's visit to our facility in Perry took place in April 2019, just a few months before the ninth anniversary of his appointment to the Board. To address the "independence" requirements of the UK Corporate Governance Code, and as disclosed in last year's annual report, the Nominations Committee launched a recruitment campaign in the first half of 2019 to find Michael's replacement. This process culminated in the appointment of Anne Thorburn to the Board in July. Anne has significant Finance-related experience in listed company environments, covering the life sciences, medical and industrial sectors, and has already made a significant contribution since joining the Board. It was sad to see Michael stepping down from the Board, as he has been a loyal servant to TT over the years. On behalf of the Board, I would like to thank Michael for his dedicated service throughout his time as a Non-executive Director.

At the end of 2019, it was announced that I would be standing down as Chairman as a result of my increasing external commitments. This represented a difficult decision for me personally, as I have thoroughly enjoyed my time with TT, having witnessed the significant progression made by the business in the past few years. This year also represents Stephen King's ninth anniversary as a director of the Company, with the result



I remain committed to the principle that the Board should focus its attention on those areas over which it can add most value and we will strive to maintain this approach in the future.”

that he too will step down from the Board during 2020. Stephen has served as Chair of the Audit Committee for the majority of his time with TT and is currently TT's Senior Independent Director. We are in the process of conducting an external search for my replacement as Chairman and will provide further information on this appointment process in due course, together with details as to whom the Board has selected as Stephen's replacement as Senior Independent Director. At the point that Stephen steps down from the Board, Anne Thorburn will take over his responsibilities as Chair of the Audit Committee. I would like to take this opportunity to thank Stephen for his considerable contribution to TT's progression during his time as a director. Except as stated above, we do not intend to recruit any new members to the Board at the present time. I can confirm that one of the Board's key priorities is to ensure that any new NED appointments made in the future are supportive of the culture of openness and transparency we have created at the Board level, to allow us to maintain focus on our key strategic priorities in an environment of trust and freedom of expression.

I am pleased to report that the Board has maintained a strong focus on its wider governance responsibilities throughout the past year, which includes the delivery of the Group's strategic priorities and monitoring performance in key areas of operations, including: health & safety, talent management, site rationalisation, improved business development capability and operational efficiency, R&D progression and M&A execution. The Board's activities during the year are set out on page 60 and demonstrate

how the strategic direction of the Group and the long-term success of the Company have remained at the forefront of the Board's decision-making processes. Whilst we have taken the decision not to repeat the external evaluation exercise first conducted in 2017, there has been a continuous focus throughout the last financial year on how the Board can better support the business as it strives to meet its growth agenda, which culminated in an in-depth Board evaluation exercise at the end of the year. The outputs of this exercise are summarised on pages 66 to 67 of this Annual Report. As described elsewhere in this report, the Board has paid particular attention in 2019 to the requirements of the new UK Corporate Governance Code in scoping its future activities. In that regard, I can confirm that the Group has complied fully with the requirements of the Code in 2019.

The Board attaches a high degree of importance to diversity at all levels across the Group and is committed to recruiting the best talent available, based on merit, and assessed against objective criteria of skills, knowledge, independence and experience. However, we do not advocate a forced approach to diversity at any level of the organisation. This is the rationale that has been applied to the NED recruitment exercises that have been undertaken during 2019 and this approach will continue to be applied in the future. Female representation on the Board now stands at over 25 per cent, which we believe will have a positive impact on the delivery of the Group's strategic and operational needs in the future. This process was reinforced by a strong focus on diversity initiatives across the Group in 2019 (including

UK Corporate Governance Code Compliance Statement

TT is committed to achieving and maintaining the highest standards of corporate governance. As at 31 December 2019, the Group was compliant with the main and supporting principles of good corporate governance set out in the UK Corporate Governance Code 2018 ("the Code"). The Code is available to view at the website of the Financial Reporting Council, www.frc.org.uk. Details and explanations of the application of the principles of corporate governance are set out in the following pages of this Governance section.





the creation of a new "Women in Business Forum" across the UK and US business units), which we propose to expand in 2020.

I am pleased with the progress we have made in 2019, both in terms of the continued improvements in operational performance and the contribution made by the Board in the delivery of the Group's strategic priorities. I believe that we have continued to develop our governance framework in 2019 to meet the future needs of the business. I remain committed to the principle that the Board should focus its attention on those areas over which it can add most value and we will strive to maintain this approach in the future. I look forward to the continuation of this progression in the coming year.

Neil Carson
Chairman

A blend of skills and experience

Board of Directors and Company Secretary

			
<p>Neil Carson OBE</p>	<p>Richard Tyson</p>	<p>Mark Hoad</p>	<p>Stephen King</p>
<p>Chairman Joined: 2015</p>	<p>Chief Executive Officer Joined: 2014</p>	<p>Chief Financial Officer Joined: 2015</p>	<p>Senior Independent Non-executive Director Joined: 2011</p>
<p>Relevant skills and experience:</p>			
<p>Neil has a proven track record of delivering growth as a leader of a FTSE 100 science/R&D based company, Johnson Matthey, reinforced by over 30 years' experience of operations management, technical innovation and strategic planning, which are highly complementary to the Company's needs. Neil has also had exposure to a wide range of industry sectors, having served on the boards of a variety of UK listed companies and Government bodies, including Amec Foster Wheeler plc, Paypoint plc, TI Fluid Systems plc and the Prince of Wales' Corporate Leaders Group on Climate Change, of which he was a founder member. Neil was also formerly the Honorary President of SCI (the Society of Chemical Industry).</p>	<p>Richard has developed an extensive portfolio of managerial and operational capabilities over a 25-year career with a range of leading aerospace and defence and technology companies, including over six years as a member of the Executive Committee and President of the Aerospace & Security division of Cobham plc. Prior to that, he was responsible for TRW Aeronautical Systems' (formerly part of Lucas Industries) European aftermarket business. Richard has significant experience of leading large complex, global businesses coupled with M&A and business transformation activities, as well as driving growth and innovation in high technology businesses.</p>	<p>Mark has a deep understanding of finance and operational activities which he has acquired during a career spent in senior finance/management roles with FTSE listed companies, including as group finance director of BBA Aviation plc, a FTSE 250 company operating in the aerospace domain. A chartered accountant, Mark's experience includes several years working in a variety of management roles at RMC Group plc in Continental Europe and Australia, as well as a strong focus on driving business transformation in the US.</p>	<p>Having served as a CFO on several FTSE 250 boards, Stephen has a wealth of finance and corporate governance experience across a number of industry sectors. Stephen is a chartered accountant and his previous executive responsibilities on the board of an investment trust company provides the Board with particular insight in the areas of M&A/financing, risk, audit and regulation at a PLC level. Stephen was previously group finance director of Caledonia Investments plc and De La Rue plc, and a non-executive director of The Weir Group plc. He has also held senior finance positions with Aquila Networks plc, Lucas Industries plc and Seeboard plc, and was also a non-executive director of Camelot plc and Bristow Group Inc.</p>
<p>Other current appointments:</p>			
<p>Non-executive chairman of Oxford Instruments plc and non-executive director of Royal Dutch Shell plc.</p>	<p>Non-executive director of the Vitec Group plc and Governor of St Swithuns' Independent School for Girls in Hampshire.</p>		<p>Non-executive director on the board of BBA Aviation plc and Chemring plc, where he chairs both of their Audit Committees.</p>
<p>N R</p>	<p>P RI</p>	<p>RI</p>	<p>A N</p>

Key

- N Nominations Committee
- A Audit Committee
- R Remuneration Committee
- P People, Social, Environmental and Ethics Committee
- Ri Risk Committee
- Chair of the Committee



Alison Wood **Jack Boyer OBE** **Anne Thorburn** **Lynton Boardman**

<p>Independent Non-executive Director Joined: 2016</p>	<p>Independent Non-executive Director Joined: 2016</p>	<p>Independent Non-executive Director Joined: 2019</p>	<p>General Counsel and Company Secretary Joined: 2012</p>
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Relevant skills and experience:

<p>Alison's background is in leading business development, M&A and strategic planning across blue-chip UK companies, particularly in the Defence sector. In addition, during her time as the Remuneration Committee chair of several FTSE listed companies, she has gained an invaluable insight into the development and execution of remuneration policy, which is a key component of the Company's growth ambitions. Alison was formerly global director corporate development & strategy for National Grid plc and before that, group strategic development director for BAE Systems plc. Alison has previously held non-executive directorships at Cobham plc, e2v technologies plc, BTG plc and THUS plc.</p>	<p>Jack has a background in corporate finance, investment and M&A, which he has applied in bringing a number of business ventures through to operational maturity in the engineering, telecommunications and biotechnology sectors. Jack's extensive experience of innovation and the exploitation of technology, in the private sector and through working with Government bodies, are highly relevant given the Company's transformational agenda. Awarded an OBE in 2015 for services to science and engineering, Jack was formerly a non-executive director of Mitie Group plc and Laird plc, and chairman of Ilika plc, AIM-listed Seeing Machines Limited and the Academies Enterprise Trust. He was also an investment banker at Goldman Sachs and strategy consultant at Bain & Co.</p>	<p>Anne has many years of experience gained from board level finance roles in listed international companies, including across life sciences, medical and industrial markets. Anne has particular expertise in financial management, risk, audit and M&A which complements the Company's strategy as it continues to transform. Anne is a member of the Institute of Chartered Accountants in Scotland and has formerly served as chief financial officer of Exova Group plc and group finance director at British Polythene Industries PLC. Anne was formerly a non-executive director of BTG plc.</p>	<p>A qualified solicitor, having practised with Simmons & Simmons, Macfarlanes and Burges Salmon LLP. Formerly head of legal (Europe, Middle East and Africa) at Syngenta Crop Protection and then general counsel and company secretary of QinetiQ Group plc from 2002 to 2011.</p>
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Other current appointments:

<p>Non-executive director of Costain Group plc, Cairn Energy plc and the British Standards Institution (BSI). In addition, Alison chairs the Remuneration Committees of Costain Group Plc and BSI.</p>	<p>Non-executive director of Ricardo plc, Chair of the University of Bristol, and Member of the Board of the Henry Royce Institute for Advanced Materials.</p>	<p>Non-executive director and chair of the Audit Committee of Diploma PLC.</p>	
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R A N	A N R P	A N	P Ri
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A blend of skills and experience continued

Executive Management Board

			
Richard Tyson	Mark Hoad	Lynton Boardman	Neil Fleming
Chief Executive Officer Joined: 2014	Chief Financial Officer Joined: 2015	General Counsel and Company Secretary Joined: 2012	EVP, Corporate Development Joined: 2018
Relevant skills and experience:			
Full biography on page 56.	Full biography on page 56.	Full biography on page 57.	Neil has experience in the energy, utilities and transportation sectors, with previous senior roles at Ontario Teachers' Pension Plan. Neil was a non-executive director at Scotia Gas Networks and Birmingham Airport.

Tenure – Independent Non-executive Directors

	0	1	2	3	4	5	6	7	8	9
Neil Carson										
Stephen King										
Michael Baunton ¹										
Jack Boyer										
Alison Wood										
Anne Thorburn ²										

Attendance 2019	Board	Audit Committee	Nominations Committee	Remuneration Committee
Neil Carson	7 of 7	–	3 of 3	5 of 5
Richard Tyson	7 of 7	–	–	–
Mark Hoad	7 of 7	–	–	–
Michael Baunton ¹	5 of 5	3 of 3	1 of 1	3 of 3
Jack Boyer	7 of 7	4 of 4	3 of 3	5 of 5
Stephen King	7 of 7	4 of 4	3 of 3	–
Alison Wood	7 of 7	4 of 4	3 of 3	5 of 5
Anne Thorburn ²	4 of 4	2 of 2	2 of 2	–

1 M Baunton resigned from the Board on 1 September 2019; he attended all scheduled meetings before such date.

2 A Thorburn was appointed to the Board on 1 July 2019; she attended all scheduled meetings after such date.

			
Tom Garvey	Sarah Hamilton-Hanna	Michael Leahan	Charlie Peppiatt
Divisional EVP Joined: 2016	EVP, Human Resources Joined: 2019	Divisional EVP Joined: 2017	Divisional EVP Joined: 2018
Relevant skills and experience:			
Tom has more than 20 years' experience in the aerospace and defence industry. Having joined from Cobham plc, Tom has experience setting and executing growth plans and developing customer-focused product and technology.	Sarah brings over 16 years' experience in HR across global HR, business transformation, talent and organisational development. Sarah was formerly Global HR lead for the food and beverage solutions division of Tate and Lyle.	Michael has over 30 years' experience in the aerospace and defence industry. Michael previously held senior positions at Marotta Controls, Lucas Aerospace and Fairchild Controls.	Charlie joined TT in 2018, following the acquisition of the Stadium Group, where he was CEO from 2013. Previously Charlie was VP Global Operations for Laird Technologies and has held senior roles globally.

The Chairman and Chief Executive Officer

The division of responsibilities between the Chairman and the Chief Executive Officer has been defined, formalised in writing, and approved by the Board:

Roles and responsibilities

Chairman

Maintains responsibility for:

- the leadership and effectiveness of the Board, and for setting its agenda;
- ensuring all Directors receive accurate, timely and clear information on financial, business and corporate matters so they can participate in Board decisions effectively;
- facilitating the effective contribution of Non-executive Directors;
- ensuring constructive relations between Executive and Non-executive Directors;
- ensuring effective communication with shareholders;
- ensuring the performance of individual Directors, the Board as a whole, and its Committees are evaluated at least once a year.

Chief Executive

Maintains responsibility for:

- the operations of the Group;
- developing Group objectives and strategy, having regard to the Group's responsibilities to its shareholders, customers, employees and other stakeholders;
- successful implementation and achievement of strategies and objectives, as approved by the Board;
- managing the Group's risk profile, including its health and safety performance;
- ensuring the Group's businesses are managed in line with strategy and approved business plans, and complying with applicable legislation and Group policy;
- ensuring effective communication with shareholders;
- setting Group human resource policies, including management development and succession planning for the senior executive team.

Leadership and Company purpose

Company purpose, strategy and values

The Board's main roles are to provide leadership to the management of the Group, to determine and ensure the implementation of the Group's strategy and to maintain the highest standards of corporate governance. Underpinning all of these aspects of the Board's responsibilities lies the principal aim of ensuring the sustainable, long-term success of the Company. The main activities covered by the Board in the year are set out below.

The Board understands the relationship between the Company's purpose, strategy and values. In 2019 the Board has reviewed and approved the new Company purpose statement – "We solve electronic challenges for a sustainable world. TT engineers advanced electronics which benefit our planet and its people for future generations. We do this by designing, manufacturing and working in a way that is cleaner, smarter and improves wellbeing." The Board considers this

purpose to be an appropriate reflection of the Group's culture and the strategic direction for the business in the future. Our corporate purpose is integral to understanding why we do what we do. The Company's strategy is clearly defined and regularly reviewed by the Board; the five-year strategic plan is discussed in detail and is approved annually, based on the Company's activities, its progress on delivering the strategic priorities and the significant challenges that have been identified both within the business and across the wider macro-economic environment. Our strategy defines what we do.

The Company's values, culture and behaviours drive how we execute our strategic vision. The "TT Way" principles, see page 46, set out the Company's culture and values by which we expect our employees, from the top down, to conduct our business. We strive to always act with integrity, transparency and professionalism. To support the TT Way, the Company has a number

of policies in place such as our Statement of Values and Business Ethics Code, the TT Worldwide Anti-Corruption and Bribery Policy and the Modern Slavery Policy. Alongside these policies the Board monitors and reviews the implementation of the Company's culture through processes such as our anonymous Whistleblowing helpline, where concerns raised are independently investigated and escalated to the Board for their review. Furthermore, the Board receives updates on our employee engagement processes, including our employee voice on the Board initiative (see page 48) which identifies what is going well and where we can improve across our sites worldwide. To support full understanding of our policies and standards there is a programme of induction for new employees and regular refresher training through e-modules and Company communications. At a wider stakeholder level, the Board approves the Group's Modern Slavery Policy and Modern Slavery Statement on an annual basis.

Board activities in 2019

During the financial year, the Board discussed and implemented the following key actions:

Value added product solutions

- Receive presentation from EVP of IoT Solutions
- Review of organic opportunities in Medical sector

Business Development

- Review of BD planning activities
- Receive presentation from EVP of IoT Solutions
- Receive presentation from EVP GMS

Operational Excellence

- Operational Review – GMS in Suzhou
- Review of Group IT Strategy
- Footprint optimisation

Value-enhancing Acquisitions

- Review and scrutiny of various acquisition proposals
- Analysis of specific regulatory regimes in other jurisdictions
- Review of post-offer intention statements one year on from Stadium
- Review of M&A opportunities in Medical sector

Organisational capabilities (people)

- Review of HR Strategic Progress
- Talent and succession planning
- Review of voice on the Board and wider stakeholder issues through PSEE Committee

Governance and reporting

- Annual report content
- Board Evaluation exercise
- Review of AGM documents, arrangements and results
- Investor relations feedback and strategy review
- Review of Stakeholder Engagement processes
- Analysis of new Corporate Governance Code reforms
- Conduct Conflicts of Interest review
- Modern Slavery Policy and Statement

Financial, risk, operational performance

- Review of financial results
- Approval of dividends
- Assessment of going concern and FBU analysis
- Regular review of risk register
- Review Group's insurance cover
- Review of Five-Year Strategic Plan
- Approve 2020 budget
- Receive presentation by Tax & Treasury

The Board

Subject to the Company's Articles of Association, UK legislation and any directions given by special resolution, the Board manages the Company's business. The Board has reserved certain specific matters to itself for decision. These include financial policy and policy relating to acquisition and disposal.

The Board appoints its members, and those of its principal Committees, having received the recommendations of the Nominations Committee. It also reviews recommendations of the Board Committees and the financial performance and operation of the Group's businesses. It regularly reviews the identification, evaluation and management of the principal risks faced by the Group and the effectiveness of the Group's system of internal control as set out on page 42.

Board and Committee meetings are scheduled in line with the Company's financial calendar, thereby ensuring that the latest operating data is available for review and sufficient time and focus can be given to matters under consideration. During the year, there were seven principal Board meetings on scheduled dates, for which full notice was given. We hold additional meetings as and when required; during 2019 one such additional meeting was scheduled to consider M&A opportunities. The Board has held two principal meetings to date during 2020.

Beyond the principal meetings, the Board takes the opportunity to discuss important strategic and operational issues at Board dinners, which are scheduled to coincide with the principal meetings. In 2019, six Board dinners were held throughout the year and members of the Executive Management Board attended one of these dinners. The Non-executive Directors meet, without the Executive Directors present, at the end of each scheduled Board meeting, as a standing agenda item.

Each Board meeting during 2019 discussed strategic issues (principally focused on key projects, the M&A opportunity pipeline and the status of integration activity on recent acquisitions) together with operational, financial, human resources, legal, governance and investor relations items. The Directors review, throughout the year, the opportunities and risks to the future success of the business by receiving and discussing information from both internal and external sources regarding the issues affecting the business, the wider industry and the macroeconomic environment. The Board has developed a deep understanding of the Group's business model and strategy and the strategic priorities that underpin the business. The main events in the Board calendar are the approvals of the half-year and full-year results, the Board site visit, the review of the five-year strategic plan (which take place around the autumn) and the approval of the budget towards the end of the year.

All Directors have access to the advice and services of the Group General Counsel & Company Secretary and are offered training to fulfil their role as Directors, both on appointment and subsequently. There is an agreed procedure for any individual Director to take independent professional advice at the Company's expense if they consider it necessary.

In accordance with the provisions on conflicts of interest in the Companies Act 2006, the Company has put in place procedures for the disclosure and review of any conflicts, or potential conflicts, of interest which the Directors may have, and for the authorisation of such conflicts by the Board. In deciding whether to authorise a conflict or potential conflict, the Directors must have regard to their general duties under the Companies Act 2006.

The authorisation of any conflict, and the terms of authorisation, may be reviewed at any time and, in accordance with best practice, we conduct a review of Director conflicts of interest annually.

Each member of the Board, including the Senior Independent Director, has the right to include items on the Board agenda or the agenda of the Committees they sit on.

Leadership and Company purpose continued

Directors' interests

The Directors of the Company at 31 December 2019 held interests (directly or through their connected persons) in the following numbers of the Company's Ordinary shares of 25 pence each on 1 January 2019, 31 December 2019 and 2 March 2020:

	2 March 2020 Ordinary shares	31 December 2019 Ordinary shares	1 January 2019 Ordinary shares
Neil Carson	190,000	190,000	190,000
Richard Tyson	717,251	717,251	560,896
Mark Hoad	550,090	550,090	454,438
Stephen King	123,000	123,000	100,000
Jack Boyer	82,588	82,588	71,588
Alison Wood	–	–	–
Anne Thorburn	45,000	45,000	–

The interests of the Directors in the Company's share options and Long-Term Incentive Plan are shown in the Directors' Remuneration report on page 96.

Going concern

The Directors have reviewed the budgets for 2020 and the projections for 2021 developed during the 2019 annual strategic planning cycle.

They have assessed the future funding requirements of the Group and compared them with the level of available borrowing facilities. They have also assessed the potential impact on the Group's trading arising from Brexit (as further described on page 43), which is not anticipated to be significant in the context of the Group's operations. Based on this, the Directors are satisfied that the Group has adequate resources to continue in operational existence for at least 12 months from the date of approval of the financial statements. For this reason, they continue to adopt the going concern basis in preparing the financial statements.

Relations with shareholders

The full list of engagement activities and our relations with shareholders during the year are set out on page 65.

Substantial shareholding notifications

The Company had been notified of the following voting rights attaching to TT Electronics plc shares in accordance with the Disclosure and Transparency Rules at 2 March 2020 and 31 December 2019.

So far as has been ascertained, no other person or corporation holds or is beneficially interested in any substantial part of the share capital of the Company.

	2 March 2020		31 December 2019	
	Number	%	Number	%
Aberforth Partners LLP	14,832,779	9.1	14,832,779	9.1
BlackRock, Inc	9,149,031	5.6	–	–
Polar Capital LLP	8,589,822	5.3	8,589,822	5.3
M&G plc	8,417,742	5.1	8,417,742	5.1
JO Hambro Capital Management	8,218,564	5.1	8,218,564	5.1
Schroders plc	7,931,600	4.9	7,931,600	4.9
Aberdeen Asset Management Ltd	7,835,077	4.8	7,835,077	4.8
NN Group N.V.	7,815,000	4.8	7,815,000	4.8
Franklin Templeton Management Ltd	7,590,000	4.6	7,590,000	4.6
Tameside MBC re: Greater Manchester Police	–	–	6,215,344	3.8

S172 Statement

The Directors have performed their duty under section 172 of the Companies Act 2006 (duty to promote the success of the Company). Two key priorities for the Board in 2019 were the acquisition of the Power Solutions business in Covina and the completion of restructuring activities at various TT sites worldwide. Both of these initiatives were undertaken having regard to TT Electronics' wider stakeholder groups, including employees, customers, suppliers, regulators and the local community (with a particular focus on promoting improved standards of Health, Safety and Environmental performance). The Board recognised that the closure of certain sub-scale facilities would regrettably result in some staff redundancies, but considered this to be a necessary outcome in order to allow the Group to push more aggressively into priority areas of strategic growth and free-up investment in world-class facilities, including Bedlington, Hartlepool, Dongguan, Minneapolis and Kuantan. In making these decisions, the Board was mindful that the Group would be promoting increased job security at these locations and improved capacity to deliver customer requirements, which was also a key factor in the decision to proceed with the Covina acquisition. Similar considerations underpinned the decision to establish the new Advanced Technology Centre, in collaboration with Nottingham University and other academic institutions, which was designed to promote customer-focused R&D in a campus-style environment.

Division of responsibilities

Leadership Structure

Details of TT's Board of Directors are set out on pages 56 and 57 of this report. The chart below provides further information on how leadership at the Board level is discharged. Most importantly, the Board comprises a majority of Independent Non-executive Directors, with the division of responsibilities between the Chairman and Chief Executive Officer having been clearly articulated. The Board believes that its composition, the structure of its principal committees and the processes it has in place to discharge its primary areas of responsibility, meet the requirements of "Leadership" and "Effectiveness" under the UK Corporate Governance Code.

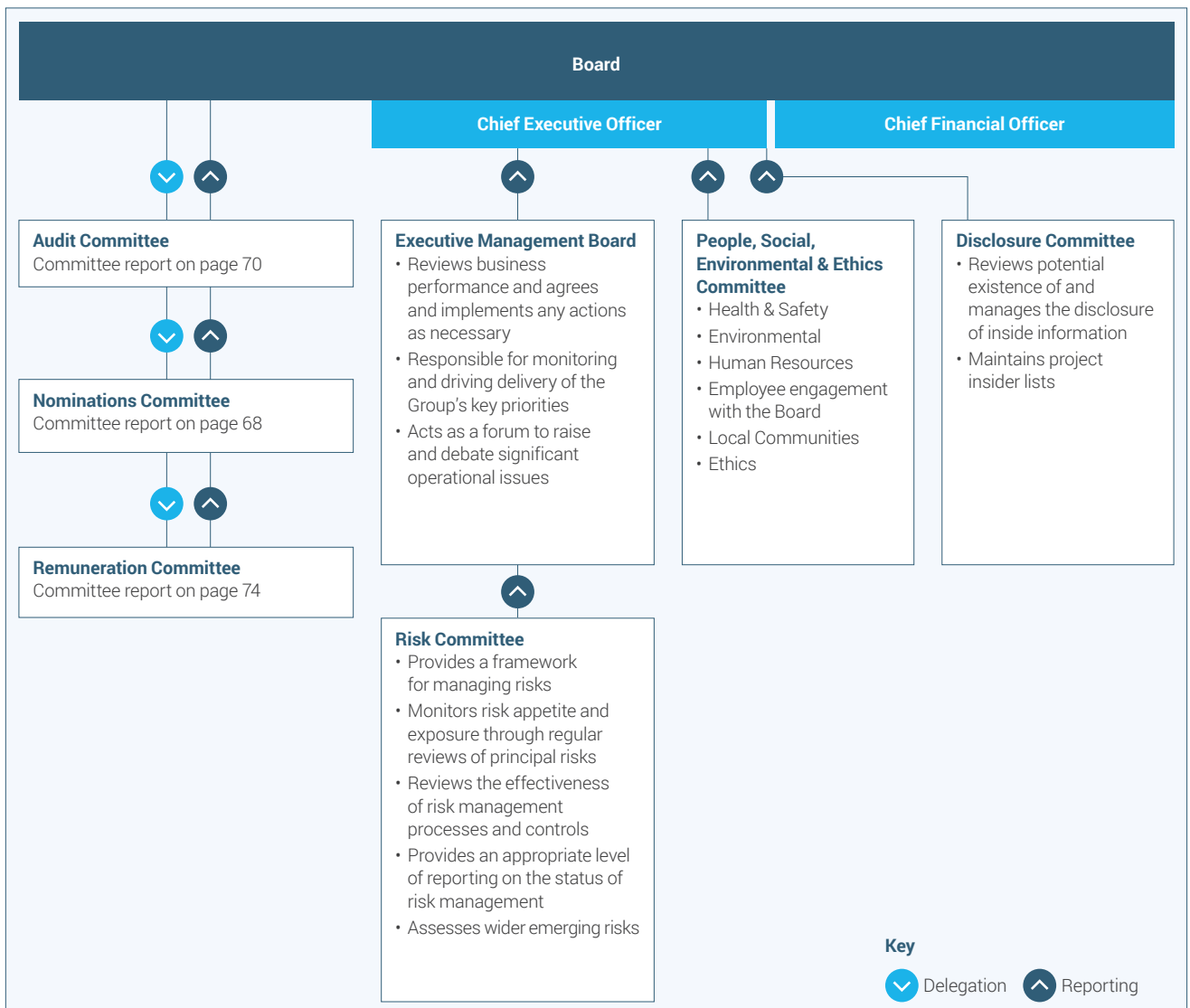
The Board has established a number of Committees, each with its own delegated authority defined in terms of reference. The Board reviews these terms periodically (the last occasion being in December 2019), and receives reports and copies of minutes of Committee meetings. The Board appoints the members of all principal Board Committees, having received the recommendations of the Nominations Committee.

A non-executive director has been nominated to be a member of the People, Social, Environmental & Ethics Committee with the purpose of receiving information about the Company's engagement with its key stakeholders.

This includes the outcomes of our employee engagement activities as described on pages 47 and 48 and sustainability initiatives described on page 14. The designated non-executive director on the PSEE Committee reports this information directly to the Board following each Committee meeting. The key activities covered by the PSEE Committee are described in more detail on page in the table below.

Approved by the Board on 3 March 2020 and signed on its behalf by:

Lynton Boardman
Group General Counsel
& Company Secretary



Relations with stakeholders

Our stakeholders are key to the long-term sustainability of our business. The importance of open and meaningful engagement with all of our stakeholders is fully embraced by all of our Board members. In 2019 the Board completed its stakeholder mapping exercise to identify the Company's key stakeholders, to determine the Board's engagement activities during the year and to review the information flow from senior management and other commercial teams to the Board.

Board visit to TT sites in Bedlington and Hartlepool



The Board meeting in July 2019 was held in the North East of England, which provided members of the Board with an opportunity to visit each of the Bedlington and Hartlepool facilities. The Board was welcomed by the local senior management team at both locations and spent time understanding the manufacturing processes at the sites and meeting local members of staff.

In Bedlington, the Board saw at first hand the redevelopment activities that were underway to create a world class centre of manufacturing excellence and innovation hub. The Board also gained a closer appreciation of the significant investment that had been made to upgrade the Hartlepool facility following the acquisition of Stadium in April 2018, to provide greater flexibility to meet customer requirements and increased capacity for future growth.



Customers and Suppliers

Our activities that affect them:

- Research and development (R&D)
- Operations and production pipeline
- Safety, quality control, reliability
- Legal and regulatory compliance
- Payment practices
- Responsible business/ethics

How we have engaged:

- Key interactions channelled through the CEO, the Divisional Executive Vice Presidents ("EVPs") and their management teams through direct meetings, trade events and conferences.
- Customer initiatives supported by the wider EMB to maintain a current understanding of the challenges faced by the customer base.
- "Voice of the customer" feedback to inform our business development, R&D and operations approaches.
- Sales and engineering teams engage with lead customers and solicit market feedback which is used in the business cases for new product development.
- The Board receives regular updates and reports from the Operations Council, the Supply Chain Council and the CEO on responses to our customers' challenges and key customer and supplier initiatives.
- Internal reporting processes ensure a flow of information on health & safety, strategy, production and financial performance from site level through the EMB and to the Board.
- Subsidiary payment practices, and the effect this has on our suppliers, will be reviewed and considered by the Board from 2020.

Outcomes of our engagement:

- R&D spend of £13.5 million, focused on core areas where we see the greatest opportunity for growth, see page 14. Established the Advanced Technology Centre in Nottingham for next generation power solution for Aerospace.
- Following site visits by the Board, best practices have been shared to improve our quality management and manufacturing processes.
- Development and periodic review of the Company's global cyber security strategy to reduce the risk of hacking events and ensure the protection of customers' confidential, technical information.
- The Board reviewed and approved the Group's Modern Slavery Policy and Statement for 2019.



Society

- Employment, training and apprenticeships
- Pollution, waste, environmental policies
- Local operational impact
- Helping local communities
- Footprint optimisation

- Membership of the Confederation of British Industry (CBI) and the Responsible Business Alliance.
- Regular updates to the Board from the HSE Council, the designated non-executive director sitting on our PSEE Committee and the EVP HR on social, environmental and employee engagement themes.
- The HSE Council engages on our environmental impact directly with regulatory bodies, and across all TT sites, to share reports with the Board on the Group's progress against its environmental KPI targets.
- TT's PSEE objectives focus on supporting our local communities and charitable activities which "Build Expertise" in science, technology, engineering and maths (STEM).
- Employees are encouraged to actively support their community and local charities. Further details on the way we work with the communities in which we operate and our environmental initiatives can be found on page 50.
- Diversity within our industry is an important theme for the Board. Gender balance is considered in terms of our senior management pipeline, our wider workforce, the sector we operate in and educational institutions nationally.
- Regular circulation of Group-wide communications to employees covering the Company's operations, challenges and successes.

- The Board has considered our environmental impact in relation to discussions on our footprint optimisation.
- The EMB endorsed our Company-wide "Pass on Plastic" environmental initiative.
- We signed up to the "Women in Aerospace & Defence Charter", a UK-wide initiative designed to promote increased gender balance within this sector.
- TT signed up to the UK Armed Forces Covenant under which we have made a commitment to honour and support current and former military personnel.
- Following Board visits to our sites where directors have met with local apprentices, the Board continues to champion apprenticeships in our business.



Employees

- Employment, training and apprenticeships
- Group employment policies
- Investment in our sites
- Diversity/Inclusion
- Health & Safety
- Group strategy

- New engagement process to ensure that the voice of the employee is considered in Board decision-making. See page 48 for further information about this process.
- Nominated NED engages with site employees to bring insights to the Board and to highlight key factors that are important to our employees.
- CEO and CFO visits to many of our manufacturing sites each year have included "town-hall-style" meetings with site employees. Regular town-hall meetings are also held at our sites throughout the year.
- At least one Board meeting per year is held at one of our sites where a site visit is organised and directors engage directly with the workforce.
- At least one NED visits a TT manufacturing site each year (independent of scheduled Board meetings) to provide individual feedback to the Board on stakeholder engagement.
- Engagement activities between Directors and members of the EMB and other representatives of the senior management team.
- The health and safety tone is set from the top with the CEO leading initiatives at various sites this year, focusing on making health and safety behaviour a fundamental part of our culture.
- Structured and robust process developed to ensure that all future NED visits to TT sites will allow time and resources for NEDs to engage meaningfully with local management and a balanced cross-section of local employees whilst taking into account cultural issues and local "hot topics".
- The first site employee forums were held at a number of sites across our global locations in 2019. Employees provided important first-hand thoughts and experiences to the Board on aspects such as safety, business strategy, ethics and impact on the local environment. The Board agreed to expand these forums to cover all TT sites globally in 2020.
- The Board, in collaboration with the EVP HR, is developing and progressing initiatives to address diversity and inclusion within the current employee base and the future pipeline, including the first "Women in Business" forums which were held in 2019.



Investors

- Financial performance
- Governance and transparency
- Leadership
- Reputation
- Sustainability

- CEO and CFO meetings with institutional investors immediately after publication of the annual and interim results, and on an ongoing basis as required.
- The Chairman wrote to and held discussions with many of our largest shareholders this year.
- The Chair of the Remuneration Committee engaged with our largest shareholders regarding proposed changes to our Directors' Remuneration Policy.
- Investor roadshows were held over a total of 17 days to discuss the annual and interim results, along with ad hoc roadshow events between the results announcements to maximise potential interactions with investors.
- The Board receives feedback on investor relations issues so that Directors develop an understanding of major shareholders' views on the Company.
- The Company's brokers provide briefings to the Board on shareholder opinions and independent feedback from investor meetings.
- Information offered at analysts' meetings and financial press releases are made available on the Group's website.
- At the Annual General Meeting, Directors communicate with both institutional and private investors, full details of the 2020 AGM are given on page 174.

- Feedback from investors has informed the Board's discussions and decisions on the Company's strategy and priorities.
- Engagement activities with our institutional investors have informed the Company's development of its sustainability strategy.
- The Board agreed and approved a full review of the Directors' Remuneration Policy prior to submitting it for approval by shareholders at the 2020 AGM.

Composition, succession and evaluation

Board composition

During 2019, the Board comprised two Executive Directors (Richard Tyson and Mark Hoad) and either five or six Non-executive Directors, as the Board composition changed in the middle of the year. In addition to the Executive Directors, Neil Carson, Stephen King, Jack Boyer and Alison Wood all served throughout the year. Anne Thorburn was appointed as a Non-executive Director on 1 July 2019. Michael Baunton served as a Non-executive Director until 1 September 2019. Stephen King served as Senior Independent Non-executive Director throughout 2019. We provide full details of each Director's Board and Committee meeting attendance on page 58 and Directors' biographies, including the Committees they serve on and chair, can be found on pages 57 and 58.

At the time of his appointment as Chairman, Neil Carson was considered to be independent in accordance with the provisions of the Code and is considered to have been independent throughout his term of office. All the remaining Non-executive Directors are also considered to be independent as defined by the Code.

In accordance with the Company's Articles of Association, Directors must offer themselves for re-election at the first Annual General Meeting held following their initial appointment, and every three years after that. However, continuing the best practice first adopted at the 2013 AGM, all Directors will retire and, if eligible, offer themselves for re-election at the forthcoming AGM. This practice will continue in the future, to ensure compliance with the requirements of the Code. Following formal performance evaluation, the Board has concluded that the performance of each Director continues to be effective and to demonstrate commitment to the role. The Notice of AGM sets out details of the key areas of contribution made by each of the Directors in providing leadership to the Company.

Board and Committee performance evaluation

In accordance with the Code, the Board has conducted an evaluation of its performance and that of its principal committees during 2019. The Company engaged an external facilitator as part of the Board's Strategic Review exercise in 2017, but decided to complete an internal assessment process (as adopted in previous years) in 2019. Overall, the Board concluded it had performed satisfactorily in 2019 and each director had performed effectively whilst giving due commitment to their role.

Evaluation process

- Skills matrices reviewed by each Non-executive Director to assess knowledge and expertise in key areas
- Matrices evaluated to identify any areas of weakness in the skills held by the Board as a whole
- One-to-one interviews between the Chairman and Committee chairs
- One-to-one interviews between the Chairman and all Directors

Discussion points

- Overall operations of the Board and committees
- Board member interactions
- Trust and transparency
- Levels of engagement
- Diversity and recruitment
- Governance
- Access to wider management team
- Site visits



Directors' performance evaluation

In accordance with the Code, the performance of individual Directors was also evaluated during 2019.

For the Non-executive Directors, the output from a private meeting held between the Chairman and the Executive Directors formed the basis for individual appraisals held by the Chairman with each Non-executive Director. This also provided an opportunity to discuss any issues which had arisen from either their individual assessments or those of the Board and its principal Committees. For the Chairman's performance, the other Non-executive Directors, led by the Senior Independent Non-executive Director, and with input from the Chief Executive Officer and Chief Financial Officer, met privately to discuss this, with the outcomes being fed back to the Chairman by the Senior Independent Director for discussion.

At the beginning of the year, we set each Executive Director challenging performance objectives, and reviewed progress against these as the year progressed. Both the Executive Directors take part in the Group's performance management programme which, together with a review of progress against agreed goals and objectives, is used to assess performance and to set clear objectives and developmental plans for the following year (which are closely aligned with the Group's strategic priorities and values). The Chief Executive Officer meets with the Chief Financial Officer at the beginning of each year to discuss and review performance against objectives. The Chairman conducted the performance evaluation of the Chief Executive Officer, taking account of the output from the Group's performance management programme together with feedback provided by the other Non-executive Directors at a private meeting held to discuss this and any other matters which the Non-executive Directors wished to raise.

Conclusions

- Excellent governance processes, with a common understanding of TT strategy and culture
- Communication between executive and Non-executive Directors is open, honest and constructive
- There is an environment of trust, and transparency and mutual support
- The Board understands the strengths of individual Board members and anticipates concerns of individuals well in advance
- The Board has responded to initiatives in a collaborative manner and has operated "at pace" whenever required
- Strong levels of engagement exist between Committee chairs and the relevant functions within TT

Areas of focus for 2020

- Increase engagement between Non-executive Directors and Divisional/Operations teams (including non-EMB Personnel)
- Work to embed the ESG agenda more fully into the TT strategy
- Minimise the impact of significant changes at Board and Committee level in 2020 (appointment of a new Board Chairman, Audit Chair and external Auditor)
- Continue the focus on recruitment and succession-planning
- Provide investors with increased exposure to TT's capabilities and how we can combine technologies to provide tangible opportunities for our customers



Neil Carson
Chair, Nominations Committee

Nominations committee

Membership

Neil Carson (Chair)
Stephen King
Jack Boyer
Alison Wood
Anne Thorburn

Principal responsibilities

- Regularly review the structure, size and composition of the Board as a whole and make recommendations for any changes to the Board.
- Review the overall leadership needs of the organisation by considering succession planning for Non-executive Directors (having due regard to their length of service), Executive Directors and members of the EMB and make recommendations to the Board.
- Manage the search for, and selection of, suitable candidates for the appointment of replacement or additional Directors and nominate candidates for the approval of the Board.

Committee meetings in 2019

During 2019, the Committee held three formal meetings. The Committee has held one meeting to date during 2020.

2019 review

As disclosed in last year's Annual Report, the Committee engaged external search consultants in the latter part of 2018 to start the recruitment process for a new Non-executive Director. This was the Committee's key priority for 2019, given the fact that Michael Baunton would reach his ninth anniversary as a NED in September 2019 and, from that point onwards, would no longer be considered "independent" for the purposes of the UK Corporate Governance Code. The Committee specified a number of key criteria as part of the recruitment process, which included: (i) the selection of a candidate who would enhance the diversity of experience at the Board level, (ii) a career profile which was closely aligned with the Group's key markets, international outlook and strategic priorities, and (iii) a listed company background in finance and accounting, such that the successful candidate would be regarded as having "recent and relevant financial experience" (as defined in the Code). The interview process, which was led by the Chairman and involved each of the ongoing members of the Committee, took place in the first half of 2019 and culminated in the appointment of Anne Thorburn to the Board in July 2019. As stated in the Chairman's statement, it is anticipated that Anne Thorburn will take over from Stephen King as Chair of the Audit Committee in due course.

Whilst this NED appointment process represented the main area of focus for the Committee in the past year, the Committee also evaluated the existing structure of the Board, together with the succession planning options at both an Executive Director and EMB level. The Committee's succession planning activities were undertaken in conjunction with the Board's annual talent review exercise, which identified several candidates across the business with the potential for promotion to EMB and/or Executive Director roles in the future. In relation to the existing NED structure, the Committee concluded that TT Electronics had in place a group of highly experienced individuals with the skills and competencies to meet the strategic and operational needs of the business in its core markets.

As stated earlier in this section, as a result of increasing external commitments, Neil Carson will be standing down from the Board in 2020 once his successor as Chairman has been appointed. The formal process to select his replacement has commenced, which is being led by Jack Boyer using independent search consultants. Other than this recruitment exercise, the Committee has decided that it will not be looking to recruit a new NED in the immediate future, on the basis that Anne Thorburn would be taking on Stephen King's responsibilities as Chair of the Audit Committee on his retirement from the Board. In addition to succession planning activities, the Committee undertook a review of its terms of reference during 2019.

At all times during 2019, the Committee has sought to ensure that the Board of TT Electronics is balanced and effective, with diverse skills, knowledge and experience. The Committee attaches a high degree of importance to diversity at all levels across the Group and is committed to recruiting the best talent available, based on merit, and assessed against objective criteria of skills, knowledge, independence and experience. However, we do not advocate a forced approach to diversity at any level of the organisation. This is the rationale that has been applied to the NED recruitment exercise conducted during 2019 and this approach will continue to be applied in the future. Female representation on the Board now stands at over 25 per cent, which the Committee believes will have a positive impact on the Board's governance processes and sends out a strong message across the Group of the importance of a diverse workforce to the future success of the business.

Details of the number of employees, senior managers and Directors of each gender are given in the "Our People" corporate responsibility section on page 47.

All Board members complete a Conflicts of Interest questionnaire and are required to inform the Board of any new or potential conflicts that may arise during the year. In addition, all Directors must obtain approval from the Board for any new external appointments to boards of listed companies to ensure that Directors are not overstretched in terms of

commitments. To assist in this process, the Nominations Committee tracks and reviews the number of external appointments held by each director, including the number of chairmanships and executive director roles held. This tracking schedule facilitates the decision-making process when reviewing whether a new external appointment would lead to overboarding.

Performance evaluation

As described further on pages 66 and 67, the Committee assessed its performance in 2020 by reviewing its activities during the year against its terms of reference. It concluded that it had performed satisfactorily and is structured appropriately to provide effective support to the Board.

Neil Carson

Chair, Nominations Committee

Anne Thorburn Induction

The Company provides all directors of the Board with a comprehensive Directors' Induction Pack which is available at all times on the electronic portal used for Board information. The pack sets out all relevant information about the Company, including its strategy, its policies and processes, directors' duties and responsibilities, and the structure and role of the Board and its Committees. Since Anne joined the Board in July 2019 she has attended the Board meeting held across two of our sites, Hartlepool and Bedlington. This two-day visit allowed Anne to complete site tours and speak directly with the workforce and management team at both sites. Anne has also independently completed two further site tours in Rogerstone and Barnstaple in November 2019. At both sites Anne held meetings with the senior management teams to discuss the business' operations and strategies. One-to-one meetings with the CEO and the CFO were held very early on so that Anne could have an open dialogue with the Executive Directors regarding the day-to-day running of the business. Anne has also attended dinners, along with other Board members, the Executive Management Board and the Suzhou management team during their visit to the UK. We were particularly pleased to have Anne on board in time for her to be a part of the audit re-tender process, during which her previous experience and expertise in this area was invaluable.



Stephen King
Chair, Audit Committee

Audit committee

Membership

Stephen King (Chair)

Jack Boyer

Anne Thorburn

Alison Wood

Principal responsibilities

- Monitor the integrity of the financial statements and the results announcements of the Group.
- Recommend the appointment and remuneration of the Auditor, assess their effectiveness, and monitor provision of non-audit services.
- Assess the content of the Auditor's transparency report, concerning Auditor independence in providing both audit and non-audit services.
- Review the scope, performance and effectiveness of the internal audit and other internal control functions and the Auditor's assessment of it.
- Review changes to accounting policies and procedures, decisions of judgement affecting financial reporting, compliance with accounting standards and with the Companies Act 2006.
- Review risk management processes, including principal risks and internal control findings highlighted by management or internal and external audit.
- Review the Group's whistleblowing arrangements and procedures.

Committee meetings in 2019

During 2019, the Committee held four scheduled meetings.

The Committee met with the Group's Auditor, KPMG LLP, on three occasions during 2019, without executives of the Company being present. During the year, the Committee also met representatives of the outsourced internal control function once, without other executives of the Company being present.

The Committee has held one meeting to date during 2020.

The Code requires at least one member of the Audit Committee to have recent and relevant financial experience. Both Stephen King and Anne Thorburn fulfil this requirement.

2019 review

To allow the Audit Committee to fulfil its duties regarding the integrity of the financial statements and other financial data, the Chief Financial Officer and the Group Director of Financial Control attend Committee meetings, presenting reports and providing analysis and explanations for queries raised. The external Auditor also attends, and presents reports on their audits. They address matters including an overview of the financial statements, key accounting judgements, accounting policies, audit differences and internal control matters. On occasion, at the request of the Committee, the Chairman and the CEO also attend for part of the scheduled Committee meetings.

The Group conducts its internal audit activities under a directed outsource arrangement, resourced by PwC and directed by our Group Director of Financial Projects and Risk. The Director of Financial Projects and Risk attends

Audit Committee meetings to provide updates on: progress on the internal audit plan; findings and recommendations; and team and methodology improvements.

The Committee also regularly receives updates on the Group's risk management framework, to allow members to review principal risks and the effectiveness of risk management processes. As part of this process, the Committee noted the outputs of the internal audit reviews conducted during 2019, which are undertaken both on a site-specific basis (with each principal TT site being reviewed at least once every three years) and on targeted functional areas. In addition, a detailed review was undertaken of the Group's Business Continuity and Disaster Recovery processes during 2019, which was focused in particular on the Group's IT-related activities. The Committee has continued to pay close attention in the past year to the progress made in developing the Group-wide Controls Framework programme and its application in driving business performance across TT, particularly in the context of the financial integration of newly acquired businesses and the impact of behavioural factors on the controls environment.

In the first half of 2019, the Committee decided that, as KPMG would have reached its tenth anniversary as auditors to the Company by July 2020, it would initiate an audit re-tender exercise during the second half of the year using defined selection criteria which included audit quality, independence, understanding of the Company's business, audit team, audit approach, price, value for money and transition plan. Four audit firms were invited to pitch for the Group's external audit work (including the existing auditors, KPMG, and one firm sitting outside the "Big 4"). Following a

comprehensive due diligence process, which involved the submission of detailed presentations and a rigorous series of interviews involving members of the Audit Committee, the CEO, the CFO and representatives of the Divisional management teams, KPMG and Deloitte were selected to proceed to the final stage of the re-tender exercise, presenting to a sub-committee of the Audit Committee. This process resulted in a final determination by the Audit Committee that it would be recommending the appointment of Deloitte as new auditors to the Company, to take effect following the completion of the 2019 year-end audit process, which was approved by the Board. The Directors will be formally proposing the appointment of Deloitte as the new auditors to the Company at the Annual General Meeting in May 2020. Actions have already commenced to replace Deloitte as advisers to the Company on remuneration issues and M&A activities, to ensure that auditor independence is maintained on appointment.

During 2019, the EMB conducted a detailed review of possible emerging risks (in consultation with the Internal Audit function), which were not currently addressed in the Group risk register, but could have application in the future to an international business operating in TT's sector. The outputs of this analysis were discussed further at both the Board and Audit Committee level.

In addition to the usual standing agenda items and further matters detailed in the table below, the Committee also reviewed and challenged the form and content of the Group's Annual Report and Accounts and Financial Statements for the last financial year. In conducting its review, the Committee considered reports prepared by management and the external Auditor. These reports covered analyses of the judgements and sources of estimation uncertainty involved in applying the accounting policies as described in note 1(h) to the financial statements. During 2019, the Committee also considered and challenged the assumptions relating to goodwill, the carrying value of fixed assets and the level of provisions held on the balance sheet (as detailed below). In addition, as part of the Committee's planning for the 2019 year-end audit process, a detailed assessment was undertaken (in conjunction with the external auditors) of the FRC's key areas of focus, as outlined in its Annual Review of Corporate Governance Reporting 2018/19, published in October 2019. The Committee also focused its attention on critical judgements, estimates and accounting policies; the viability statement and risk reporting; strategic reporting; Alternative Performance Measures; the impact of Brexit; IFRS 16; the Group's pension scheme obligations/funding requirements; and KPMG's approach to the audit work undertaken in respect of the Group's operations in China in light of the Coronavirus outbreak in 2020.

Significant issues considered in relation to the financial statements

The main areas of judgement and estimation are set out in the accounting policies on pages 116 to 124.

The Committee received and reviewed reports from management and the external Auditor setting out the significant issues in relation to the 2019 financial statements, which related to:

- Underlying profit
- Provisions (including taxation and product warranties)
- Defined benefit pension obligations and
- Going concern and viability.

They discussed these issues (which are considered in more detail below) with management during the year and with the external Auditor at the time the Committee reviewed and agreed the external Auditor's Group audit plan; when the external Auditor reviewed the half-year results in July 2019; and also at the conclusion of the audit of the financial statements. The Committee is also satisfied that the significant assumptions used for determining the value of assets and liabilities have been appropriately scrutinised and challenged, and are sufficiently robust. The Group's approach to provisioning (with particular reference to the areas of taxation and product warranty claims) is considered by the Committee to have been the area of most significant external audit focus in 2019.

Committee activities in 2019			
Financial reporting	Governance	Internal audit and risk and assurance	External audit
<ul style="list-style-type: none"> • Monitored and reviewed the Group's financial statements and results announcements • Reviewed significant financial reporting and accounting issues • Reviewed going concern and viability statements, including appropriate sensitivity analysis • Reviewed the fair, balanced and understandable process for the financial reports • Reviewed and discussed 2019 H1 and year-end accounting issues • Detailed review of IFRS 16 and its impact on Group results 	<ul style="list-style-type: none"> • Reviewed the Financial Reporting Council's letter of October 2019 in relation to 2018/2019 Corporate Governance reporting • Reviewed Terms of Reference • Received and considered whistleblowing matters reported through the Group's multi-lingual, anonymous Ethics and Integrity portal • Undertook an internal evaluation on the effectiveness of the Committee • Considered Group distributable reserves as part of M&A planning activities • Considered new areas of audit disclosure under UK legislation/regulation 	<ul style="list-style-type: none"> • Received a report at each meeting on the internal audit and risk assurance plan • Agreed the remit of the internal audit programme of work • Considered the results of the 2019 internal audit activities • Reviewed and approved the 2020 internal audit plan • Conducted the annual review of the Group's internal auditor • Presentation on Finance team initiatives from the VP Finance for Power Electronics • Review of the application of Group policy in the area of inventory and overheads 	<ul style="list-style-type: none"> • Discussed and approved the external audit plan and audit fee • Reviewed and confirmed the independence of the external auditor as part of the 2019 review • Assessed the quality and effectiveness of the audit programme, including the performance of the Auditor relative to prior year • Oversaw audit re-tender process leading to the appointment of new auditors

Audit committee continued

Underlying profit

As further explained in note 8 to the financial statements, the Group reports non-trading income or expenditure outside of underlying profit when the size, nature or function of an item or aggregation of similar items is such that separate presentation is relevant to an understanding of its financial position. The Committee challenged the items that were excluded from underlying profit and were satisfied that these were in accordance with the Group's disclosed accounting policy and gave a true and fair view of the Group's underlying financial position.

The Auditor explained to the Committee the work they had conducted and the results of their audit procedures on significant items recorded outside underlying profit.

Provisions

(i) Taxation

Current tax provisions held in respect of tax risks are included within current tax liabilities depending on the underlying circumstances of the provision. Management confirmed to the Committee that the provisions recorded at 31 December 2019 represent their best estimate of the potential financial exposure faced by the Group. The Committee reviewed each significant provision and challenged the basis of management's judgement and concurred with the estimates.

The Auditor explained to the Committee the work they had conducted during the year, including how their audit procedures were focused on those provisions with the highest level of judgement on recognition criteria and/or measurement.

(ii) Warranty provisions

As further explained in note 2 to the financial statements, a provision is recognised in the financial statements when the Group has a present legal or constructive obligation as a result of a past event and it is probable that an outflow of resources, that can be reliably measured, will be required to meet the obligation.

Provisions are recognised at an amount equal to management's best estimate of the expenditure required to meet the Group's liability taking into account the time value of money, where this is considered material.

Management has confirmed to the Committee that the provisions recorded at 31 December 2019 represent their best estimate of the potential financial exposure faced by the Group. The Committee reviewed each significant provision and challenged the basis of management's judgement and concurred with management's estimates.

The Auditor explained to the Committee the work they had conducted during the year, including how their audit procedures were focused on those provisions with the highest level of judgement on recognition criteria and/or measurement.

Further information about the specific categories of provisions held by the Group is set out in note 20.

Defined benefit pension obligations

Following the merger of the Stadium Group scheme and the TT Group scheme with effect from 29 March 2019 the Group now operates one significant defined benefit scheme. There are three other small defined benefit schemes, one in the UK and two in the US.

The Scheme exposes the Group to actuarial risks such as longevity risk, currency risk, inflation risk, interest rate risk and market (investment) risk. The Group is not exposed to any unusual, entity specific or scheme specific risks, but given the material nature of the TT Group scheme, the Group has developed a comprehensive strategy to manage the financial risk. This strategy includes maintaining a long-term working partnership with the Trustee to ensure strong governance of risks within the TT Group scheme and implementing a prudent investment strategy seeking risk-rewarded long-term returns whilst removing the majority of liability mismatching unrewarded risks.

The Committee reviewed the key assumptions supporting the valuation of the retirement benefit obligations noting the advice that management had received from third party advisers. The Committee also considered the adequacy of disclosures in respect of the sensitivity of the balances to changes in these key assumptions (see note 23 to the financial statements on pages 151 to 155).

The Auditor explained to the Committee the work they had conducted during the year in this area.

Other items

Legal, divestment and restructuring provisions

As further explained in note 2 to the financial statements, a provision is recognised in the financial statements when the Group has a present legal or constructive obligation as a result of a past event and it is probable that an outflow of resources, that can be reliably measured, will be required to meet the obligation.

Provisions are recognised at an amount equal to management's best estimate of the expenditure required to meet the Group's liability taking into account the time value of money, where this is considered material. On legal and contractual exposures, the Committee received periodic reports from the Group General Counsel and Company Secretary outlining the open legal and contractual disputes and best estimates of the expected costs associated with such matters.

Management has confirmed to the Committee that the provisions recorded at 31 December 2019 represent their best estimate of the potential financial exposure faced by the Group. The Committee reviewed each significant provision and challenged the basis of management's judgement and concurred with management's estimates.

The Auditor explained to the Committee the work they had conducted during the year in this area. Further information about the specific categories of provisions held by the Group is set out in note 20.

Misstatements

Management has confirmed to the Committee that they were not aware of any material misstatements or immaterial misstatements made intentionally to achieve a particular presentation. The Committee confirms that it is satisfied that the external Auditor has fulfilled their responsibilities with diligence and professional scepticism.

After reviewing the presentations and reports from management and consulting where necessary with the Auditor, the Audit Committee is satisfied the financial statements appropriately address the critical judgements and key estimates (both for the amounts reported and the disclosures).

Fair, balanced and understandable

In accordance with the UK Corporate Governance Code, the Board requested the Committee to advise them on whether it believed the Group's Annual Report, taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategic plan. Procedures are in place to facilitate the appropriate and timely review of the drafts of the Annual Report and specifically to highlight evidence of a fair and balanced representation, which supports input and challenge from all Independent Non-executive Directors, the external Auditor and other external advisers. On careful review of the Annual Report for the year ended 31 December 2019, and the basis for the statement made by the Board on "Fair, balanced and understandable" on page 102, the Audit Committee recommended to the Board that, taken as a whole, the Annual Report is fair, balanced and understandable and provides the information necessary for shareholders to assess the Company's position and performance, business model and strategic plan.

Auditor's independence, objectivity and effectiveness

The Audit Committee assesses the independence of the Auditor annually to ensure suitable policies and procedures are in place to safeguard the Auditor's

independence and objectivity, having regard to length of tenure, provision of non-audit services and the existence of any conflicts of interest.

The Committee has formally reviewed the independence of the Auditor as part of the 2019 review. KPMG has provided a letter to the Committee confirming they remain independent within the meaning of the relevant regulations and in accordance with their professional standards.

The Committee also reviewed the quality and effectiveness of the audit programme during the year, including the performance of the Auditor. The use of an evaluation questionnaire and an auditor assessment survey (completed by heads of finance across the Group's operations), together with information provided by the Auditor, assisted in ensuring that a comprehensive assessment was undertaken. We identified areas for improvement and communicated them to the Auditor for action, recognising the transition of Auditor to Deloitte LLP for the financial year ending 31 December 2020, following the recent audit re-tender exercise.

Policy on non-audit services

The Company has an established policy regarding the provision of non-audit services by external auditors. This states that we may obtain non-audit services from the most appropriate source, having regard to expertise, availability, knowledge and cost. Non-audit services where fees are expected to exceed £25,000 should be approved, in advance, by the Chair of the Audit Committee or, in his absence, by another member of the Audit Committee. There is also a restriction such that fees for non-audit services will not exceed those for audit services, paid to the same service provider, for more than two consecutive years, unless specifically recommended by the Audit Committee and agreed by the Board. The overriding preference of the Committee is not to engage the Auditor for additional non-assurance services, unless there are compelling reasons to the contrary, such as capability, time or cost.

In 2019, audit service fees paid to KPMG were £1.1 million, while non-audit service fees paid to KPMG totalled approximately £60,000. This comprised assurance services relating to the half-year review. During 2019, non-audit service fees paid to KPMG represented approximately 5.5 per cent of audit service fees paid to them during the same period, an increase compared to 2018. The Committee believes that, for these particular areas, KPMG was best placed to provide a comprehensive and effective service to the Company.

Stephen King

Chair, Audit Committee



2019 was another year of strong performance."



Alison Wood
Chair, Remuneration Committee

Directors' remuneration report

Membership

Alison Wood (Chair)
Jack Boyer
Neil Carson

2019 Highlights

- Review of Remuneration Policy including requirements of the UK Corporate Governance Code and legislative changes.
- Shareholder consultation on changes to Remuneration Policy.
- Review of workforce remuneration, CEO pay ratio and UK gender pay.
- Review the total remuneration levels for the Chairman, Executive Directors and Senior Managers.
- Reviewed outcomes, awards and performance targets of incentive schemes.
- Incentive scheme rules updated to reflect best practice for malus and clawback.

Directors' remuneration report

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See our KPIs on pages 20–21
Read our full Remuneration policy in the 2016 Annual Report at www.ttelectronics.com/investors

Chair's statement

On behalf of the Board, I am pleased to introduce the Directors' Remuneration report for the year ended 31 December 2019. The report sets out our philosophy and the proposed policy for Directors' remuneration, together with the key activities of the Remuneration Committee. Our Directors' Remuneration Policy (the "Policy") was last approved by shareholders at the AGM in 2017 and this report includes details of the proposed changes which shareholders will be able to vote on at the AGM on 6 May 2020.

Context and business performance

2019 was another year of strong performance with good revenue growth, double-digit improvement in underlying operating profit and further margin enhancement despite the macro challenges in some of our markets.

- Underlying profit before tax was £36.3 million, up by 15 per cent.
- Free cash flow was £9.7 million, up by 14 per cent.
- Underlying EPS was 18.7p, up by 15 per cent.

Since 2015, the Group has undergone significant transformation and is continuing to become a higher quality, better-balanced business with increasing exposure to the structural growth markets of aerospace, defence and medical. We have made significant progress across our strategic priorities. During the year, our business development focus has resulted in new customer wins, growth in our key accounts and now increased cross-selling successes between divisions (see pages 16 to 17 for more details).

Our R&D investment has been increased again and is split between near-term new product development for existing customers and markets, and in the year included a longer-term initiative to develop our first entire power assembly for the aerospace market. We have focused our operational excellence activities at sites where our operational performance has been below TT benchmark levels and continue to work on optimising our cost base. We have launched a new self-help programme to underpin further margin progression, improved efficiency and reduced carbon footprint (see pages 50 to 52 for more details).

During the year, we announced two acquisitions, extending our power supply capabilities in the US across our core markets. Power Partners extends our technology roadmap for power products while improving our medical market access in the US and the Power Solutions business of Excelitas based in Covina, USA expands our capabilities for providing advanced power solutions to our aerospace and defence customers while giving us enhanced access to the large and growing US market.

We have introduced a new strategic priority, bringing together all the environment and sustainability activities inside the Group under one strategic banner, to allow more focus on maintaining our commitment to delivering sustainable value for all our stakeholders (see more on page 17).

How do we report on Directors' remuneration?

Our aim is to be open and transparent so stakeholders can assess whether remuneration paid to executives is appropriate, given the financial, operational and strategic performance of the Company and executives' individual performance. We have reviewed feedback from last year's report and have enhanced how we analyse and describe executives' individual performance.

Policy Review

2019 has been an appropriate time to review and propose changes to the Remuneration Policy. Since the Policy was last approved by over 99 per cent of our shareholders at the AGM in 2017, the Company has continued its strategy of portfolio transformation while delivering organic and inorganic growth which has fundamentally changed the scale, business complexity and value of the Group. This strategy will continue into the next Policy period. In reviewing the Policy, we have proposed changes to ensure the Policy is "fit for purpose" to align both shareholders' and our Executive Directors' focus and interests during the next phase of the strategy. At the same time, we have taken into account the changes to the UK Corporate Governance Code, legislative changes and developments in good practice.

Whilst we have undertaken a full review of our Policy, we believe that it has served us well to date and therefore we consider the proposed changes to be an evolutionary re-alignment rather than fundamental. In proposing the changes we have engaged with and sought feedback from our largest institutional shareholders and the major investor bodies; their feedback is reflected in our final proposals. I was encouraged with the level of engagement we received, and I would like to thank them for the time taken and for their constructive feedback.

The main changes to the Policy, which are set out in detail in the Remuneration Policy Report, are as follows:

- Alignment of the pension provision for newly appointed Executive Directors to those available to the majority of the local workforce in which the Executive is employed. This is currently 7 per cent of salary in the UK. The current Executive Directors will retain their existing contractual pension provision of 15 per cent of salary. The Committee notes investor sentiment and will continue to annually review market trends and developments in respect of the contractual pension provision to the existing Executive Directors;

Principal responsibilities

- Determine the Remuneration Policy for Directors for approval at least every three years.
- Determine remuneration packages and terms and conditions of employment for the Executive Directors, Senior Managers and the Chairman of the Board.
- Approve the design, performance measures, targets and outturns of incentive schemes for the Executive Directors and Senior Managers.
- Set remuneration policy within the wider context of remuneration trends across the workforce.
- Produce an annual report of the implementation of the Directors' Remuneration Policy in the last financial year and for the forthcoming year.

Areas of focus 2020

- Approve the design, performance measures, targets and outturns of incentive schemes for the Executive Directors and Senior Managers, including the impact on incentives of further portfolio development.
- Monitor market developments, developments in good practice and the alignment of remuneration strategy to deliver the business strategy within the context of wider workforce remuneration.
- Further enhance oversight of the workforce remuneration policies and framework to ensure they support the strategic objectives, culture and TT values.
- Build on the existing mechanisms to improve workforce engagement on remuneration.

Directors' remuneration report continued

- Introduction of a material post cessation of employment share ownership requirement. Executive Directors will be required to hold for two years post-employment the lower of 50 per cent of the share ownership requirement or the shareholding at cessation. The Committee will continue to review market trends and developments in respect of post cessation share ownership requirements;
- Re-alignment of incentive opportunity and rebalancing of our incentive mix which will continue to be weighted towards the long-term strategic agenda. To reflect the ongoing business transformation, scale and business complexity the maximum short-term incentive opportunity will be increased for the Executive Directors by 25 per cent to 125 per cent of salary;
- Introduction of short-term incentive deferral, with 20 per cent of the incentive earned deferred into shares for two years; and
- Incorporation and alignment of additional malus and clawback triggers in the short-term incentive, deferred short-term incentive and long-term incentive plan rules.

Review of performance for the year

The Group continued to deliver strong growth and profit improvement throughout the year, reflecting the strategy to capture the opportunities from "Electronics Everywhere" in the structural growth markets of aerospace, defence, medical and high-end industrial. The Company has delivered another strong year of progress, despite softer macroeconomic uncertainty in some of our markets.

In reviewing performance, we have carefully considered the overall performance of the Company and the shareholder experience during the year in determining appropriate incentive outcomes. We believe that the following outcomes are a fair reflection of the business and personal performance of the Executive Directors:

- Short-term incentive for Executive Directors comprises 75 per cent based on financial measures (50 per cent underlying profit before tax and 25 per cent Group free cash flow) and 25 per cent on the achievement of strategic objectives. For the year ended 31 December 2019, underlying profit before tax grew 15 per cent to £36.3 million which continues the growth trend of the business. Despite this strong growth, performance was slightly below the stretching on-target performance hurdle. Free cash flow performance was again strong at £9.7 million with an underlying cash conversion of 98 per cent. The Executive Directors delivered another year of strategic progress with further actions remaining to fully deliver the business strategy and the Group's transformation. The overall strong performance led to an incentive payment of 64 per cent of the maximum for the Executive Directors. Detail of the short-term incentive outcome is presented on pages 93 to 94, including the full range of performance levels for each of the financial measures and commentary on performance against the strategic objectives.
- The 2016 Long-term Incentive Plan (LTIP) awards part vested in March 2019. The awards were based on two equally weighted measures, absolute underlying Earnings Per Share (EPS) and relative Total Shareholder Return (TSR) performance. The EPS element vested in full as reported last year. The TSR performance over the three-year period was 41 per cent. The TSR element vested in part at 73 per cent as presented on page 94.
- The 2017 LTIP awards vest in March 2020 based on performance against EPS and TSR. Following the strong performance of the Group over the three years to 31 December 2019, the EPS performance measure was met in full with a compound annual growth rate of 33.8 per cent. The TSR performance measure concludes in March 2020. TSR performance is anticipated to finalise around the maximum performance target and will be disclosed in next year's Directors' remuneration report. Further detail is presented on page 94.

CEO Pay Ratio

Following the changes to the UK Corporate Governance Code the CEO pay ratio is included in this report. Full details can be found on page 97. We believe that our median pay ratio of 59:1 is consistent with our approach to remuneration across the Company and the types of roles held by our employees across the UK. A significant proportion of our Chief Executive's total remuneration is in performance dependent variable pay and therefore we expect the pay ratio to vary from year to year dependent on the outcome of both our short-term and long-term incentive plans.

UK Gender Pay

Creating a positive work environment where all employees can develop and build their expertise is of paramount importance to TT. We strive to build a supportive, diverse and engaging place to work built around the "TT Way". We are confident that our people policies and approaches to recruitment, training, development and remuneration are fair and free of bias. Across the Group we are broadly evenly split by gender and are delighted to have improved our gender diversity at the Executive level with the appointment of Anne Thorburn. We acknowledge that further progress is required to improve the gender balance in our professional and management roles.

Our UK gender pay reports show that women hold fewer senior positions within the UK than men, for both managerial, professional and technical roles. As with other employers in our sector we believe that closing the pay gap will occur over the longer-term. Our gender pay reports outline our initiatives to actively engage our local communities to encourage more women to pursue technical and engineering based careers, and the positive actions that are being taken to encourage all employees to develop their careers within the Company.

Full details of our UK Gender Pay disclosures can be found on www.ttelectronics.com.

Remuneration in the upcoming year

In line with the proposed new Policy and following a total remuneration review of the Executive Directors and Senior Managers, the Committee has agreed the following:

- Base salaries for the Executive Directors will be maintained at their current level. In making the decision, the Committee took account of the proposed approach for the UK workforce, expected to average around 2 per cent, retention risks and the request made by the Executive Directors not to receive an increase, recognising the changes to some of our external markets and the actions taken within the Company. Fees for the Chairman and Non-executive Directors will also remain unchanged;
- The short-term incentive will continue to comprise 75 per cent based on financial measures (50 per cent underlying profit before tax and 25 per cent Group free cash flow) and 25 per cent on the achievement of strategic objectives. In line with our proposed new Policy, subject to shareholder approval, the maximum short-term incentive opportunity for 2020 will be increased from 100 per cent to 125 per cent of base salary, with 20 per cent of the earn incentive deferred into shares for a period of two years. The targets and performance against all of the performance measures will be fully disclosed in next year's Directors' remuneration report. The strategic priorities for 2020 will include a component on the development and integration of the Group ESG strategy.
- LTIP awards are planned to be made in March 2020 and will continue to be made on two equally weighted performance measures, EPS and TSR. As in 2019 the awards for the CEO and CFO are expected to be set at 150 per cent and 135 per cent of salary respectively.

Discretion and independent judgement

As a Committee, we are willing to exercise discretion and judgement when determining remuneration outcomes for the Executive Directors. Before agreeing performance outcomes we reflect on whether the Company's overall performance is appropriately represented by the performance measures we have set, by taking into account performance against non-financial measures, environmental, social and governance (ESG) matters, the demonstration of leadership qualities and living our values.

During the year the Committee applied its judgement to amend short-term incentive scheme performance measures for exceptional items, changes to accounting standards and portfolio development. Changes ensured that targets remained "fit for purpose" and materially neither easier nor more difficult to achieve. In respect of the acquisition of Power Partners Inc., the financial performance measures in the short-term incentive were adjusted to reflect the budgeted performance of the acquisition. The Committee also reviewed the methodology of measuring performance outturns at budget exchange rates to ensure the actual outcomes are assessed in line with the approach to target setting.

Workforce remuneration

TT Electronics' over-arching remuneration framework is commonly applied across the Group and supports the people strategy to create an inclusive, equitable and performance related organisational culture. It is designed to underpin the business' core purpose, delivery of strategic priorities and enables it to attract, retain and motivate talented people by applying consistent yet locally driven remuneration principles across the Group. Where practicable, remuneration practices are aligned with those of Executive Directors to ensure alignment of focus and motivation.

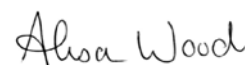
Enabling Colleagues to become shareholders

We feel strongly in the positive benefits of our colleagues being shareholders in the business and have been running all employee share schemes in both the UK and US for almost ten years. In recent years participation has been increasing and we are delighted that over 25 per cent of employees from across the UK and US participate in our schemes. Our existing all-employee share schemes are coming to the end of their ten-year lifespans and replacements to these share schemes are included in the 2020 AGM voting resolutions.

Developments for 2020

As the Company continues to transform, the Committee, working with management, will continue to assess and ensure the alignment of remuneration arrangements with TT's strategy, business results and market demands. In particular, we will consider how the Group purpose and ESG strategy align with our remuneration programmes, and we will test and challenge the alignment of pay for performance programmes across the workforce. We will build on the existing mechanisms to engage the workforce on our approach to remuneration and continue to provide oversight of the workforce remuneration policies to ensure they support the strategic objectives, culture and TT values.

As always, we would welcome any feedback or comments on this Report. The Committee remains firmly committed to the principle of pay for performance, ensuring that rewards to the senior leadership team are aligned with the sustainability of the Company and the returns to long-term shareholders. If you would like to discuss any further aspect of our remuneration strategy I would welcome your views. I can be contacted at alison.wood@ttelelectronics.com.



Alison Wood
Chair, Remuneration Committee

Future Remuneration Policy overview

Future Remuneration Policy

The Remuneration Policy supports and rewards the achievement of the Group's strategy to deliver profitable and sustainable growth over the short and longer term. This is driven and evaluated by how the Group performs against a variety of KPIs both financial and non-financial. Our Directors' Remuneration Policy was last approved by shareholders at the AGM in 2017 and this overview outlines the proposed key changes which shareholders will be able to vote on at the 2020 AGM and how this would be applied. The Policy is set out in full on pages 81 to 90.

Executive Director remuneration for 2020

Element	Maximum	2020	2021	2022	2023	2024
Fixed Pay	Salary	Market competitive. Increases set with reference to the wider workforce.	Salary paid.			
	Benefits	Market competitive.	Benefits paid.			
	Pension	Aligned to those available to majority of local workforce for newly appointed Executives. 15% of salary for existing Executive Directors.	Pension provision paid.			
Variable Pay	Short-term incentive plan	CEO/CFO 125% of salary. 80% cash and 20% in deferred shares.	Annual performance conditions apply. Majority weighting on Group financial targets, minority to strategic objectives.	Cash element paid (80% of earned incentive).		
				2-year share deferral (20% of earned incentive).		
	Long-term incentive plan	CEO 150% of salary, CFO 135% of salary. 2-year holding period applies.	Based on financial and/or share price measures over a three-year performance period.			2-year holding period.
Governance	Share ownership requirement	200% of salary.	Executive Directors required to build and maintain the share ownership requirement. CEO share ownership is 375% of salary, CFO is 383% of salary.			
	Malus (withholding) and clawback (recovery)	All incentives.	Malus: incentive plans allow for the Committee to exercise discretion and make adjustments to formulaic outcomes. Clawback: misstatement, serious misconduct, serious reputational damage, error in calculation and corporate failure.			
	Post-employment share ownership	100% of salary.	Holding requirement for shares until two years after cessation of employment.			

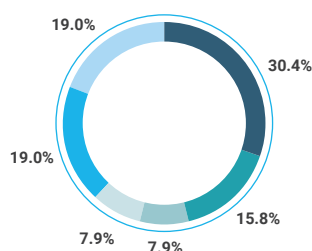
Outline of key Policy changes

Element		Current Policy	Proposed Policy	Rationale
Fixed Pay	Pension	Current policy for Executive Directors is up to 15% of salary.	<p>The maximum contribution for the existing Executive Directors will be up to 15% of salary.</p> <p>The pension provision for newly appointed Executive Directors will be aligned with those available to the majority of the local workforce in which the Executive is employed.</p>	<p>To align pension provision of newly appointed Executive Directors with the workforce.</p> <p>The Committee recognises the Code requirement and the desire of shareholders to see the alignment of pension provision to that of the workforce. The Committee is mindful of the current Executive Director contractual commitments and has not reduced their pension contributions. The Committee will continue to monitor developments in market practice.</p>
	Short-term incentive opportunity	The maximum potential is 100% of base salary in respect of any financial year.	The maximum potential is 125% of base salary in respect of any financial year.	<p>The Committee believes the level of incentivisation better reflects the ongoing business transformation, scale, business complexity and value of the Group.</p> <p>To further incentivise the annual delivery of financial and strategic goals as the Group continues to execute its growth strategy.</p>
Governance	Short-term incentive deferral	No current formal policy.	80% of earned incentive will be paid in cash. 20% of earned incentive will be deferred into shares for a period of 2 years. Dividend equivalents will accrue in respect of deferred shares.	The Committee believes that deferral into shares strengthens the alignment between the long-term interests of Executive Directors and shareholders.
	Post-cessation shareholding	No current formal policy.	Introduction of a post-cessation of employment shareholding requirement of 50% of the minimum shareholding required for 2 years following cessation. The requirement will apply to share awards made under the LTIP and the short-term incentive deferral following the approval of the policy.	The Committee recognises the Code requirement and the desire of shareholders. The Committee believes that the proposal strengthens alignment between the long-term interests of Executive Directors and shareholders.
	Malus (withholding) and Clawback (recovery)	<p>Malus and clawback applies to both the short-term and long-term incentive.</p> <p>STIP: Clawback provisions apply for material misstatement.</p> <p>LTIP: Clawback provisions apply during the two-year holding period. Clawback provisions apply for material misstatement, misconduct and calculation error.</p>	<p>Malus provisions apply to the short-term plan, short-term incentive deferral and long-term incentive plan.</p> <p>Malus provisions across all plans allow the Committee to exercise discretion and make adjustments to formulaic outcomes prior to payment or vesting.</p> <p>Clawback provisions apply to all plans. For two years after the payment date of the short-term incentive and for three years after the vesting in the short-term incentive deferral and long-term incentive plan.</p> <p>Clawback provisions apply for material misstatement, misconduct, calculation error, reputational damage and corporate failure.</p>	<p>The Committee recognises the Code requirement and the need to ensure that incentive payments are appropriate and that the schemes enable the recovery and/or withholding of awards in circumstances where it would be appropriate to do so.</p> <p>Changes to Malus and Clawback were introduced for the 2019 incentive awards.</p>

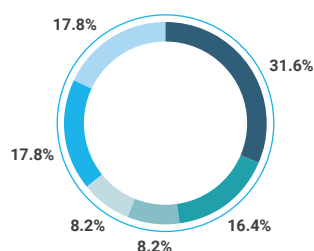
Remuneration at a glance

Aligning our principles with reward

Richard Tyson (2020)



Mark Hoad (2020)



- Fixed Pay
- Underlying profit before tax (short-term incentive)
- Group free cash flow (short-term incentive)
- Strategic objectives (short-term incentive)
- Underlying earnings per share (long-term incentive)
- Total Shareholder Return (long-term incentive)

Key performance indicators for 2019

Our remuneration arrangements have a clear link to our key performance indicators that are aligned with our business strategy.

Short-term incentive plan ¹	Financial	Underlying profit before tax (50%)	£36.4m 40% of max
		Group free cash flow (25%)	£8.3m 100% of max
Strategic objectives	Strategic growth preparation in North America (12.5%)	Performance between target and stretch 76% of max	
	Operational efficiency (12.5%)	Performance between target and stretch 76% of max	
Long-term incentive plan ²	Financial	Underlying earnings per share (50%)	33.8% compound annual growth rate 100% of max
	Share price	Total shareholder return (50%)	66 percentile 73% of max

1 Target and actual performance are assessed at constant budget exchange rates.

2 EPS performance measure relates to the 2017 LTIP award (performance period from 1 January 2017 to 31 December 2019), TSR performance measure relates to the 2016 LTIP award (performance period from 16 March 2016 to 15 March 2019).

The Committee believes that performance measures should be both motivational and stretching. In 2019, the Executive Directors grew underlying profit before tax by 15 per cent and delivered strong cash flow performance. Against the stretching targets, the overall short-term incentive awards to the CEO and CFO were 64 per cent of salary. See pages 93 to 94 for more detail. Further detail in respect of the Long-Term Incentive Plan vesting can be found on page 94.

Executive Director remuneration for 2019

	Fixed pay						Variable pay						Total remuneration £'000	
	Salary £'000		Benefits £'000		Pensions £'000		STIP £'000		LTIP £'000		Other £'000			
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Executive Directors														
Richard Tyson	478	455	23	22	72	68	306	425	655	1,248	0	4	1,534	2,222
Mark Hoad	359	348	20	20	54	52	230	325	453	732	0	4	1,116	1,481

[See page 92 for more detail](#)

Remuneration Policy report

Remuneration objectives and key principles

The following pages detail the Directors' Remuneration Policy which we intend to apply, subject to shareholders approval at the 2020 AGM and how it differs from that approved by shareholders at the 2017 AGM. As a Committee, we believe that the proposed Policy will be "fit for purpose" to align both shareholders' and our Executive Directors' focus and interests during the next phase of the Company strategy. In proposing the changes we have sought feedback from our largest institutional shareholders and the major investor bodies; their feedback is reflected in our final proposals.

Summary of the key changes from the previous Policy

The key differences between the Policy approved by shareholders in 2017 and the proposed Policy are as follows:

- Alignment of the pension provision for newly appointed Executive Directors to those available to the majority of the local workforce in which the Executive is employed. This is currently 7 per cent of salary in the UK. The current Executive Directors will retain their existing contractual pension provision of 15 per cent of salary;
- Introduction of a material post cessation of employment share ownership requirement. Executive Directors will be required to hold for two years post-employment the lower of 50 per cent of the share ownership requirement or the shareholding at cessation;
- Re-alignment of incentive opportunity and rebalancing of our incentive mix which will continue to be weighted towards the long-term strategic agenda. To reflect the ongoing business transformation, scale, business complexity and value of the Group the maximum short-term incentive opportunity will be increased by 25 per cent to 125 per cent of salary;
- Introduction of short-term incentive deferral, with 20 per cent of the incentive earned deferred into shares for two years; and
- Incorporation and alignment of additional malus and clawback triggers in the short-term incentive, deferred short-term incentive and long-term incentive plan rules.

The proposed Policy represents an evolutionary re-alignment of the current Policy rather than a fundamental change. The Committee continues to believe that the remuneration arrangements should be aligned with the Executives' underlying commitment to act in the best interests of maximising sustainable long-term shareholder value creation, whilst ensuring that behaviours remain consistent with the governance and values of the business.

Key Policy objectives

To deliver a remuneration package:

- to attract, retain and motivate high calibre executives in a challenging and competitive business environment;
- that delivers an appropriate balance between fixed and variable compensation for each executive;
- that places a strong emphasis on performance, both short-term and long-term;
- strongly aligned to the achievement of strategic objectives and the delivery of sustainable value to shareholders; and
- that seeks to avoid creating excessive risks in the achievement of performance targets.

Remuneration principles

- Performance-related: the majority of the Executive and Senior Manager remuneration packages should be determined based on the performance of the Group. A significant proportion of this is aligned with shareholder interests, such as measures based on EPS and TSR. Failure to reach performance thresholds leads to no pay-out under the Group's short-term or long-term incentive arrangements.
- Transparency: to engender a fair and collaborative culture, total remuneration frameworks should be clear and openly communicated.
- Competitive: through a combination of base salaries and competitive performance-related incentive schemes, the Committee aims to provide competitive total remuneration in return for superior performance. Base salaries are designed to reflect the requirements of the role and responsibility, together with the overall level of individual performance and taking account of prevailing market and economic conditions, and remuneration levels across the Group.

Remuneration Policy report continued

Operation and scope of Remuneration policy

The future Remuneration policy is intended to apply to the Executive Directors and Non-executive Directors from the close of the Company's AGM on 6 May 2020, subject to approval by shareholders.

The Committee has written this Policy principally in relation to remuneration arrangements for the Executive Directors, whilst taking into account the possible recruitment of a replacement or additional Executive Director during the operation of this Policy. The Policy is intended to operate for the full Policy term. However, the Committee may after due consideration, seek to change the Policy during this period if it believes it is appropriate to do so for the long-term success of the Company, after consultation with shareholders and having sought shareholder approval at a general meeting.

The Committee reserves the right to make any remuneration payments and/or payments for loss of office (including exercising any discretions available to it in connection with such payments) notwithstanding that they are not in line with the Policy where the terms of the payment were agreed:

- (i) before AGM 2014 (the date the Company's first shareholder-approved Directors' Remuneration Policy came into effect);
- (ii) before the future Policy comes into effect, provided that the terms of the payment were consistent with the shareholder-approved Directors' Remuneration Policy in force at the time they were agreed; or
- (iii) at a time when the relevant individual was not a Director of the Company and, in the opinion of the Committee, the payment was not in consideration for the individual becoming a Director of the Company. For these purposes "payments" includes the Committee satisfying awards of variable remuneration and, in relation to an award over shares, the terms of the payment are "agreed" at the time the award is granted.

Future Remuneration Policy table

Subject to shareholder approval at the Company's AGM on 6 May 2020, the Remuneration Policy for each remuneration element will be as outlined in the following Policy tables. From time to time, the Committee may consider it appropriate to apply judgement and discretion in respect of the approved Policy. This is highlighted where relevant in the Policy, and the use of discretion will always be in the spirit of the approved Policy.

Salary		No material change	
Purpose and link to strategy	Operation	Opportunity	Performance measures
To provide a core reward for the role. Set at an appropriate level to attract, motivate and retain high calibre individuals needed to deliver the Group's strategic priorities.	Salary is normally reviewed annually, typically effective from 1 January each year. Salaries are normally paid in the currency of the Executive Director's home country. The Committee consider a number of factors in setting salaries, including but not limited to: <ul style="list-style-type: none"> • Broader Company policy in respect of salaries applied to all employees. • Individual's role and scope, skills, experience and performance. • Competitiveness to independently sourced data compared to relevant comparator groups such as companies of similar complexity, sector and size. • Set at an appropriate level to ensure an appropriate level of basic fixed income and avoids excessive risk arising from over reliance on variable income. 	There is no prescribed maximum annual increase although increases are generally aligned with the general increase received by the broader employee base in which the Executive operates and market movement. Higher increases may be made at the Committee's discretion in certain circumstances such as a significant change in responsibility, in the scale of their role or in the size and complexity of the Group. Larger increases may also be considered for progression if a Director has been initially appointed to the Board at a lower than typical salary. Current base salary levels are set out in the Directors' Annual Remuneration Report.	Not applicable, although the overall performance of the individual is taken into account when determining salary increases.

Benefits			No material change
Purpose and link to strategy	Operation	Opportunity	Performance measures
To provide market competitive and cost-effective benefits to attract and retain high-calibre individuals	<p>Executive Directors are eligible to receive benefits, which typically may include but are not limited to:</p> <ul style="list-style-type: none"> • Cash allowance in lieu of company car benefit. • The provision of private medical insurance, health screening. • life assurance, income protection and critical illness cover. <p>In line with the policy for other employees, Executive Directors may be eligible to receive relocation or overseas relocation benefits and allowances as appropriate.</p> <p>Benefit provision is tailored to reflect geographic market practice in which the Executive Director is based and different policies may apply if Executive Directors are based in a different country.</p>	<p>There is no prescribed maximum as benefit costs can fluctuate depending on changes in provider cost and individual circumstances.</p> <p>Details of the current benefit costs are set out in the Directors' Annual Remuneration Report.</p>	Not applicable.

Pension			Alignment to workforce pension provision for newly hired Executive Directors
Purpose and link to strategy	Operation	Opportunity	Performance measures
To provide a market competitive level of retirement income and assist attraction and retention.	<p>Pension arrangements for Executive Directors are structured in accordance with the provisions available to the majority of the local workforce in which the Executive is employed. Where the individual chooses not to become a member of the pension plan, cash in lieu of the relevant pension contribution is paid instead.</p> <p>Executive Directors in the UK are entitled either to join the defined contribution pension plan and/or to receive a cash pension in lieu of the pension contribution.</p> <p>In line with market practice, pensionable pay for Executive Directors in the UK includes basic salary only.</p>	<p>The pension provision for newly appointed Executive Directors will be aligned with those available to the majority of the local workforce in which the Executive is employed.</p> <p>The pension provision for incumbent Executive Directors is up to 15 per cent of basic salary.</p>	Not applicable.

Remuneration Policy report

continued

Short-term incentive plan			Change to opportunity and introduction of deferral
Purpose and link to strategy	Operation	Opportunity	Performance measures
<p>To incentivise and recognise execution of the achievement of the business strategy on an annual basis.</p> <p>Rewards the achievement of stretching annual financial measures and strategic business targets aligned to business strategy.</p>	<p>Performance measures and targets are typically set at the start of each financial year and are aligned with the strategic business priorities. Financial targets are set with reference to the budget.</p> <p>Incentive awards are assessed and determined by the Committee based on performance against the targets.</p> <p>20 per cent of any earned incentive is automatically deferred pre-tax into shares for a period of two years. Deferred shares are eligible for dividend equivalents up to the date of vesting and release. Deferred awards (after any sales to pay associated tax withholdings) must be retained until the share ownership guideline and/or post-cessation of employment share ownership guidelines are met.</p> <p>The Committee may apply judgement in making appropriate adjustments to incentive outcomes to ensure they reflect underlying business performance and shareholder interests.</p> <p>Awards are subject to malus and clawback provisions.</p>	<p>The maximum opportunity for Executive Directors is 125 per cent of basic salary.</p> <p>For target performance, the incentive award will be 50 per cent of the maximum opportunity.</p>	<p>Based on a combination of financial and strategic performance measures with at least 75 per cent of the incentive assessed against Group financial measures. The specific measures and weighting between measures will be determined each year to ensure alignment with Company strategy and budgets. The Committee may use its discretion to set financial measures that it considers appropriate in each financial year.</p> <p>Specific performance measures and weightings will be included in the relevant year's Annual Report on Remuneration.</p>
Long-term incentive plan			No material change
Purpose and link to strategy	Operation	Opportunity	Performance measures
<p>To incentivise and recognise delivery of longer-term sustainable business performance, aligning Executive Directors' interests with those of shareholders.</p> <p>In addition, to provide a retention element, encourage long-term shareholding and discourage excessive risk taking.</p>	<p>Award of shares, either as nil cost options or conditional awards, made annually with vesting dependent on the achievement of performance conditions measured over three years. Vested shares (after any sales to pay tax) are subject to an additional two-year holding period.</p> <p>Performance measures and targets are set at the Committee's discretion, there may be a single target range to be met at the end of the three-year period or annual target ranges to be met throughout the three-year period. Targets are set for each award with reference to the business plan.</p> <p>Awards are eligible for dividend equivalents up to the date of vesting and release.</p> <p>The Committee may apply judgement to adjust the formulaic vesting outcomes (either up or down) to ensure they reflect underlying business performance and shareholder interests over the performance period.</p> <p>Awards are subject to malus and clawback provisions.</p>	<p>The maximum award which may be granted under the LTIP in any one year is up to 150 per cent of basic salary for the Executive Directors.</p> <p>The amount that is paid out for achievement of threshold performance will be no more than 25 per cent of the maximum. The minimum vesting is 0 per cent.</p>	<p>Awards vest based on a variety of financial and/or shareholder value creation measures.</p> <p>The specific measures and weighting between measures will be determined each year to ensure alignment with Company strategy and business plan. The Committee may use its discretion to set measures that it considers appropriate each year. Specific performance measures and weightings will be included in the relevant year's Annual Report.</p> <p>LTIP performance is currently measured over three years based on financial (e.g. EPS) and/or share price measures (e.g. relative TSR).</p>

All-employee share plans			No material change
Purpose and link to strategy	Operation	Opportunity	Performance measures
To encourage employee share ownership and increase alignment with shareholders.	<p>A number of all-employee share plans are operated across the Group.</p> <p>Executives are entitled to participate in all-employee share plans (Sharesave in the UK, Employee Share Purchase Plan in the USA) on the same terms as all other eligible employees.</p>	In accordance with prevailing legislative and plan limits.	Not applicable.

Share ownership guidelines			Introduction of post cessation requirement
Purpose and link to strategy	Operation	Opportunity	Performance measures
To align the interests of Executive Directors with those of shareholders.	Executive Directors are required to build and maintain significant shareholdings over time.	<p>Executive Directors are required to build and maintain a shareholding in employment of 200 per cent of basic salary.</p> <p>Post-cessation of employment, Executive Directors are required to maintain for two years, a shareholding of half the in employment requirement or maintain their actual holding if lower.</p> <p>The post-cessation requirement will be calculated based on the basic salary at the leave date and applies to shares that vest (after any sales to pay tax) under the long-term incentive plan and the deferred share bonus plan (DSBP) following the approval of this Remuneration Policy.</p>	Not applicable.

Malus (withholding) and Clawback (recovery)	Updated to reflect good practice
<p>The Committee may apply judgement to adjust formulaic incentive outcomes (either up or down) prior to payment/vesting to ensure they reflect underlying business performance and shareholder interests. Malus and clawback events include material misstatement, misconduct of the participant, vesting/payments based on erroneous or misleading data, serious reputational damage and corporate failure.</p> <p>The Committee may enact clawback up to three years from the vesting of share awards under the LTIP (2019 awards onwards) and the DSBP. Clawback of the cash incentive may be enacted up to two years after payment. In the event that clawback is enacted the Committee has the discretion to require repayment or to reduce any unvested or unpaid award made under any Employees' Share Scheme or the short-term incentive plan. In addition, if a participant in the DSBP, which shareholders are asked to approve at the 2020 AGM, is subject to investigation, then the vesting of their award may be delayed until the outcome of that investigation.</p>	

Remuneration Policy report

continued

Future Remuneration Policy Table – Non-executive Directors (NEDs)

Non-executive Director fees			No material change
Purpose and link to strategy	Operation	Opportunity	Performance measures
To attract NEDs who have a broad range of experience and skills to oversee the implementation of our strategy.	<p>NED fees (excluding those of the Chairman) are set by the Chairman and Executive Directors. The Chairman fee is set by the Committee.</p> <p>NEDs receive a basic fee paid monthly in respect of their Board duties.</p> <p>Further fees are paid in respect of Board committee chair fees and the role of Senior Independent Director. No additional fees are payable for membership of a Board committee.</p> <p>Fees are reviewed annually and set by reference to independently sourced data compared to relevant comparator groups such as companies of similar complexity, sector and size. Fee reviews are typically effective from 1 January each year. Fees are normally paid in the currency of the Non-executive's home country.</p> <p>Non-executives are eligible for the reimbursement of Company-related expenses (grossed up for tax where appropriate) relating to the performance of their duties including travel, accommodation and subsistence.</p>	There is no prescribed maximum fee level, increases are generally aligned with the general increase received by the broader employee base and market movement.	Not applicable.

Notes to the Policy table

Performance measures and targets

The Committee believes the choice of performance measures for the short-term and long-term incentive plans represent an appropriate balance between the short-term and long-term focus of the Group's strategic aims and key performance indicators, as well as an appropriate balance between internal and external assessment of performance. Performance measures for the short-term incentive are tied to the Company's delivery of key financial metrics and strategic objectives. The measures applicable to the LTIP reward the delivery of long-term returns to shareholders and the Group's financial growth being consistent with the Company's objective of delivering superior levels of long-term value to shareholders. When setting targets, the Committee takes into account a variety of factors, including but not limited to market practice, market expectations and internal business plans and forecasts. In setting the targets, the Committee ensures that they are sufficiently stretching and that there is an appropriate balance between incentivising Executive Directors to meet targets for the year, whilst ensuring that they do not drive unacceptable levels of risk and encourage inappropriate behaviours.

Consideration of remuneration arrangements throughout the Group

In setting the Remuneration policy the Committee considers the remuneration arrangement across the Group and the relativity of Executive Director remuneration. When considering annual salary adjustments, the Committee takes account of the expected increases for the broader employee base.

Remuneration arrangements across the Group are based on the same principles that remuneration should support the delivery of the business strategy and should be sufficient to attract, motivate and retain talent. Although the remuneration offered to the Executive Directors has a stronger emphasis on variable performance-related pay than that offered to other employees, to the extent practicable, remuneration practices are cascaded down the organisation, such that employees are aligned towards common goals.

The Group operates in a number of different geographic territories and has many employees who carry out a range of diverse roles. The ratio of fixed to variable pay differs by employee level and the structure of remuneration varies by local market, consisting:

- Salary and benefits (including pension/retirement) are tailored to the local market.
- Short-term incentive plans are operated across the Group, typically on differing metrics aligned to the Company strategy which may include financial performance, operational delivery, HSE, individual or team performance.
- Long-term incentive plan awards are made annually to senior leadership roles across the Group on the same terms as those for Executive Directors.
- All employee share plans are available to all UK and US employees.

While employees have not been formally consulted in respect of the Remuneration policy, the Company conducts regular employee surveys which include feedback on remuneration matters. The Committee anticipates that the wider developments of employee forums across the Group and the interlinkages with the Board will provide the opportunity to engage employees more widely in remuneration matters.

Recruitment Policy

When considering the recruitment of a new Executive Director, the Committee will apply the prevailing Remuneration Policy at the time of appointment.

The Committee will determine remuneration on a case-by-case basis depending on the role, the market from which they will operate, their skills and experience. Total remuneration levels will be set to attract the most appropriate candidate and will take into account remuneration levels amongst relevant comparator groups. Where appropriate, salaries may initially be set below mid-market levels to allow for future development in the role with the Committee retaining discretion to award increases in excess of those of the wider workforce to bring the salary to the market level over time.

Benefit and pension arrangements will be set in accordance with the terms of the approved Remuneration Policy in force at the time of appointment. The Committee may also agree that the Company will meet certain costs associated with the recruitment, for example legal fees, and the Committee may agree to provide relocation benefits.

It is anticipated that new Executive Directors will participate in short and long-term incentive plans on the same arrangements as existing Directors. In certain circumstances, the performance measures associated with these awards, in the year of joining, may be granted with different measures and/or targets to the other Directors.

Remuneration Policy report continued

For an externally appointed Executive Director, the Company may offer additional remuneration that it considers necessary to buy out current entitlements from the existing employer that will be lost, as may be required in order to achieve a successful recruitment when the Committee considers these to be in the best interests of the Company and shareholders. The Company is mindful of the sensitivity relating to recruitment packages and will seek to minimise buy out remuneration. The overriding principle for any such remuneration would be that any replacement buy out award should be of comparable commercial value to the terms, incentives and other compensation which have been forfeit. In order to facilitate buy out arrangements, existing incentive arrangements will be used to the extent possible, although if necessary awards may be granted as permitted under the Listing Rules exemption 9.4.2.

For an internal executive Director appointment or a new Director following acquisition or merger, any variable pay element awarded in respect of their prior role may be determined according to the original terms, adjusted as relevant to take into account the appointment. In addition, any other ongoing remuneration obligations existing prior to appointment may continue on their original terms.

The Committee retains discretion to make appropriate remuneration decisions outside the standard Policy to meet the individual circumstances of recruitment when:

- an interim appointment is made to fill an Executive Director role on a short-term basis; or
- exceptional circumstances require that the Chairman or a Non-executive Director takes on an executive function on a short-term basis.

In the event that a Non-executive Director takes on an executive role for a temporary period, the Non-executive Director will be remunerated in line with the prevailing Executive Director Remuneration Policy in force at the time of appointment.

If appropriate, on the recruitment of a new Executive, the Committee may agree to an initial notice period in excess of 12 months, reducing to 12 months over a specified period.

Fees for a new Chairman or Non-executive Directors will be set in line with the approved Policy in force at the time of appointment. It is not intended that variable pay, day rates or benefits in kind be offered, although in exceptional circumstances such remuneration may be required in currently unforeseen circumstances.

The Committee will include in future Remuneration Reports details of the implementation of the Policy as utilised during the Policy period in respect of any such recruitment to the Board.

Service contracts/letters of appointment

Executive Directors service contracts are terminable by either party with 12 months' notice and allow for the Company to impose a six-month non-competition clause.

The Chairman and Non-executive Directors do not have service contracts but have letters of appointment with the Company. Notice periods are normally set at one month for the Chairman and Non-executive Directors.

Loss of office policy

In the event that an Executive Director's employment with the company terminates, the following policies and payments will apply.

Element of Remuneration	Loss of office payment policy
Fixed Pay	Up to 12 months' annual salary payable. The contracts contain provision, at the Board's discretion, for payment in lieu of notice. In calculating any termination payment, the Board would take into account the commercial interests of the Company and apply usual common law and contractual principles. Generally, benefits will continue to apply until cessation. The Committee may make payments in connection with an existing legal obligation or in respect of any claim relating to the cessation of employment. This may include fees for outplacement assistance, legal and/or professional advice.
Short-term incentive plan	No award would generally be payable if on the date the payment is declared an individual is no longer employed by the Company, or has received or given notice to leave the Group. However, the Committee retains discretion to deem an individual a good leaver ¹ , in which case it may provide a time pro-rated award, determined against the relevant performance conditions. Any award would normally be payable at the normal payment date. In determining the level of short-term incentive to be paid, the Committee may, at its discretion, take into account performance up to the date of cessation or over the financial year as a whole based on appropriate performance measures as determined by the Committee.
Deferred share bonus plan	Deferred short-term incentive awards are governed by the plan rules which are subject to shareholder approval. Unvested awards will normally lapse unless the individual is deemed a good leaver ¹ in which case the awards will vest in full on the original vesting date. The Committee retains discretion, in exceptional circumstances, to determine an early vesting date. In the event of change of control, awards will vest or may be exchanged for new awards.
Long-term incentive plan	Long-term incentive plan awards are governed by the plan rules which have been approved by shareholders. Unvested awards will normally lapse unless the individual is deemed a good leaver ¹ in which case the awards will normally vest on the original vesting date, subject to the satisfaction of the relevant performance conditions and be pro-rated for time. The Committee retains discretion to determine that awards vest at cessation (for example in the case of death) and/or to disapply time-based pro-rating. In the event of change in control, and unless participants agree with the acquiring company to exchange their awards, awards will vest subject to the satisfaction of the relevant performance conditions and be pro-rated for time. However, the Committee has discretion to disapply time pro-rating.

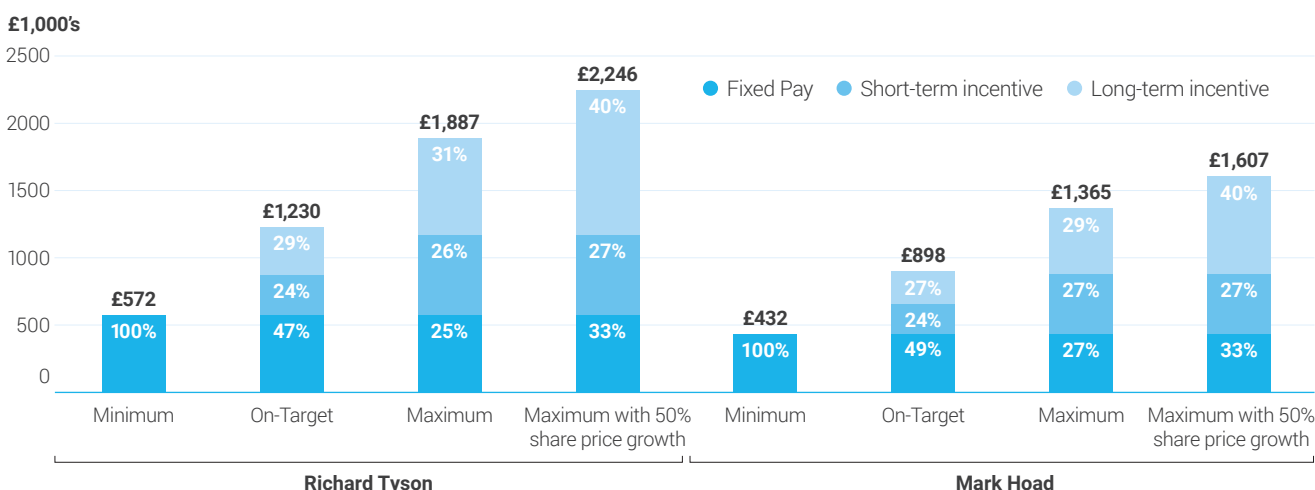
¹ For example: death, disability, redundancy, retirement or other circumstances at the discretion of the Committee.

External appointments

Executive Directors, with the prior approval of the Board, may accept one external appointment as a Non-executive Director of another company. Experience as a board member of another company is considered to be valuable personal development, which is of value to the Company. The retention of any related fees by the Executive Director or remission to the Company will be determined on a case by case basis.

Illustration of total remuneration opportunity

The following charts illustrate the future total remuneration for each Executive Director in respect of the proposed remuneration opportunity to be granted under the future Remuneration Policy for approval at the 2020 AGM. The charts indicate the minimum, on-target and maximum remuneration that could be received. Underlying assumptions follow the charts.



Remuneration Policy report continued

All scenarios:

- Base salary to be paid in 2020.
- Benefits in kind and pension received in 2019 as shown in the Single Total Figure of Remuneration table.
- Short-term incentive is based on 125 per cent of salary, as proposed under the future Remuneration Policy.
- Long-term incentive is based on the multiples for 2020 of 150 per cent and 135 per cent of salary for the CEO and CFO respectively.
- Dividend equivalents are not included in respect of deferred awards under the short-term incentive or awards under the long-term incentive plan.

Fixed:

- Fixed pay consists of salary, pension and benefits in kind as provided under the Remuneration policy.

On-target:

- For the short-term incentive 50 per cent of the maximum would be payable. For the long-term incentive 50 per cent vesting is assumed.

Maximum:

- It is assumed that the short-term incentive would be payable at maximum and the that the long-term incentive award would vest in full.

Maximum with share price growth:

- Calculated as per the maximum but for the long-term incentive award which includes a 50 per cent share price growth assumption.

Discretion

The Committee has discretion in numerous areas of the Policy as set out in the report. The Committee may also exercise administrative and operational discretion under incentive plan and share plan rules. The Committee may make minor amendments to the Policy set out in this Policy Report (for regulatory, exchange control, tax or administrative purposes or to take account of a change in legislation) without obtaining shareholder approval for that amendment.

The Committee may vary or waive any performance condition(s) if an event occurs which causes it to determine that the original condition(s) have ceased to be appropriate, provided that any such variation or waiver is fair, reasonable and not materially less difficult to satisfy than the original condition would have been but for the event in question (in its opinion). The Committee may also adjust the calculation of performance targets and vesting outcomes (for instance for material acquisitions, investments or disposals and events not foreseen at the time the targets were set) to ensure they remain a fair reflection of performance over the relevant period. In the event that the Committee were to make an adjustment of this sort, a full explanation would be provided in the next Directors' Annual Remuneration Report. The Committee will also consider shareholder consultation in respect of material adjustments.

Annual report on remuneration

Implementation of the Remuneration Policy for the year ending 31 December 2020

A summary of how the Directors' Remuneration Policy will be applied during the year ending 31 December 2020 is set out below.

Basic salary

The Remuneration Committee agreed that the base salaries of the Executive Directors would remain unchanged for 2020. In making the decision the Committee took into account the proposed approach for the wider workforce, retention risks and the request made by the Executive Directors not to receive an increase, recognising the changes to some of our external markets and the actions taken within the Company.

Executive	2020	2019	Increase
Richard Tyson	£478,218	£478,218	0.0%
Mark Hoad	£358,731	£358,731	0.0%

The Group's UK employees, in general, are expected to receive pay rises averaging 2 per cent depending on location, promotional increases and individual performance.

Pension and Benefits

There are no changes to the pension (15 per cent of salary) or benefits for current Executive Directors. The Committee will review annually the market trends and developments in respect of the contractual pension provision to the existing Executive Directors.

Short-term Incentive Plan

The Committee believes it is important for Executive Directors that a significant proportion of their remuneration is performance-related and the performance conditions applying to incentive arrangements support the delivery of the Company's strategy. In line with our proposed new Policy, the intention is that the maximum short-term incentive opportunity for 2020 will be increased from 100 per cent to 125 per cent of base salary, with 20 per cent of earned incentive deferred into shares for a period of two years. The split of targets continues to be based on the Group's financial results, being Group underlying profit before tax (50 per cent weighting), Group underlying free cash flow (25 per cent weighting) and strategic objectives (25 per cent weighting) based on the Company's priorities for the forthcoming year.

Targets are set taking account of internal and external forecasts relating to the Company's performance and reflecting the Board's expectation of year-on-year development of the Group. The strategic objectives element has been set to reflect the creation of sustainable value for all our stakeholders with a focus on delivery of critical operational and strategic goals of the business for the year. No award will be payable in respect of the strategic objectives unless specific underlying performance measures are reached.

Targets are considered commercially sensitive until the year end and will be disclosed retrospectively in the Directors' Annual Remuneration report for 2020.

Long-term Incentive Plan

It is intended that LTIP awards of shares worth 150 per cent of salary for the CEO and 135 per cent of salary for the CFO will be made in March 2020. The performance measures will be equally weighted and will consist of relative TSR and growth in the Group's EPS. It is anticipated that the following financial targets will apply to the 2019 LTIP awards:

Performance measures	Weighting	Threshold (25% vesting)	Maximum (100% vesting)
EPS compound annual growth over the three-year performance period	50%	5.0%	12.0%
Relative TSR performance against the FTSE SmallCap (excluding Investment Trusts)	50%	Median rank	Upper quartile rank or above

The awards will vest on the third anniversary of grant to the extent the performance targets have been satisfied, followed by a two-year holding period.

Annual report on remuneration continued

The performance measures chosen ensure the alignment of senior management's and shareholders' interests. Target ranges for the 2020 awards have been set taking into account the latest internal and external forecast for the business, including both economic and political uncertainty and TT's principal risks. The Committee believes that the EPS performance growth targets pose a similar level of stretch to those of prior years with maximum performance aligning with upper quartile sector growth forecasts.

The Committee will continue to consider the impact of any significant future portfolio development on the outstanding performance targets at the time of the capital deployment. Any further changes to the performance targets in these circumstances will be communicated to shareholders.

Fees for Non-executive Directors

Non-executive Directors' remuneration is set by the Board taking account of the time and responsibility involved in each role, including where applicable for the Chair of Board Committees. For 2020, the Chairman's fee and the Non-executive Directors' fees will remain unchanged in line with those of the Executive Directors.

	2020	2019	Increase
Chairman	£188,455	£188,455	0.0%
Base fee	£45,145	£45,145	0.0%
Additional fees:			
Senior Independent Director	£6,000	£6,000	0.0%
Audit Committee Chair	£8,000	£8,000	0.0%
Remuneration Committee Chair	£8,000	£8,000	0.0%

Implementation of the Remuneration Policy for the year ending 31 December 2019

Single figure for total remuneration (audited)

Directors' remuneration for the year ended 31 December 2019 was as follows:

£'000		Salary/ fees	Taxable benefits	Pension	Short-term Incentive	Long-term Incentive	Other	Malus and Clawback	Total
Executive Directors									
	Richard Tyson	2019	478	23	72	306	655		1,534
		2018	455	22	68	425	1,248	4	2,222
	Mark Hoad	2019	359	20	54	230	453		1,116
		2018	348	20	52	325	732	4	1,481
Chairman									
	Neil Carson	2019	188						188
		2018	184						184
Non-executive Directors									
	Stephen King	2019	59						59
		2018	58						58
	Jack Boyer	2019	45						45
		2018	44						44
	Alison Wood	2019	53						53
		2018	52						52
	Anne Thorburn ¹	2019	23						23
Former Directors									
	Michael Baunton ²	2019	30						30
		2018	44						44

1 Anne Thorburn's fees reflect the period following her appointment as a Non-executive Director, 1 July 2019 to 31 December 2019.

2 Michael Baunton's fees reflect the period before he stepped down as a Non-executive Director, 1 January 2019 to 31 August 2019.

Base salary/fees

Base salaries for Executive Directors were reviewed in December 2018 and were increased by 5 per cent and 3 per cent with effect from 1 January 2019 for the CEO and CFO respectively.

Base fees for Non-executives were reviewed in January 2019 and were increased by 2.5 per cent with effect from 1 January 2019. Additional fees were unchanged.

Taxable benefits

The Executive Directors' taxable benefits consist of a car allowance and insurance benefits.

Pensions

Employer contributions are paid at 15 per cent of base salary, as defined contribution pension and/or a cash supplement.

Short-term incentive

Short-term incentive payments were based on performance against Group underlying profit before tax (up to 50 per cent of salary) and Group free cash flow (up to 25 per cent of salary) measured at constant budget exchange rates and strategic objectives (up to 25 per cent of salary) as measured over the 2019 financial year.

During the year the Company acquired Power Partners Inc.; in line with common market practice both the financial targets of Group underlying profit before tax and Group free cash flow were restated to include the pro-rata budget performance. The financial performance targets were also restated for the impact of unbudgeted cash flows for exceptional items and to drive growth in future years ahead of budget.

The outcomes of the short-term incentive awards for financial and individual strategic performance in 2019 are summarised in the table below:

Short-term incentive payments for 2019¹

Performance measure	Threshold potential (% of salary)	Maximum potential (% of salary)	Required for threshold bonus (£m)	Required for maximum bonus (£m)	Outturn for incentive plan purposes (£m)	Achievement (% of salary)
Group underlying profit before tax	5%	50%	34.3	39.0	36.4	20.00%
Group free cash flow	2.5%	25%	(0.1)	6.7	8.3	25.00%
Strategic objectives	n/a	25%	Further detail below			19.00%
Total		100%				64.00%

¹ Short-term incentives are measured using constant budget exchange rates.

Annual report on remuneration continued

The strategic objectives of the Executive Directors focused on the strategic development of the Group and improving operational efficiency. Performance against these is set out in the table below.

Strategic objective	Performance Commentary	Maximum potential (% of salary)	Achievement
Execution of portfolio strategy	<ul style="list-style-type: none"> Groundwork completed with external stakeholders to enable the successful execution of the next phase of the Group portfolio strategy. Group prepared to successfully enable acquisition in the strategic growth markets. Execution of acquisitions of Power Partners Inc. in March 2019 and the aerospace and defence power supply business of Excelitas Technologies Corp in January 2020. Significant progress/engagement in several potential opportunities. 	12.5%	9.5% Between target and stretch
Improve operational efficiency	<ul style="list-style-type: none"> Improved financial performance in lower performing businesses and growth divisions offsetting challenging market conditions in some areas of the Group. Action taken to mitigate challenging market conditions in some external markets. Analysis of facility footprint review and commencement of efficiency actions. 	12.5%	9.5% Between target and stretch

Summary

The Executive Directors delivered another year of strong results with continued strategic progress, despite softer market conditions. Financial performance has continued to improve, and progress benchmarks favourably against peers with organic and inorganic revenue growth of 4 per cent and 11 per cent respectively. Operating profit has similarly been strong with operating margin improving from 7.8 per cent to 8.4 per cent.

In addition to the performance against the strategic objectives, the Executive Directors have overseen continued progress across the Group with the integration of the newly acquired businesses, business development/sales functions driving revenue growth and bringing a number of new customers to the Group, and progress on our product capabilities to deliver value-added product solutions. There has been continued focus and prioritisation of investment in R&D, progress on our people talent agenda and significant improvement in HSE performance.

In carrying out a thorough review of the achievement of the strategic objectives, the Committee determined that whilst the Executive Directors have delivered another good year of performance, there remains further actions to fully deliver the business strategy and the Group's transformation.

As a result, the Remuneration Committee concluded that the strategic objectives have been achieved between on target and maximum.

The Committee considered whether the formulaic outcome of the financial and strategic assessment was reflective of the performance of the Group during 2019. The Committee was satisfied that this was the case and that no discretion was required to the formulaic outcome.

Long-term incentive

LTIP awards vest depending on performance against two equally weighted measures over separate three-year performance periods. The EPS performance condition is over the three-year period aligned with the Group's financial year. The TSR performance condition is over a separate three-year performance period, ending on the third anniversary of the award date. Accordingly, the performance periods of the two performance conditions end in separate reporting years. Both the 2016 and 2017 LTIP awards had performance periods that ended on or by 31 December 2019 which are therefore included in the single figure for total remuneration for 2019. LTIP values shown in the single figure include dividend equivalents; the value attributable to share price appreciation for the CEO and CFO is £215,992 and £146,385 respectively.

Award year and performance measure	Threshold (25% vesting)	Maximum (100% vesting)	Outcome	Percentage of maximum achievement
2016 LTIP award ¹ : Relative TSR performance against the FTSE SmallCap (excluding Investment Trusts)	Median rank	Upper quartile rank or above	66 Percentile (Between threshold and upper quartile)	73%
2017 LTIP award ^{2,3} : EPS compound annual growth over the three-year performance period	10%	17.5%	33.8% (Above upper quartile)	100%

1 2016 LTIP award (vested March 2019): The EPS performance period ended on 31 December 2018 and a maximum level of vesting was achieved as described in last year's Remuneration Report. The 2018 single figure for total remuneration has been restated to reflect the vested value of the shares subject to the EPS performance measure which vested on 18 March 2019. The TSR performance period for this award ended on 15 March 2019 and a maximum level of vesting was achieved as indicated in the above table. The vested value of the shares subject to EPS performance measure is included in the 2019 single figure for total remuneration. In both cases the vested shares have been valued at 230.5p.

2 2017 LTIP award (vests March 2020): The EPS performance period for this award ended on 31 December 2019 and a maximum level of vesting was achieved as indicated in the above table. An estimate of the vested value of the shares subject to the EPS performance measure is included in the 2019 single figure for total remuneration with that estimate based on the average share price in the final quarter of 2019 (236.8p). This estimate will be restated for the actual vested value in the next remuneration report. The TSR performance period ends in March 2020 and the value of the vested awards subject to the TSR performance measures will be included in the 2020 single figure for total remuneration.

3 As disclosed in last year's Directors' annual remuneration report, the EPS targets were reviewed for the effect of portfolio developments during 2018 in respect of the acquisition of Stadium Group and Precision Inc.. Following that review, the EPS targets were increased from a threshold target of 5% compound annual growth and a maximum target of 12% compound annual growth.

As part of the portfolio development strategy the Committee has agreed principles for the adjustment of LTIP performance conditions in relation to capital deployment. During the year, the acquisition of Power Partners Inc. for an initial cash consideration of \$1.6 million (£1.2 million), with an additional performance-based amount of up to \$1.3 million (£1.0 million), was reviewed against the principles and the financial impact was deemed to be below the materiality threshold.

Other

The amount shown in 2018 relates to Sharesave options granted on 28 September 2018 over 8,372 shares. The value shown is the difference between the option price and the share price on the date of the award.

Malus and clawback

No malus or clawback events occurred during 2019.

Long-term incentives granted during the financial year (audited)

On 11 March 2019, the following LTIP awards were granted to Executive Directors. Awards are subject to a three-year vesting period plus an additional two-year holding period.

Executive	Basis of award granted (% of salary)	Share price at date of grant (pence) ¹	Number of shares over which award was granted	Face value of award (£)	% of face value that would vest at threshold performance	Performance period end date
Richard Tyson	150%	201.5	355,993	717,326	25%	10/03/2022
Mark Hoad	135%	201.5	240,340	484,285	25%	10/03/2022

¹ The share price used to determine the number of shares granted was the average share price over the three trading days prior to grant.

Performance measures for LTIP awards granted during the financial year (audited)

Awards to Executive Directors during 2019 are subject to two equally weighted measures of EPS and TSR as follows.

Performance measures	Weighting	Threshold (25% vesting)	Maximum (100% vesting)
EPS compound annual growth over the three-year period	50%	6%	13.5%
Relative TSR performance against the FTSE SmallCap (excluding Investment Trusts)	50%	Median rank	Upper quartile rank or above

Executive Director interests in shares subject to Company performance conditions

The table below sets out details of outstanding LTIP share awards held by the Executive Directors at 31 December 2019.

Executive	Date of grant	1 January 2019	Granted during the year	Lapsed	Vested	31 December 2019	Market value at 31 December 2019 (£) ¹	Market price at grant date (pence)	Vesting date
Richard Tyson	15/03/2017	266,565 ²				266,565	666,413	167	15/03/2020
	14/03/2018	294,152 ³				294,152	735,380	232	14/03/2021
	11/03/2019		355,993			355,993	889,982	202	11/03/2022
Total outstanding						916,710	2,291,775		
Mark Hoad	15/03/2017	203,844 ²				203,844	509,610	167	15/03/2020
	14/03/2018	202,446 ³				202,446	506,115	232	14/03/2021
	11/03/2019		240,340			240,340	600,850	202	11/03/2022
Total outstanding						646,630	1,616,575		

¹ The market value at 31 December 2019 represents the total number of shares awarded multiplied by 250.0 pence, being the share price on 31 December 2019. The calculation does not take into account dividend equivalents or the likelihood of vesting.

² The performance condition attached to 50% of the award is based on EPS. As disclosed in last year's Annual Report on Remuneration, the EPS targets were reviewed for the effect of portfolio developments during 2018 in respect of the acquisition of Stadium Group and Precision Inc.. Following that review, the EPS targets were increased. 25% of the shares subject to this part of the award will vest for EPS growth of 10% (previously 5%) compound per annum, increasing on a straight-line basis to 100% vesting for EPS growth for the year ending 31 December 2019 of 17.5% (previously 12%) compound per annum. The performance condition attached to the other 50% of the award is based on TSR performance against the FTSE SmallCap (excluding Investment Trusts) during the three-year performance period from the date of award. 25% of the shares subject to this part of the award will vest at median performance increasing on a straight-line basis to 100% vesting at the upper quartile of the comparator group.

³ The performance condition attached to 50% of the award is based on EPS. 25% of the shares subject to this part of the award will vest for EPS growth of 6% compound per annum, increasing on a straight-line basis to 100% vesting for EPS growth for the year ending 31 December 2020 of 13.5% compound per annum. The performance condition attached to the other 50% of the award is based on TSR performance against the FTSE SmallCap (excluding Investment Trusts) during the three-year performance period from the date of award. 25% of the shares subject to this part of the award will vest at median performance increasing on a straight-line basis to 100% vesting at the upper quartile of the comparator group.

Annual report on remuneration

continued

TT Electronics plc Sharesave scheme

Executive	Date of grant	1 January 2019	Granted during the year	Lapsed	Exercised	31 December 2019	Potential gain at 31 December 2019 (£) ¹	Option price (pence)	Exercisable between/ exercised on
Richard Tyson	01/10/2018	8,372				8,372	2,930	215	01/11/2021-30/04/2022
Mark Hoad	01/10/2018	8,372				8,372	2,930	215	01/11/2021-30/04/2022

¹ The potential gain at 31 December 2019 represents the total number of shares under the option multiplied by 250.0 pence, being the share price on 31 December 2019.

Payments to past Directors (audited)

No payments were made in 2019.

Payments for loss of office (audited)

No payments were made in 2019.

Statement of Directors' shareholding and share interests (audited)

The Executive Directors are required to build and hold a shareholding of 200 per cent of salary. Executive Directors must retain 50 per cent of the net of tax value of any vested LTIP shares until the guideline is met. At 31 December 2019, the Executive Directors were compliant with the requirement.

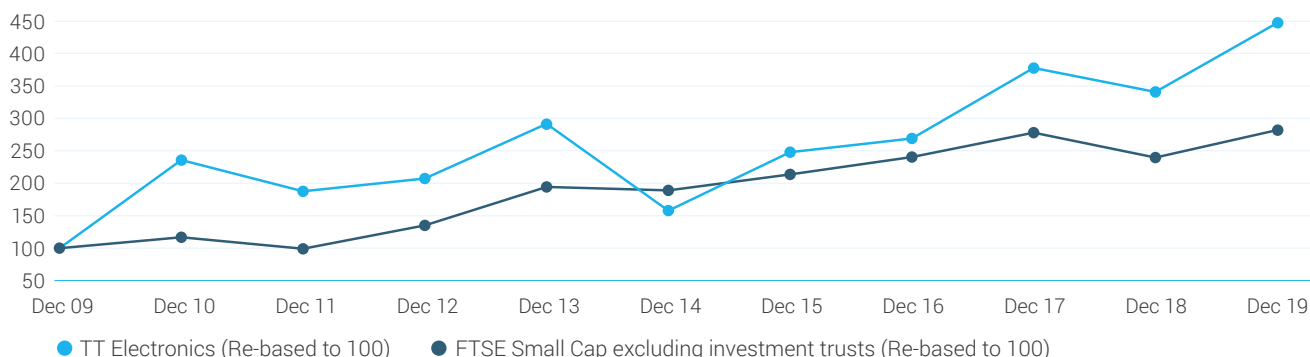
Executive	Beneficially owned at 1 January 2019	Beneficially owned at 31 December 2019	Unvested share awards subject to Company performance conditions	Outstanding share awards under all employee share plans as at 31 December 2019	Shareholding as a % of salary at 31 December 2019	Value of beneficially owned at 31 December 2019 (£)	Basic salary at 31 December 2019
Executive Directors							
Richard Tyson	560,896	717,251	916,710	8,372	375.0%	1,793,128	478,218
Mark Hoad	454,438	550,090	646,630	8,372	383.4%	1,375,225	358,731
Chairman							
Neil Carson	190,000	190,000					
Non-executive Directors							
Stephen King	100,000	123,000					
Jack Boyer	71,588	82,588					
Alison Wood	0	0					
Anne Thorburn	0	45,000					
Former Directors							
Michael Baunton	99,598	104,598					

There have been no changes to shareholdings between 31 December 2019 and the date of this report.

The closing middle market prices for an Ordinary share of 25 pence of the Company on 31 December 2018 and 31 December 2019 as derived from the Stock Exchange Daily Official List were 195.8 pence and 250.0 pence respectively. During 2019, the middle market price of TT Electronics plc Ordinary shares ranged between 178.0 pence and 265.0 pence.

Performance graph and table

The following graph shows the cumulative Total Shareholder Return of the Company over the last ten financial years relative to the FTSE SmallCap Index (excluding Investment Trusts). The FTSE SmallCap Index has been selected for consistency as it is the index against which the Company's Total Shareholder Return is measured for the purposes of the LTIP. In addition, the Company is a constituent of the Index.



The graph above shows the value, by 31 December 2019, of £100 invested in TT Electronics plc on 31 December 2009 compared with the value of £100 invested in the FTSE SmallCap Index (excluding Investment Trusts).

Total remuneration figures for the Chief Executive Officer

The total remuneration figures for the Chief Executive Officer during each of the last ten financial years are shown in the table below. The total remuneration figures include the short-term incentive based on that year's performance and LTIP awards based on three-year performance periods ending in the relevant year.

	2010	2011	2012	2013	2014 ¹	2014 ²	2015	2016	2017	2018	2019
Total remuneration (£'000)	771	1,576	1,684	1,154	249	401	1,151	1,152	1,794	2,189	1,534
Short-term incentive (% of maximum)	96.0	96.0	50.0	53.0	0.0	25.0	90.8	100.0	100.0	93.3	64.0
LTIP vesting (% of maximum)	0.0	100.0	94.0	89.6	39.6	n/a	0.0	0.0	50.0	100.0	86.5

1 Relates to previous Chief Executive Officer who was in position until 30 June 2014.
 2 Relates to current Chief Executive Office who joined on 1 July 2014.

Percentage change in the Remuneration of Directors and Employees

The table below shows the percentage change in Director remuneration (excluding the value of any LTIP and pension benefits receivable in the year) between the financial year ending 31 December 2018 and 31 December 2019, compared to that of the average for UK employees of the Group.

	Salary	Benefits	Annual bonus
CEO	5.0%	4.1%	(28.0)%
Average of UK employees ¹	1.0%	-7.9%	(45.9)%

1 For comparison purposes, data is on a like-for-like basis with 2018 including joiners during 2018 from Stadium Group plc. The decrease in annual bonus is representative of the profit and operational performance of our UK facilities against the stretching performance goals in our site-based profit share schemes.

Pay ratio of the Chief Executive Officer

The table below shows the ratio of the total remuneration of the Chief Executive Officer to that of the UK employees of the Group. The CEO's pay is based on the single figure of remuneration set out on page 92 of this report. In line with our remuneration principles, the majority of the remuneration opportunity is performance-related variable pay. The CEO's pay ratio is heavily dependent on the outcomes of the short-term and long-term incentive plans and, in the case of long-term share-based awards, share price movements. As such it is expected that there will be considerable year-to-year changes in the CEO pay ratio. Context to the CEO total remuneration is set out on pages 92 to 95. The Committee believe that the pay ratio is appropriate and is reflective of the roles undertaken by employees in the UK.

Year	Method for calculation		Pay Ratio			Remuneration Values ^{2,3}		
	Lower quartile	Median	Upper quartile	Lower quartile	Median	Upper quartile		
2020 Total Remuneration	B ¹	67:1	59:1	41:1	22,853	26,182	37,307	

1 Method B has been selected as the basis of the disclosure as permitted under The Companies (Miscellaneous Reporting) Regulations 2018. This method was selected due to the administration complexities associated with Method A.
 2 Under method B, representative quartile employees are selected utilising the Gender Pay reporting datasets which is a snapshot of pay on 6 April 2019. Adjustments may be made to ensure quartiles are representative. Employees must have been employed on 31 December 2019 and employee data is based on full-time equivalent pay, and calculated in accordance with the single figure of remuneration. Employee earnings include the forecast value of any incentive payments to relevant employees, the forecast will be restated for the actual vested value in the next remuneration report and pay ratios updated accordingly.
 3 Across the UK, the majority (80%) of the workforce undertake operational roles in our facilities. The employee lower quartile and median remuneration values are generally reflective of the roles held by our semi-skilled/skilled operators.

Annual report on remuneration

continued

Relative importance of spend on pay

The following table shows the Company's actual spend on pay for all employees relative to dividends. Dividend figures relate to amounts payable in respect of the relevant financial year.

	2018	2019	Change
Staff costs (£'m)	126.9	135.6	6.9%
Dividends (£'m) ¹	10.5	11.4	8.6%

¹ The spend on dividends has increased in line with the number of shares and the progressive dividend policy.

Advisers to the Remuneration Committee

The Committee received advice during 2019 from Deloitte LLP (Deloitte) and FIT Remuneration Consultants LLP (FIT). During the year the Committee undertook a review of the Remuneration Adviser in accordance with the change to the Company Auditor to Deloitte LLP. FIT was appointed as the independent external consultants, to advise on remuneration matters, effective November 2019. Prior to their appointment Deloitte continued to provide advice having been appointed in 2016 as the independent external consultants.

Both FIT and Deloitte are members of the Remuneration Consultants Group and have signed up to that group's code of conduct. The Committee is satisfied that the advice it received during the year was objective and independent and that the provision of other services in the year by Deloitte in no way compromised their independence. During the year Deloitte provided services in respect of mergers and acquisitions due diligence support.

Work undertaken by Deloitte in their role as independent advisers to the Committee included advice in respect to the Remuneration Policy and developments in good governance, advice relating to malus and clawback provisions and the provision of market information for the Executive Directors and other Senior Managers, and other governance matters. The fees paid to Deloitte for providing advice in relation to executive remuneration over the financial year amounted to £46,080. FIT were appointed late in 2019 and did not provide any material advice to the Committee during the year.

The Company's approach to the Chairman's and Executive Directors' remuneration is determined by the Board on the advice of the Remuneration Committee. The Committee considers the views of the Chairman on the performance of the CEO, and of the CEO on the performance and remuneration of the other members of the Executive Management Board. The Committee is also supported by the Group General Counsel and Company Secretary who acts as Secretary to the Committee, the CFO, the EVP Human Resources and the Group Reward Director who attend meetings at the invitation of the Committee. No Committee members or attendees take part in any discussions relating to their own remuneration.

Shareholder voting

The Remuneration Committee considers shareholder feedback received in connection with the AGM each year at a meeting immediately following the AGM and at other times of the year. This feedback is considered as part of the Company's annual review of the Remuneration report and Remuneration Policy. In addition, the Remuneration Committee endeavours to consult directly with the largest shareholders and their representative bodies on proposals ahead of any significant changes.

At the Annual General Meeting held on 9 May 2019 the resolution pertaining to the Directors' Remuneration report was passed on a show of hands. Proxy votes cast in respect of this resolution and the most recent resolution to approve the Remuneration Policy were as follows:

Number of votes	For & Discretionary	For & Discretionary (%)	Against	Against (%)	Withheld	Total vote
Remuneration report (approved at the 2019 AGM)	115,835,135	93.44%	8,131,369	6.56%	49,550	124,016,054
Remuneration Policy (approved at the 2017 AGM)	125,506,296	99.35%	821,753	0.65%	58,879	126,386,928

A full schedule in respect of shareholder voting on the above and all resolutions at the 2019 AGM is available at www.ttelectronics.com.

The Directors' Remuneration report has been approved by the Board on 3 March 2020 and signed on its behalf by:

 **Alison Wood**
Chair, Remuneration Committee

Other statutory disclosures

This Annual Report and Accounts includes the Directors' report and the audited financial statements for the year ended 31 December 2019. Certain information required to be disclosed in the Directors' report is provided in other sections of this Annual Report. This includes the overview, the operating and financial reviews, the Corporate Governance and Remuneration reports and specific elements of the Financial statements noted below. The table below lists items that are relevant to this report, and which are incorporated by reference, including information required in accordance with the UK Companies Act 2006 and Listing Rule 9.8.4R:

Current and future dividend waiver	Page 101
Employee engagement	Pages 47–48
Future developments in the business	Pages 10–15
Going Concern	Page 62
Greenhouse gas emissions	Page 51
S172 Statement	Page 62
Subsidiary undertakings	Pages 168–170
Viability Statement	Page 43

Results and dividends

The Group's profit on ordinary activities after taxation was £17.3 million (2018: £13.4 million). The audited financial statements of the Group and the Company are set out on pages 111 to 171. Further details of the Group's activities are set out in the Strategic report on pages 1 to 53.

The Directors are recommending a final dividend of 4.9 pence per share for the year ended 31 December 2019 (2018: 4.55 pence), to be paid on 15 May 2020 to shareholders on the register at 24 April 2020. This, together with the interim dividend of 2.1 pence per share paid on 17 October 2019 (2018: 1.95 pence), makes a total for the year of 7.0 pence (2018: 6.5 pence).

Tax Principles & Strategy

The Group applies a conservative approach to tax and seeks to comply with the OECD Transfer Pricing guidelines, which should ensure that profits are taxed where value is created and business risks are managed. The Group's full Tax Principles & Strategy document is published on the Group's website.

Acquisitions and disposals

On 12 November 2018, TT (through its wholly-owned subsidiary Welwyn Components Limited) and UniRoyal Electronics Industry (Kunshan) Co., Ltd ("UniRoyal") announced an agreement to establish a joint venture, focused on thick-film, thin-film and metal-based resistors. The transaction was conditional on the completion of various conditions precedent, including the establishment of a 100 per cent owned trading company in China and the granting of associated operating permits by Chinese authorities. By 1 November 2019, the relevant conditions precedent had not been satisfied and Welwyn Components Limited formally notified UniRoyal of the termination of the joint venture agreement with immediate effect.

On 28 October 2019, the Company's wholly-owned subsidiary, TT Electronics Power Solutions (US) Inc, signed an Asset Purchase Agreement to acquire the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California, for a consideration of US\$17.7 million (£13.7 million), subject to typical conditions precedent (including customary regulatory approvals) and a post-completion working capital adjustment. The transaction completed on 3 January 2020.

On 22 March 2019 the Group acquired the entire equity share capital of Power Partners Inc. for an initial cash consideration of \$1.6 million (£1.2 million). An additional \$1.3 million (£1.0 million) may become payable subject to business performance over the next two years.

Directors

Rules for the appointment and replacement of Directors are set out in the Company's Articles of Association. Directors are appointed by the Board on the recommendation of the Nominations Committee. Directors may also be appointed or removed by the Company by ordinary resolution at a general meeting of holders of Ordinary shares. The office of a Director shall be vacated if his or her resignation is requested by all the other Directors, not being fewer than three in number. Further details of the activities of the Nominations Committee are set out on page 68.

There are no agreements between the Company and its Directors or employees providing for compensation for loss of office or employment that occurs as a result of a takeover bid except that provisions of the Company's share plans may cause options and awards granted under such schemes to vest on takeover, subject to the satisfaction of any performance conditions. Further details of the Executive Directors' service contracts can be found in the Directors' Remuneration Policy. Copies of the Executive Directors' service contracts and letters of appointment of the Non-executive Directors are available for inspection by any person at the Company's registered office, during normal business hours on any weekday (other than public holidays) and at the Annual General Meeting from 15 minutes before the start of the AGM until its conclusion.

The Group maintains Directors' and Officers' Liability insurance. The Directors of the Company also benefit from a qualifying third party indemnity provision in accordance with Section 234 of the Companies Act 2006 and the Company's Articles of Association. The Company has provided a pension scheme indemnity within the meaning of Section 235 of the Companies Act 2006 to directors of associated companies.

Other statutory disclosures continued

Auditor

In 2019, the Company undertook a competitive re-tender exercise for external audit services, following which it was determined that Deloitte LLP (Deloitte) would be appointed in such capacity for the financial year 2020 onwards. KPMG LLP (KPMG) was appointed as Auditor in 2010 following a competitive tender process and KPMG's appointment as Auditor will end following the report on the 2019 financial statements at the 2020 AGM. A resolution will be proposed at the AGM to appoint Deloitte as external Auditor. See pages 70 to 71 for further details on the Auditor re-tender and transition process.

The Auditor's responsibilities are set out on page 110 and should be read in conjunction with those of the Directors as set out at the end of this report.

Annual General Meeting

The Annual General Meeting of the Company will be held on 6 May 2020 at the offices of Allen & Overy LLP, One Bishops Square, London E1 6AD at 10.00 am. The Notice of the Company's Annual General Meeting accompanies this document.

Research and development

The Group carries out research and development in order to develop new products and processes and to substantially improve existing products and processes. Further details are given in note 16 to the consolidated financial statements.

Significant agreements relating to change of control

The Group has a number of borrowing facilities provided by various banking groups. Some of these facility agreements include change of control provisions which, in the event of a change in ownership of the Company, could result in renegotiation or withdrawal of these facilities.

There are a number of other agreements that may be renegotiated upon a change of control of the Company. None is considered to be significant in terms of their potential impact on the business of the Group as a whole.

Employment

The Group is committed to the fair and equal treatment of all its employees regardless of gender, race, age, religion, disability or sexual orientation. Where existing employees become disabled, the policy of the Group is to provide continuing employment and training wherever practicable.

The Group makes significant efforts to ensure it maintains high standards of employee welfare in all its operations, irrespective of where in the world, and of local market conditions. Together with many other global companies operating in its sector, the Group is a member of the Responsible Business Alliance (formerly the Electronic Industry Citizenship Coalition), a leading industry organisation promoting best practice in corporate responsibility, which is committed to raising standards of employee welfare in all jurisdictions and at all levels of the supply chain for electronic products. Further details on the Group's policies relating to its employees are given on pages 46 to 48.

Political contributions

The Group made no political contributions during the year.

Share capital

The Company's issued share capital comprises a single class of share capital divided into Ordinary shares of 25 pence each. All issued shares are fully paid. The share capital during the year is shown in note 24 to the consolidated financial statements. The rights and obligations attaching to the Company's Ordinary shares are set out in the Company's Articles of Association, a copy of which can be obtained from Companies House in the United Kingdom or by writing to the Group General Counsel & Company Secretary. Subject to applicable statutes, shares may be issued with such rights and restrictions as the Company may decide by ordinary resolution, or (if there is no such resolution or so far as it does not make specific provision) as the Board may decide.

Holders of Ordinary shares are entitled to speak at general meetings of the Company, to appoint one or more proxies and, if they are corporations, to appoint

corporate representatives and to exercise voting rights. Holders of Ordinary shares may also receive a dividend, and on a liquidation may share in the assets of the Company. In addition, holders of Ordinary shares are entitled to receive the Company's Annual Report and Accounts. Subject to meeting certain thresholds, holders of Ordinary shares may require a general meeting of the Company to be held or the proposal of resolutions at Annual General Meetings.

Authority to allot shares and disapply statutory pre-emption rights

The Directors will be seeking to renew their authorities to allot unissued shares and to disapply statutory pre-emption rights at the Annual General Meeting, to be held on 6 May 2020. During 2019, this authority was used primarily in connection with the allotment of shares resulting from the operation of the Group's share schemes.

Purchase of own shares

At the Annual General Meeting held on 9 May 2019, the Company was given authority to purchase up to 16,342,759 of its Ordinary shares until the date of its next AGM. Other than market purchases made by the Employee Benefit Trust, no purchases were made during the year by the Company. The Directors will be seeking a new authority for the Company to purchase its Ordinary shares at the forthcoming Annual General Meeting.

Further details regarding the authority to allot shares and disapply statutory pre-emption rights and the purchase of own shares are set out in the Notice of the Annual General Meeting, which accompanies this document and is available to view on the Company's website.

Shares held by the Employee Benefit Trust

The Company has established an employee benefit trust ("EBT"), the trustee of which is Sanne Fiduciary Services Limited (previously Sanne Trust Company Limited), part of Sanne Group. As at 31 December 2019, the trustee held 1,011,123 shares with a nominal value of £252,780.75 and an aggregate purchase price of £2.38 per share, representing 0.616 per cent of the total

issued share capital at that date. These shares will be used to satisfy awards made under the TT Electronics plc Restricted Share Plan ("RSP"), the TT Electronics plc Long-Term Incentive Plan ("LTIP") or other employee share schemes. The maximum number of shares held by the EBT during the year was 1,145,679. The voting rights in relation to these shares are exercisable by the trustee. However, in accordance with investor protection guidelines, the trustee abstains from voting. A dividend waiver is in place under which the trustee waived its right to receive dividends on the shares it held during the year, and any future dividends. The Executive Directors, as employees of the Company, are potential beneficiaries of shares held by the EBT.

Voting rights and restrictions on transfer of shares

On a show of hands at a general meeting of the Company, every holder of Ordinary shares present in person or by proxy, and entitled to vote, has one vote and on a poll, every member present in person or by proxy, and entitled to vote, has one vote for every Ordinary share held. You can find further details regarding voting at the Annual General Meeting in the Notice of the Annual General Meeting which accompanies this document. None of the Ordinary shares carries any special rights with regard to control of the Company. Electronic and paper proxy appointments and voting instructions must be received by the Company's Registrars not later than 48 hours before a general meeting. A shareholder can lose their entitlement to vote at a general meeting where that shareholder has been served with a disclosure notice and has failed to provide the Company with information concerning interests in those shares. The Directors may refuse to register a transfer of a certificated share which is not fully paid, provided the refusal does not prevent dealings in shares in the Company from taking place on an open and proper basis. The Directors may also refuse to register a transfer of a certificated share unless the instrument of transfer: (i) is lodged, duly stamped (if stampable), at the registered office of the Company or any other place decided

by the Directors accompanied by the certificate for the share to which it relates and/or such other evidence as the Directors may reasonably require to show the right of the transferor to make the transfer; (ii) is in respect of only one class of shares; (iii) is in favour of a person who is not a minor, bankrupt or a person in respect of whom an order has been made on the grounds that such person is suffering from a mental disorder or is otherwise incapable of managing their affairs; or (iv) is in favour of not more than four transferees.

Transfers of uncertificated shares must be carried out using CREST and the Directors can refuse to register a transfer of an uncertificated share in accordance with the regulations governing the operation of CREST.

The Directors may decide to suspend the registration of transfers for up to 30 days a year, by closing the register of shareholders. The Directors cannot suspend the registration of transfers of any uncertificated shares without obtaining consent from CREST.

There are no other restrictions on the transfer of Ordinary shares in the Company except: certain restrictions may from time to time be imposed by laws and regulations (for example, insider trading laws or the Market Abuse Regulations 2015); pursuant to the Company's share dealing code whereby the Directors and certain employees of the Group require approval to deal in the Company's shares; and where a shareholder with at least a 0.25 per cent interest in the Company's certificated shares has been served with a disclosure notice and has failed to provide the Company with information concerning interests in those shares.

The Company is not aware of any agreements between shareholders that may result in restrictions on the transfer of Ordinary shares or on voting rights.

Articles of Association

The Company's Articles of Association may only be amended by special resolution approved at a general meeting of the shareholders.

Disclosure of information to Auditor

To the best of each Director's knowledge and belief, there is no audit information relevant to the preparation of the Auditor's report of which the Auditor is unaware and each Director has taken all steps which might be expected, to be aware of such relevant information and to establish that the Auditor is also aware of that information.

Approved by the Board on 3 March 2020 and signed on its behalf by:



Lynton Boardman
Group General Counsel
& Company Secretary

Statement of Directors' responsibilities in respect of the Annual Report and Accounts

The Directors are responsible for preparing the Annual Report and Accounts and the Group and parent company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare Group and parent company financial statements for each financial year. Under that law they are required to prepare the Group financial statements in accordance with International Financial Reporting Standards as adopted by the EU (IFRSs as adopted by the EU) and applicable law, and have elected to prepare the parent company financial statements in accordance with UK accounting standards, including FRS 101 Reduced Disclosure Framework.

Under company law, the Directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and parent company and of their profit or loss for that period. In preparing each of the Group and parent company financial statements, the Directors are required to:

- select suitable accounting policies and then apply them consistently
- make judgements and estimates that are reasonable, relevant, reliable and prudent
- for the Group financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU
- for the parent company financial statements, state whether applicable UK accounting standards have been followed, subject to any material departures disclosed and explained in the parent company financial statements

- assess the Group and parent company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and
- use the going concern basis of accounting unless they either intend to liquidate the Group or the parent company or to cease operations, or have no realistic alternative but to do so.

The Directors are responsible for keeping adequate accounting records that are sufficient to show and explain the parent Company's transactions and disclose with reasonable accuracy at any time the financial position of the parent Company and enable them to ensure that its financial statements comply with the Companies Act 2006. They are responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error, and 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, Directors' report, Directors' Remuneration report and Corporate Governance statement that complies with that law and those regulations.

The Directors are 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.

Responsibility statement of the Directors in respect of the Annual Report and Accounts

We confirm that to the best of our knowledge:

- the 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 profit or loss of the Company and the undertakings included in the consolidation taken as a whole and
- the Strategic Report includes a fair review of the development and performance of the business and the position of the Company and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties that they face.

We consider the Annual Report and Accounts, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the Group's position and performance, business model and strategy.

The coordination and review of Group-wide input into the Annual Report is a key element of the control process upon which the Directors rely and is an exercise which spans a period wider than the timetable for compiling the Annual Report itself. This control process incorporates the controls the Group operates throughout the year to identify key financial and operational issues and includes:

- Strategy meetings, held as part of most Board meetings, at which the entire Board is present, resulting in a clear agreement of the Group's strategy.

- The identification of the key milestones and the related key performance indicators to be monitored and measured throughout the period.
- Monthly reviews of business performance conducted by executive management (in consultation with divisional management), supplemented by reports highlighting key issues and analysis of the main variances from budget and prior year.
- Preparation of a detailed budget, reviewed and agreed by management and then the Board, which is used to calibrate strategy implementation and against which actual performance is measured.
- A timetabled process coordinating input from each division, identifying significant market issues and key elements of performance for each business area, and appropriately incorporating them into the structure of the Annual Report.
- The identification of key risks from the risk management process, for inclusion within the Annual Report, ensuring a consistency of approach with regard to the risks and the ongoing review programme.
- A planned Audit Committee sign-off process which incorporates meetings of the Chair of the Audit Committee with the Executive Directors, the Risk and Assurance function and external Auditor to identify and timetable potential issues of significance to be addressed.
- A process for internal distribution and comment on the Annual Report, including those of the members of the Board, the Executive Management Board, key advisers and external Auditor.

By order of the Board:



Lynton Boardman
Group General Counsel
& Company Secretary

3 March 2020

Independent auditor's report to the members of TT Electronics plc

1 Our opinion is unmodified

We have audited the financial statements of TT Electronics plc ("the Company") for the year ended 31 December 2019 which comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of financial position, consolidated statement of changes in equity, consolidated cash flow statement, company statement of financial position, company statement of changes in equity and the related notes, including the accounting policies in note 1 and note 2 to the consolidated and company financial statements.

In our opinion:

- 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 2019 and of the Group's profit for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards as adopted by the European Union;
- the parent Company financial statements have been properly prepared in accordance with UK accounting standards, including FRS 101 Reduced Disclosure Framework, 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.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities are described below. We believe that the audit evidence we have obtained is a sufficient and

appropriate basis for our opinion. Our audit opinion is consistent with our report to the audit committee.

We were first appointed as auditor by the directors on 1 July 2010. The period of total uninterrupted engagement is for the 10 financial years ended 31 December 2019. We have fulfilled our ethical responsibilities under, and we remain independent of the Group in accordance with, UK ethical requirements including the FRC Ethical Standard as applied to listed public interest entities. No non-audit services prohibited by that standard were provided.


Overview


Materiality:	4.5% (2018: 4.5%) of group financial statements as a whole
Coverage	77% (2018: 77%) of Group profit before tax from continuing operations
	79% (2018: 80%) of Group revenue from continuing operations
	73% (2018: 87%) of Group assets from continuing operations


Key audit matters


vs 2018

Recurring risks for the group


The impact of uncertainties due to the UK exiting the European Union 

Tax provisioning 

The presentation of 'underlying' operating profit, 'underlying' profit before tax and 'underlying' earnings per share from continuing operations 

Warranty and other product provisions 

Recurring risks for the Parent Company

Recoverability of parent company's investment in and amounts due from subsidiaries 

2 Key audit matters: Including our assessment of risks of material misstatement

Key audit matters are those matters that, in our professional judgement, were of most significance in the audit of the financial statements and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by us, including 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. We summarise below the key audit matters in arriving at our audit opinion above, together with our key audit procedures to address those matters and, as required for public interest entities, our results from those procedures. These matters were addressed, and our results are based on procedures undertaken, in the context of, and solely for the purpose of, our audit of the financial statements as a whole, and in forming our opinion thereon, and consequently are incidental to that opinion, and we do not provide a separate opinion on these matters.

The impact of uncertainties due to the UK exiting the European Union on our audit

Refer to pages 44–45 (principal risks), page 43 (viability statement), page 70 (Audit Committee Report), page 119 (accounting policy) and page 111 (financial disclosures).

The risk – Unprecedented levels of uncertainty

All audits assess and challenge the reasonableness of estimates, in particular as described in the recoverability of parent company's investments in and amounts due from subsidiaries key audit matter below, and related disclosures and the appropriateness of the going concern basis of preparation of the financial statements (see below). All of these depend on assessments of the future economic environment and the group's future prospects and performance.

In addition, we are required to consider the other information presented in the Annual Report including the principal risks disclosure and the viability statement and to consider the directors' statement that 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 position and performance, business model and strategy.

Brexit is one of the most significant economic events for the UK and its effects are subject to unprecedented levels of uncertainty of consequences, with the full range of possible effects unknown.

Our response:

We developed a standardised firm-wide approach to the consideration of the uncertainties arising from Brexit in planning and performing our audits. Our procedures included:

- **Our Brexit knowledge:** We considered the directors' assessment of Brexit-related sources of risk for the group's business and financial resources compared with our own understanding of the risks. We considered the directors' plans to take action to mitigate the risks;
- **Sensitivity analysis:** When addressing recoverability of parent company's investments in and amounts due from subsidiaries key audit matter and other areas that depend on forecasts, we compared the directors' sensitivity analysis to our assessment of the full range of reasonably possible scenarios resulting from Brexit uncertainty and, where forecast cash flows are required to be discounted, considered adjustments to discount rates for the level of remaining uncertainty;
- **Assessing transparency:** As well as assessing individual disclosures as part of our procedures on going concern, warranty and other provisions, tax provisions, carrying value of goodwill and recoverability of parent

company's investments in and amounts due from subsidiaries key audit matters we considered all of the Brexit related disclosures together, including those in the strategic report, comparing the overall picture against our understanding of the risks.

Our results:

As reported under recoverability of parent company's investment in and amounts due from subsidiaries key audit matter, we found the resulting estimates and related disclosures and disclosures in relation to going concern to be acceptable. However, no audit should be expected to predict the unknowable factors or all possible future implications for a company and this is particularly the case in relation to Brexit (2018: acceptable).

Tax provisioning (£7.3 million, 2018: £10.9 million)

Refer to page 70 (Audit Committee section of the Directors' Report and Notes 1h, 2t and 9 (accounting policy and financial disclosures)).

The risk – Dispute outcome

Provisions for tax contingencies require the directors to make judgements and estimates in relation to tax issues and exposures given that the Group operates in a number of tax jurisdictions, the complexities of transfer pricing and other international tax legislation and the time taken for open tax matters to be agreed with the tax authorities.

The effect of these matters is that, as part of our risk assessment, we determined that tax provisioning levels have a high degree of estimation uncertainty. The amount provided and assessed may not reflect the eventual outcome and there is a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole, and possibly many times that amount. The financial statements (note 9) disclose the range estimated by the Group.

Our response:

Our procedures included:

- **Our tax expertise:** Assessing together with our own international and local tax specialists the Group's tax positions, its exposure to future cash outflows that may arise from the tax issues and analysing and challenging the assumptions used to determine tax provisions based on our knowledge and experience of the application of tax legislation by relevant authorities;
- **Test of details:** Inspecting the Group's correspondence with the relevant tax authorities and its external tax advisers and compared it to management's assumptions forming the basis of estimates in this matter;
- **Assessing transparency:** Assessing the adequacy of the Group's disclosures in respect of tax and uncertain tax positions.

Our results:

We found the level of tax provisioning to be acceptable (2018: acceptable).

The presentation of 'underlying' operating profit, 'underlying' profit before tax and 'underlying' earnings per share from continuing operations (£40.0 million, 2018: £33.4 million)

Refer to page 70 (Audit committee section of the Directors' Report and Notes 1c, 1d and 8 (accounting policy and financial disclosures)).

The risk – Presentation appropriateness

The Group discloses its earnings in accordance with the requirements of EU Adopted IFRS. It also presents a measure of underlying profit and earnings as defined in note 8, which excludes a number of separately disclosed items of income and expenditure. The identification of non-underlying items and the presentation of underlying profit and earnings measures that show a consistent and balanced view of the underlying performance of the Group

Independent auditor's report to the members of TT Electronics plc continued

involves significant judgement. Significant judgement is also involved in ensuring that undue prominence is not given to underlying financial information, which could be misleading to the readers of the financial statements.

The effect of these matters is that, as part of our risk assessment, we determined that the presentation of underlying operating profit requires a high degree of judgement.

Our response:

Our procedures included:

- **Assessing principles:** Assessing whether the Group's accounting policy for non-underlying items is consistent with the FRC's thematic reviews and ESMA guidelines on alternative performance measures;
- **Tests of details:** For a sample of the items identified as non-underlying inspect the available supporting documentation to assess the nature of the items and consider if they have been appropriately excluded from underlying profit based on the Group's accounting policy; assess the completeness of non-underlying income by considering the nature of a sample of credit items and if they have been appropriately included in underlying profit based on the Group's accounting policy;
- **Assessing application:** Considering whether the policy for non-underlying items has been applied consistently between periods by comparing both the policy and the nature of these items in the two years ended 31 December 2019 taking into account the basis of our understanding of the results gained throughout the audit process;
- **Assessing balance and transparency:** Assessing whether 'underlying' operating profit is clearly and accurately defined in the financial statements and that a reconciliation to IFRS financial information is presented. Evaluating the extent to which the relative prominence given to underlying

measures, including related commentary and adopted IFRS could be misleading in the form and context in which it appears.

Our results:

We found the Group's presentation of non-underlying transactions to be acceptable (2018: acceptable).

Warranty and other product provisions (£2.2 million, 2018 £3.5 million)

Refer to page 70 (Audit Committee section of the Directors' Report and Notes 1h, 2u and 20 (accounting policy and financial disclosures)).

The risk – Dispute outcome

The Group's products are used in a variety of complex applications and if they do not perform in the manner specified, the Group may be exposed to warranty claims from customers of the continuing and discontinued operations. Assessing if such claims are likely and when received, if they are valid, as well as estimating the likely outflow of economic benefit, requires judgement and involves making estimates and assumptions.

The effect of these matters is that, as part of our risk assessment, we determined that the warranty and other product provisions of £2.2m has a high degree of estimation uncertainty, with a potential range of reasonable outcomes greater than our materiality for the financial statements as a whole. The financial statements (note 20) disclose the range estimated by the Group.

Our response:

Our procedures included:

- **Enquiries of lawyers:** Corresponding with the Group's external legal counsel and discussions with the Group's internal legal counsel as well as with the Group's and business units directors to identify actual and potential customer claims and the reasonableness of the estimated liability with respect to those claims;

- **Test of details:** Considering relevant available information used by Directors to assess the validity of claims and challenging the methodology of calculating the provisions including the assumptions used and how estimation uncertainty was assessed;

- **Historical comparisons:** Evaluating the historical track record of warranty and other product claims against the Group in order to help assess the appropriateness of provisions held at the period end;

- **Assessing transparency:** Evaluating the adequacy of the Group's disclosures in respect of these provisions in line with accounting standards, and in particular the disclosure of the estimation uncertainty and the quantification of that uncertainty where appropriate.

Our results:

We considered the warranty and other product provisions recognised to be acceptable (2018: acceptable).

Recoverability of parent company's investment in and amounts due from subsidiaries (Investment in subsidiaries – £189.3 million, 2018: £188.3 million. Amounts owed by subsidiary undertakings – £190 million, 2018: £115.5 million)

Refer to Notes 1d, 3 and 4 (accounting policy and financial disclosures) of the Company financial statements.

The Risk – Low risk, high value

The carrying amount of the parent company's investments in, and amounts due from, subsidiaries represents 46% (2018: 55%) and 46% (2018: 34%) of the company's total assets respectively. Their recoverability is not at a high risk of significant misstatement or subject to significant judgement. However, due to their materiality in the context of the parent company financial statements, this is considered to be the area that had the greatest effect on our overall parent company audit.

Our response:

Our procedures included:

- **Tests of detail:** Comparing the carrying amount of 100% of investments and 100% of amounts owed by subsidiary undertakings, with the relevant subsidiaries' draft balance sheet to identify whether their net assets, being an approximation of the minimum recoverable amount of the related investments and amounts owed by subsidiary undertakings, were in excess of their carrying amount, and assessing whether those subsidiaries have historically been profit-making;
- **Assessing subsidiary audits:** Where indicators of impairment are identified, assessing the work performed by the group reporting subsidiary audit teams on those subsidiaries and considering the results of that work on those subsidiaries' profits and net assets;
- **Our sector experience:** For those subsidiaries where the carrying amount exceeded the net asset value, comparing the carrying amount of the investment with the expected value of the business, which is the subsidiary's value in use based on the present value of the cash flows expected to be generated;

• Benchmarking assumptions:

Comparing the relevant subsidiary investment's forecast cash flow assumptions to externally derived data in relation to key inputs such as projected economic growth and (using our valuation specialists) discount rates.

Our results:

We found the directors' assessment of the recoverability of the investment in subsidiaries and amounts due from subsidiaries to be acceptable (2018: acceptable).

3 Our application of materiality and an overview of the scope of our audit

Materiality for the group financial statement as a whole was set at £1.4 million (2018: £1.2 million), determined with reference to a benchmark of Group profit before tax from continuing operations normalised to exclude this year's restructuring and other acquisition related costs as disclosed in note 8 of £16.8m (2018: £12.1m), of which it represents 4.5% (2018: 4.5%).

Materiality for the parent company financial statements as a whole was set at £0.8 million (2018: £1.2 million), determined with reference to a benchmark of company total assets, of which it represents 0.2% (2018: 0.3%).

We agreed to report to the Audit Committee any corrected or uncorrected identified misstatements exceeding £0.07 million (2018: £0.06 million) for items impacting the income statement and £0.14 million (2018: £0.06 million) for items in respect of the balance sheet misclassification, in addition to other identified misstatements that warranted reporting on qualitative grounds.

Of the group's 181 (2018: 144) reporting components, we subjected 34 (2018: 44) to full scope audits for group purposes and 3 (2018: 5) to specified risk-focused audit procedures. The latter were not individually financially significant enough to require a full scope audit for group purposes, but did present specific individual risks that needed to be addressed.

The components within the scope of our work accounted for the following percentages of the Group's results:

2019 (2018)	Number of components	Group revenue from continuing operations	Group profit before tax from continuing operations	Total assets
Audits for group reporting purposes	34 (44)	60% (55%)	74% (78%)	60% (79%)
Specified risk focused audit procedures on significant working capital balances, non-current assets, revenue, cost of sales and administrative expenses.	3 (5)	20% (25%)	3% (7%)	13% (8%)
Total	37 (49)	79% (80%)	77% (85%)	73% (87%)

Independent auditor's report to the members of TT Electronics plc continued

The remaining 21% (2018: 20%) of group revenue from continuing operations, 18% (2018: 13%) of group profit before tax from continuing operations and 15% (2018: 13%) of total group assets is represented by 181 (2018: 114) reporting components, none of which individually represented more than 4% of any of group revenue from continuing operations, group profit before tax from continuing operations or total group assets. For these residual components, we performed analysis at an aggregated group level to re-examine our assessment that there were no significant risks of material misstatement within these components.

The Group team instructed component auditors as to the significant areas to be covered, including the relevant risks detailed above and the information to be reported back. The Group team approved the component materialities, which ranged from £0.1 million (2018: £0.01 million) to £0.8 million (2018: £1.1 million), having regard to the mix of size and risk profile of the Group across the components. The work on 13 of the 37 components (2018: 19 of the 49 components) was performed by component auditors and the rest, including the audit of the parent company, was performed by the Group team. The group team performed procedures on the items excluded from normalised group profit before tax on continuing operations.

The Group team visited 5 (2018: 6) component locations in the USA and the UK (2018: USA, China and the UK) to assess the audit risk and strategy. Telephone conference meetings were also held with the component auditors throughout the audit. At these visits and meetings, the findings reported to the Group team were discussed in more detail, and any further work required by the Group team was then performed by the component auditor.

Following the coronavirus outbreak in China the group audit team were unable to visit China to review the work performed by the Chinese component audit teams in respect of two components representing, in aggregate, 25% of group revenue. As a mitigation to this we extended our oversight of these component teams.

4 We have nothing to report on going concern

The Directors have prepared the financial statements on the going concern basis as they do not intend to liquidate the Company or the Group or to cease their operations, and as they have concluded that the Company's and the Group's financial position means that this is realistic. They have also concluded that there are no material uncertainties that could have cast significant doubt over their ability to continue as a going concern for at least a year from the date of approval of the financial statements ("the going concern period").

Our responsibility is to conclude on the appropriateness of the Directors' conclusions and, had there been a material uncertainty related to going concern, to make reference to that in this audit report. However, as we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgements that were reasonable at the time they were made, the absence of reference to a material uncertainty in this auditor's report is not a guarantee that the Group and the Company will continue in operation.

In our evaluation of the Directors' conclusions, we considered the inherent risks to the Group's and Company's business model and analysed how those risks might affect the Group's and Company's financial resources or ability to continue operations over the going concern period. The risks that we considered most likely to adversely affect the Group's and Company's available financial resources over this period were:

- The impact on electronic component volumes of a broad economic downturn;
- The impact of a significant business continuity issue, including the effects of the COVID19 virus, affecting the Group's manufacturing facilities or those of its suppliers;
- The impact of Brexit on the Group's supply chain.

As these were risks that could potentially cast significant doubt on the Group's and the Company's ability to continue as a going concern, we considered sensitivities over the level of available financial resources indicated by the Group's financial forecasts taking account of reasonably possible (but not unrealistic) adverse effects that could arise from these risks individually and collectively and evaluated the achievability of the actions the Directors consider they would take to improve the position should the risks materialise. We also considered less predictable but realistic second order impacts, such as the erosion of customer or supplier confidence, which could result in a rapid reduction of available financial resources.

Based on this work, we are required to report to you if:

- we have anything material to add or draw attention to in relation to the directors' statement in Note 1 to the financial statements on the use of the going concern basis of accounting with no material uncertainties that may cast significant doubt over the Group and Company's use of that basis for a period of at least twelve months from the date of approval of the financial statements; or
- the related statement under the Listing Rules set out in the Governance report is materially inconsistent with our audit knowledge.

We have nothing to report in these respects, and we did not identify going concern as a key audit matter.

5 We have nothing to report on the other information in the Annual Report

The directors are responsible for the other information presented in the Annual Report together with the financial statements. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Strategic report and directors' report

Based solely on our work on the other information:

- we have not identified material misstatements in the strategic report and the directors' report;
- in our opinion the information given in those reports for the financial year is consistent with the financial statements; and
- in our opinion those reports have been prepared in accordance with the Companies Act 2006.

Directors' remuneration report

In our opinion the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006.

Disclosures of emerging and principal risks and longer-term viability

Based on the knowledge we acquired during our financial statements audit, we have nothing material to add or draw attention to in relation to:

- the directors' confirmation within the Viability Statement on page 43 that they have carried out a robust assessment of the emerging and principal risks facing the Group, including those that would threaten its business model, future performance, solvency and liquidity;
- the Principal Risks and Uncertainties disclosures describing these risks and explaining how they are being managed and mitigated; and
- the directors' explanation in the Viability Statement of how they have assessed the prospects of the Group, over what period they have done so and why they considered that period to be appropriate, and their statement as to 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 the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Under the Listing Rules we are required to review the Viability Statement. We have nothing to report in this respect.

Our work is limited to assessing these matters in the context of only the knowledge acquired during our financial statements audit. As we cannot predict all future events or conditions and as subsequent events may result in outcomes that are inconsistent with judgments that were reasonable at the time they were made, the absence of anything to report on these statements is not a guarantee as to the Group's and Company's longer-term viability.

Corporate governance disclosures

We are required to report to you if:

- we have identified material inconsistencies between the knowledge we acquired during our

financial statements audit and the directors' statement that they consider that 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 position and performance, business model and strategy; or

- the section of the annual report describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.

We are required to report to you if the Corporate Governance Statement does not properly disclose a departure from the provisions of the UK Corporate Governance Code specified by the Listing Rules for our review.

We have nothing to report in these respects.

6 We have nothing to report on the other matters on which we are required to report by exception

Under the Companies Act 2006, we are required 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.

We have nothing to report in these respects.

Independent auditor's report to the members of TT Electronics plc continued

7 Respective responsibilities

Directors' responsibilities

As explained more fully in their statement set out on page 102, the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; 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 they 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

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 other irregularities (see below), or error, and to issue our opinion in an auditor's report. Reasonable assurance is a high level of assurance, but does not guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud, other irregularities or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

A fuller description of our responsibilities is provided on the FRC's website at www.frc.org.uk/auditorsresponsibilities.

Irregularities – ability to detect

We identified areas of laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general commercial and sector experience, through discussion with the directors as required by auditing standards, and from inspection of the group's regulatory and legal correspondence and discussed with the directors the policies and procedures

regarding compliance with laws and regulations. We communicated identified laws and regulations throughout our team and remained alert to any indications of non-compliance throughout the audit. This included communication from the group to component audit teams of relevant laws and regulations identified at group level.

The potential effect of these laws and regulations on the financial statements varies considerably.

Firstly, the Group is subject to laws and regulations that directly affect the financial statements including financial reporting legislation (including related companies legislation), distributable profits legislation and taxation legislation, and we assessed the extent of compliance with these laws and regulations as part of our procedures on the related financial statement items.

Secondly, the Group is subject to many other laws and regulations where the consequences of non-compliance could have a material effect on amounts or disclosures in the financial statements, for instance through the imposition of fines or litigation or the loss of the Group's license to operate. We identified the following areas as those most likely to have such an effect: health and safety, anti-bribery and corruption and employment law recognising the nature of the Group's activities. Auditing standards limit the required audit procedures to identify non-compliance with these laws and regulations to enquiry of the directors and inspection of regulatory and legal correspondence, if any. These limited procedures did not identify actual or suspected non-compliance.

Owing to the inherent limitations of an audit, there is an unavoidable risk that we may not have detected some material misstatements in the financial statements, even though we have properly planned and performed our audit in accordance with auditing standards. For example, the further removed non-compliance with laws and regulations (irregularities) is from the events and transactions reflected in the

financial statements, the less likely the inherently limited procedures required by auditing standards would identify it. In addition, as with any audit, there remained a higher risk of non-detection of irregularities, as these may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls. We are not responsible for preventing non-compliance and cannot be expected to detect non-compliance with all laws and regulations.

8 The purpose of our audit work and to whom we owe our responsibilities

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.

Mike Barradell
(Senior Statutory Auditor)
for and on behalf of KPMG LLP,
Statutory Auditor
 Chartered Accountants
 15 Canada Square
 London
 E14 5GL

3 March 2020

Consolidated income statement

For the year ended 31 December 2019

£million (unless otherwise stated)	Note	2019	2018
Revenue	3a	478.2	429.5
Cost of sales		(361.4)	(318.8)
Gross profit		116.8	110.7
Distribution costs		(28.1)	(26.4)
Administrative expenses		(71.3)	(69.5)
Other operating income		1.4	1.7
Operating profit		18.8	16.5
Analysed as:			
Underlying operating profit	3a	40.0	33.4
Restructuring and other	8	(13.2)	(4.9)
Acquisition related costs	8	(8.0)	(12.0)
Finance income	6	0.9	0.5
Finance costs	6	(4.6)	(2.4)
Profit before taxation		15.1	14.6
Taxation	9	(1.2)	(1.6)
Profit from continuing operations		13.9	13.0
Discontinued operations			
Profit from discontinued operations	5	3.4	0.4
Profit for the period attributable to the owners of the Company		17.3	13.4
EPS attributable to owners of the Company (pence)			
Basic			
Continuing operations	11	8.5	8.0
Discontinued operations	11	2.1	0.3
		10.6	8.3
Diluted			
From continuing operations	11	8.4	7.8
From discontinued operations	11	2.0	0.3
		10.4	8.1

Consolidated statement of comprehensive income

for the year ended 31 December 2019

Emillion	Note	2019	2018
Profit for the year		17.3	13.4
Other comprehensive income/(loss) for the year after tax			
Items that are or may be reclassified subsequently to the income statement:			
Exchange differences on translation of foreign operations		(4.9)	6.3
(Loss)/gain on hedge of net investment in foreign operations		(2.0)	1.7
Gain/(loss) on cash flow hedges taken to equity less amounts taken to income statement		0.1	(2.4)
Items that will never be reclassified to the income statement:			
Remeasurement of defined benefit pension schemes	23	(9.1)	9.5
Tax on remeasurement of defined benefit pension schemes	9	1.7	(1.6)
Total comprehensive income for the year attributable to the owners of the Company		3.1	26.9

Consolidated statement of financial position

at 31 December 2019

£million	Note	2019	2018
ASSETS			
Non-current assets			
Right-of-use assets	13	12.8	–
Property, plant and equipment	14	51.1	51.7
Goodwill	15	136.1	137.9
Other intangible assets	16	51.3	55.0
Deferred tax assets	9	7.5	6.1
Pensions	23	21.2	24.9
Total non-current assets		280.0	275.6
Current assets			
Inventories	17	102.8	96.4
Trade and other receivables	18	78.6	76.2
Income taxes receivable		4.3	1.6
Derivative financial instruments	22	0.9	0.4
Cash and cash equivalents		60.2	40.6
Total current assets		246.8	215.2
Total assets		526.8	490.8
LIABILITIES			
Current liabilities			
Lease liabilities	21	3.8	0.4
Derivative financial instruments	22	2.1	2.1
Trade and other payables	19	103.9	96.0
Income taxes payable		8.0	13.2
Provisions	20	5.2	4.4
Total current liabilities		123.0	116.1
Non-current liabilities			
Borrowings	21	111.7	81.7
Lease liabilities	21	13.8	0.2
Deferred tax liability	9	4.6	4.8
Pensions	23	4.6	8.4
Other non-current liabilities	19	0.2	0.1
Total non-current liabilities		134.9	95.2
Total liabilities		257.9	211.3
Net assets		268.9	279.5
EQUITY			
Share capital	24	41.0	40.8
Share premium		4.1	3.4
Other reserves	24	1.2	2.7
Hedging and translation reserve		32.3	39.1
Retained earnings		188.3	191.5
Equity attributable to owners of the Company		266.9	277.5
Non-controlling interests		2.0	2.0
Total equity		268.9	279.5

Approved by the Board of Directors on 3 March 2020 and signed on their behalf by:



Richard Tyson
Director



Mark Hoad
Director

Consolidated statement of changes in equity

for the year ended 31 December 2019

£million	Share capital	Share premium	Hedging and translation reserve	Other reserves	Retained earnings	Sub-total	Non-controlling interest	Total
At 1 January 2018	40.7	2.9	33.5	8.4	180.0	265.5	2.0	267.5
Profit for the period	–	–	–	–	13.4	13.4	–	13.4
Other comprehensive income								
Exchange differences on translation of foreign operations	–	–	6.3	–	–	6.3	–	6.3
Gain on hedge of net investment in foreign operations	–	–	1.7	–	–	1.7	–	1.7
Loss on cash flow hedges taken to equity less amounts taken to income statement	–	–	(2.4)	–	–	(2.4)	–	(2.4)
Remeasurement of defined benefit pension schemes	–	–	–	–	9.5	9.5	–	9.5
Tax on remeasurement of defined benefit pension schemes	–	–	–	–	(1.6)	(1.6)	–	(1.6)
Total other comprehensive income	–	–	5.6	–	7.9	13.5	–	13.5
Transactions with owners recorded directly in equity								
Equity dividends paid by the Company	–	–	–	–	(9.7)	(9.7)	–	(9.7)
Share-based payments	–	–	–	(3.8)	–	(3.8)	–	(3.8)
Deferred tax on share-based payments	–	–	–	(1.0)	–	(1.0)	–	(1.0)
Current tax taken to equity	–	–	–	–	(0.1)	(0.1)	–	(0.1)
Purchase of own shares	–	–	–	(0.9)	–	(0.9)	–	(0.9)
New shares issued	0.1	0.5	–	–	–	0.6	–	0.6
At 31 December 2018	40.8	3.4	39.1	2.7	191.5	277.5	2.0	279.5
Impact of adoption of IFRS 16	–	–	–	–	(2.3)	(2.3)	–	(2.3)
Adjusted balance at 1 January 2019	40.8	3.4	39.1	2.7	189.2	275.2	2.0	277.2
Profit for the year	–	–	–	–	17.3	17.3	–	17.3
Other comprehensive income								
Exchange differences on translation of foreign operations	–	–	(4.9)	–	–	(4.9)	–	(4.9)
Loss on hedge of net investment in foreign operations	–	–	(2.0)	–	–	(2.0)	–	(2.0)
Gain on cash flow hedges taken to equity less amounts taken to income statement	–	–	0.1	–	–	0.1	–	0.1
Remeasurement of defined benefit pension schemes	–	–	–	–	(9.1)	(9.1)	–	(9.1)
Tax on remeasurement of defined benefit pension schemes	–	–	–	–	1.7	1.7	–	1.7
Total other comprehensive income	–	–	(6.8)	–	(7.4)	(14.2)	–	(14.2)
Transactions with owners recorded directly in equity								
Equity dividends paid by the Company	–	–	–	–	(10.9)	(10.9)	–	(10.9)
Share-based payments	–	–	–	0.2	–	0.2	–	0.2
Deferred tax on share-based payments	–	–	–	0.1	–	0.1	–	0.1
Current tax taken to equity	–	–	–	–	0.1	0.1	–	0.1
Purchase of own shares	–	–	–	(1.8)	–	(1.8)	–	(1.8)
New shares issued	0.2	0.7	–	–	–	0.9	–	0.9
At 31 December 2019	41.0	4.1	32.3	1.2	188.3	266.9	2.0	268.9

Consolidated cash flow statement

for the year ended 31 December 2019

£million	Note	2019	2018
Cash flows from operating activities			
Profit for the year		17.3	13.4
Taxation		1.2	1.6
Net finance costs		3.7	1.9
Restructuring and other		13.2	4.9
Acquisition related costs		8.0	12.0
Profit from discontinued operations		(3.4)	(0.4)
Underlying operating profit		40.0	33.4
Adjustments for:			
Depreciation	13	13.9	9.8
Amortisation of intangible assets	15	4.1	3.8
Other items		2.5	3.5
Increase in inventories		(9.5)	(16.2)
(Increase)/decrease in receivables		(4.0)	4.6
Increase in payables		10.4	9.5
Underlying operating cash flow		57.4	48.4
Special payments to pension funds		(8.6)	(5.3)
Restructuring and acquisition related costs		(9.2)	(11.2)
Net cash generated from operations		39.6	31.9
Net income taxes paid		(3.7)	(6.8)
Net cash flow from operating activities		35.9	25.1
Cash flows from investing activities			
Interest received		0.1	0.1
Purchase of property, plant and equipment	13	(14.0)	(13.4)
Proceeds from sale of investment property, plant and equipment and grants received		0.4	4.2
Development expenditure	15	(3.9)	(3.7)
Purchase of other intangibles	15	(0.7)	(2.1)
Acquisitions of businesses		(2.4)	(63.9)
Dividends paid by subsidiary to former shareholders		–	(0.8)
Cash with acquired businesses		0.1	(3.2)
Disposal of subsidiaries	5	–	1.5
Tax arising on disposal of subsidiaries		(1.2)	(2.9)
Net cash flow from investing activities		(21.6)	(84.2)
Cash flows from financing activities			
Issue of share capital	24	0.9	0.6
Interest paid		(4.1)	(1.7)
Repayment of borrowings		–	(15.0)
Proceeds from borrowings		30.4	86.7
Payment of lease liabilities		(4.4)	(0.3)
Other items		(4.6)	(7.9)
Dividends paid by the Company	10	(10.9)	(9.7)
Net cash flow from financing activities		7.3	52.7
Net increase/(decrease) in cash and cash equivalents		21.6	(6.4)
Cash and cash equivalents at beginning of year	26	40.6	46.5
Exchange differences	26	(2.0)	0.5
Cash and cash equivalents at end of year	26	60.2	40.6

Notes to the consolidated financial statements

1 Basis of preparation

a) Basis of accounting

The consolidated financial statements have been prepared on a historical cost basis modified by derivatives held at fair value and by the revaluation of certain property, plant and equipment at the transition date to International Financial Reporting Standards ('IFRS'). The consolidated financial statements have been prepared in accordance with IFRS as issued by the International Accounting Standards Board ('IASB') and interpretations issued by the IFRS Interpretations Committee of the IASB, as adopted by the European Union, and in accordance with the provisions of the Companies Act 2006.

The financial statements set out on pages 111 to 161 have been prepared using consistent accounting policies except for the adoption of new accounting standards and interpretations noted below.

b) Basis of consolidation

The consolidated financial statements set out the Group's financial position as at 31 December 2019 and the Group's financial performance for the year ended 31 December 2019.

Subsidiaries are those enterprises controlled by the Group. Control exists when the Group is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. 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.

All intercompany balances and transactions, including unrealised profits arising from intra-group transactions, have been eliminated in full. Unrealised losses are eliminated in the same way as unrealised gains except that they are only eliminated to the extent that there is no evidence of impairment.

c) Alternative performance measures

These financial statements include alternative performance measures that are not prepared in accordance with IFRS. These alternative performance measures have been selected by management to assist them in making operating decisions because they represent the underlying operating performance of the Group and facilitate internal comparisons of performance over time.

Alternative performance measures are presented in these financial statements as management believe they provide investors with a means of evaluating performance of the Group on a consistent basis, similar to the way in which management evaluates performance, that is not otherwise apparent on an IFRS basis. These alternative performance measures exclude certain significant non-recurring, infrequent or non-cash items that management does not believe are indicative of the underlying operating performance of the Group (that are otherwise included when preparing financial measures under IFRS).

The Directors consider there to be four main alternative performance measures: underlying operating profit, free cash flow, underlying EPS and underlying effective tax rate.

d) Underlying operating profit

This has been defined as operating profit from continuing operations excluding the impacts of significant restructuring programmes; significant one-off items including property disposals, business acquisition and divestment related activity; and the amortisation of intangible assets recognised on acquisition. Business acquisition and divestment related items include the writing off of the pre-acquisition profit element of inventory written up on acquisition, other direct costs associated with business combinations, integration costs and adjustments to contingent consideration related to acquired businesses. Restructuring include significant changes in footprint (including movement of production facilities) and significant costs of management changes.

Other alternative performance measures are defined in note 8.

1 Basis of preparation continued

e) Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position are set out within the Strategic Report on pages 1 to 53. The Strategic Report analyses the financial position of the Group, its cash flows, liquidity position and borrowing facilities. In addition, note 22 to the financial statements includes the Group's objectives, policies and processes for managing its capital; its financial risk management objectives; details of its financial instruments and hedging activities; and its exposures to credit risk and liquidity risk.

The Group had net debt of £69.1 million at 31 December 2019 (2018: £41.7 million), with available undrawn committed and uncommitted facilities of £238.6 million (comprising committed facilities of £199.3 million and uncommitted facilities of £39.2 million representing overdraft lines and an accordion facility of £30 million). Given the considerable financial resources available, together with long-term partnerships with several key customers and suppliers across different geographic areas and industries, the Directors believe that the Group is well placed to manage its business risks successfully.

The Directors have a reasonable expectation that the Company has adequate resources and financial headroom to continue in operational existence for at least 12 months from the date of signing these financial statements. Thus they confirm that is appropriate to adopt the going concern basis of accounting in preparing the annual financial statements. Further details are contained in the Governance and Directors' Report on page 62.

f) New standards and interpretations not yet adopted

The Group does not consider that any standard, amendment or interpretation issued by the IASB, but not yet applicable, will have a significant impact on the financial statements. Standards and interpretations issued by the IASB are only applicable if endorsed by the EU.

g) Change in accounting policies

The Group has implemented IFRS 16 Leases with effect from 1 January 2019. The standard provides a single lessee accounting model, requiring lessees to recognise right-of-use assets and lease obligations for all leases unless the lease term is 12 months or less or the underlying asset has a low value. The Group has applied IFRS 16 using the modified retrospective approach under which the cumulative effect of initial application has been recognised in retained earnings at 1 January 2019 and comparative information has not been restated and continues to be reported under IAS 17.

The Group previously classified leases as operating or finance leases based on whether the lease transferred substantially all the risks and rewards of ownership. Under IFRS 16, the Group recognises right-of-use assets and lease liabilities for most leases (unless the lease term is 12 months or less or the underlying asset has a low value).

The Group recognises a lease liability at the lease commencement date (or on initial application), measured as the present value of the future lease payments, discounted at the incremental borrowing rate. The weighted average incremental borrowing rate applied was 5.0%. A corresponding right-of-use asset is recognised separately on the face of the consolidated balance sheet, net of accumulated depreciation and impairment losses. For leases recognised on initial application, the right-of-use asset is initially measured at either the carrying amount if IFRS 16 had always been applied, or an amount equal to the initially recognised lease liability.

The Group has applied the following practical expedients on transition: not to reassess whether contracts contained a lease; use of hindsight in determining the lease term; exclusion of initial direct costs from the measurement of the right-of-use asset.

The Group has applied judgement to determine the lease term for contracts that include renewal options. The assessment of whether the exercise of such options is reasonably certain impacts the lease term, which significantly affects the amount of lease liability and right-of-use asset recognised.

On transition, the Group recognised £18.0 million of right-of-use assets, £21.3 million of lease liabilities, an adjustment of £0.2 million to working capital, an adjustment of £0.8 million to deferred tax and an amount of £2.3 million recognised in retained earnings.

The Group recognised depreciation of £3.5 million and impairment of £2.7 million (reported outside of underlying operating profit) in respect of right-of-use assets and interest costs of £1.0 million in respect of leases in the year ended 31 December 2019.

The Group adopted IFRIC 23 Uncertainty over Income Tax Treatments from 1 January 2019. There was no material impact.

Notes to the consolidated financial statements

continued

1 Basis of preparation continued

h) Significant accounting judgements and estimates

Judgements

Determining many of the amounts included in the consolidated financial statements involves the use of judgements. These judgements are based on management's best knowledge of the relevant facts and circumstances having regard to prior experience, but actual results may differ from the amounts included in the consolidated financial statements. In addition to the key sources of estimation uncertainty shown below, in applying the Group's accounting policies, the Directors have exercised judgement in adopting alternative performance measures (as described in note 8). The determination of items of income and expense excluded from operating profit to arrive at underlying operating profit requires critical judgement.

Estimation uncertainty

The preparation of the consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period. Actual outcomes could differ from these estimates. In particular, information about significant areas of estimation uncertainty made by the Directors in preparing the consolidated financial statements is shown below:

- Note 9 – Taxation. Accruals for tax contingencies require management to make judgements and estimates in relation to tax audit issues and exposures. Amounts accrued are based on management's interpretation of country-specific tax law and the likelihood of settlement. Tax benefits are not recognised unless the tax positions are probable of being sustained. Once considered to be probable, management reviews each material tax benefit to assess whether a provision should be taken against full recognition of the benefit on the basis of potential settlement through negotiation and/or litigation. These amounts are expected to be utilised or to reverse as tax audits occur or as the statute of limitations is reached in the respective countries concerned. The recognition of deferred tax assets is dependent on assessments of future taxable income in the relevant countries concerned;
- Note 15 – Goodwill. The carrying amount of goodwill has been tested for impairment by estimating the value in use of the cash-generating units to which it has been allocated. Note 15 outlines the significant assumptions made in performing the impairment tests;
- Note 20 – Provisions. The Group makes appropriate provision on a consistent basis for risks of product liability, litigation, restructuring, credit risk and other normal trading exposures with estimates being made regarding the timing of future payments; and
- Note 23 – Defined benefit pension obligations. The defined benefit pension obligations are calculated using a number of assumptions, including future inflation, salary increases and mortality and the obligation is then discounted to its present value using an assumed discount rate. Note 23 outlines the significant assumptions and associated sensitivities.

2 Summary of significant accounting policies

The following significant accounting policies have been applied in the preparation of the consolidated financial statements. These accounting policies have been consistently applied across the Group.

a) Revenue

Revenue is measured at the fair value of the right to consideration, usually the invoiced value, for the provision of goods and services to external customers excluding value added tax and other sales related taxes and is recognised when the customer obtains control of goods. In most cases this is at the point in time of transfer of legal title of the goods. Revenue for services is recognised as the services are rendered. For sales to customers where a right to return an item is granted, revenue is recognised to the extent of the consideration to which the Group ultimately expects to be entitled (i.e. revenue is not recognised for goods expected to be returned). Where a service warranty is provided to customers, the associated revenue, based upon an allocation of the overall cost of performance, is recognised over the warranty period.

b) Finance income

Finance income comprises interest income on funds invested and foreign exchange gains. Interest income is recognised as it accrues.

c) Finance costs

Finance costs comprise interest expense on borrowings which are not capitalised under the borrowing costs policy, the calculated interest income on pension assets net of the calculated interest expense on pension liabilities and foreign exchange losses.

d) Discontinued operations and assets held for sale

The Group reports a business as a discontinued operation when it has been disposed of in a period, or its future sale is considered to be highly probable at the balance sheet date, and results in the cessation of a major line of business or geographical area of operation. An asset is classified as held for sale if it is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets and that it is highly probable the asset will be sold within one year from the date of classification.

e) Dividends

Dividends are recognised as a liability in the period in which they are approved by shareholders. Dividends receivable are recognised when the Group's right to receive payment is established.

f) Business combinations

Business combinations are accounted for using the acquisition method. Goodwill on business combinations is recognised as the fair value of the consideration transferred less the fair value of the identifiable assets and liabilities acquired and is recognised as an asset in the consolidated balance sheet. Costs relating to the acquisition are recognised as expenses in the consolidated income statement as incurred.

Acquisitions and disposals of non-controlling interests that do not result in a change of control are accounted for as transactions with owners in their capacity as owners and therefore no goodwill is recognised as a result of such transactions. The adjustments to non-controlling interests are based on a proportionate amount of the net assets of the subsidiary. Any difference between the price paid or received and the amount by which non-controlling interests are adjusted is recognised directly in equity and attributed to the owners of the parent.

g) Property, plant and equipment

Initial measurement

Property, plant and equipment is stated at cost less accumulated depreciation and impairment losses. The cost of a tangible fixed asset comprises its purchase price and any costs directly attributable to bringing it into working condition for its intended use. The cost of self-constructed assets includes the cost of materials, direct labour and an appropriate proportion of production overheads.

Notes to the consolidated financial statements

continued

2 Summary of significant accounting policies continued

Depreciation

The cost of each item of property, plant and equipment is depreciated over its useful life. Depreciation is charged to the consolidated income statement so as to write-off the cost less estimated residual value on a straight-line basis over the estimated useful life of the asset. Depreciation commences on the date the assets are ready for use within the business and the asset carrying values are reviewed for impairment when there is an indication that they may be impaired. Freehold land is not depreciated.

The depreciation rates of assets are as follows

Freehold buildings	50 years
Leasehold building improvements	50 years (or over the period of the lease, if shorter)
Plant and equipment	3 to 10 years

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets that take a substantial period of time to get ready for their intended use are capitalised as part of the cost of the respective asset.

h) Investment property

Property held to earn rental income rather than for the purpose of the Group's principal activities is classified as investment property. Investment property is recorded at cost less accumulated depreciation and any recognised impairment loss. The depreciation policy is consistent with that described for other Group properties. The assets' residual values and useful lives are reviewed, and adjusted, if appropriate, at each balance sheet date.

Investment properties are derecognised when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognised in the consolidated income statement in the period of derecognition.

i) Leases

In the prior year, finance leases, which transfer to the Group substantially all the risks and rewards of ownership of the leased items, were capitalised at the commencement of the lease. Plant and equipment acquired by way of finance lease was stated at an amount equal to the lower of its fair value and the present value of the minimum lease payments at inception of the lease, less accumulated depreciation and impairment losses. The capital elements of future obligations under finance lease and hire purchase contracts were included as liabilities in the consolidated balance sheet. Lease payments were apportioned between the finance charge and reduction of the finance lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges were charged directly against income. Capitalised lease assets were depreciated over the shorter of the estimated useful life of the asset or the lease term. All other leases are treated as operating leases and the cost was expensed to the consolidated income statement as incurred.

The Group applied IFRS 16 on 1 January 2019, recognising right-of-use assets and lease liabilities for most leases (unless the lease term is 12 months or less or the underlying asset has a low value).

The Group recognises a lease liability at the lease commencement date (or on initial application), measured as the present value of the future lease payments, discounted at the incremental borrowing rate. A corresponding right-of-use asset is recognised separately on the face of the consolidated balance sheet, net of accumulated depreciation and impairment losses. For leases recognised on initial application, the right-of-use asset is initially measured at either the carrying amount if IFRS 16 had always been applied, or an amount equal to the initially recognised lease liability. Depreciation of right-of-use assets are recognised on a straight-line basis over the lease term.

The Group has applied judgement to determine the lease term for contracts that include renewal options. The assessment of whether the exercise of such options is reasonably certain impacts the lease term, which significantly affects the amount of lease liability and right-of-use asset recognised.

j) Government grants

Government grants relating to non-current assets are treated as deferred income and credited to the consolidated income statement by equal instalments over the anticipated useful lives of the assets to which the grants relate. Other grants are credited to the consolidated income statement over the period of the project to which they relate.

2 Summary of significant accounting policies continued

k) Goodwill

Goodwill arising on the acquisition of a business, representing the difference between the cost of acquisition and the fair value of the identifiable net assets acquired, is capitalised and is tested annually for impairment. Goodwill is not amortised, and any impairment losses are not subsequently reversed. The net book value of goodwill at the date of transition to IFRS has been treated as deemed cost. On the subsequent disposal or discontinuance of a previously acquired business, the relevant goodwill is dealt with in the consolidated income statement except for the goodwill already charged to reserves.

Negative goodwill arising on the acquisition of a business is credited to the consolidated income statement on acquisition as part of acquisition costs reported outside underlying profit.

l) Other intangible assets

Intangible assets acquired as part of a business combination are stated in the consolidated balance sheet at their fair value at the date of acquisition less accumulated amortisation.

Expenditure on research activities undertaken with the prospect of gaining new scientific or technical knowledge and understanding is recognised in the consolidated income statement as incurred. Expenditure on development activities, whereby research findings are applied to a plan or design for the production of new or substantially improved products and processes, is capitalised if the product or process is technically and commercially feasible and the Group has sufficient resources to complete development. The expenditure capitalised includes the cost of materials, direct labour and an appropriate proportion of overheads. Other development expenditure is recognised in the consolidated income statement as incurred. Capitalised development expenditure is stated at cost less accumulated amortisation and impairment losses. The carrying values of intangible assets are tested for impairment whenever there is an indication that they may be impaired.

Acquired computer software licences for use within the Group are capitalised as an intangible asset on the basis of the costs incurred to acquire and bring to use the specific software. Costs that are directly associated with the implementation of identifiable and unique software products controlled by the Group, and that will probably generate economic benefits exceeding costs beyond one year, are recognised as intangible assets. Capitalised software development expenditure is stated at cost less accumulated amortisation.

The amortisation rates for intangible assets are:

Acquired patents and licences	up to 10 years
Product development costs	5 years
Customer relationships	3 to 15 years
Order backlog	up to 2 years
Software	3 to 5 years

Amortisation is charged on a straight-line basis.

Notes to the consolidated financial statements

continued

2 Summary of significant accounting policies continued

m) Deferred taxation

Deferred taxation is provided on taxable temporary differences between the carrying amounts of assets and liabilities in the financial statements and their corresponding tax bases. No provision is made for deferred tax which would become payable on the distribution of retained profits by overseas subsidiaries where the timing of the reversal of the temporary difference can be controlled and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is measured using the tax rates expected to apply when the asset is realised, or the liability settled based on tax rates enacted or substantively enacted by the balance sheet date. However, deferred tax is not provided on the initial recognition of goodwill, nor on the initial recognition of an asset or liability unless the related transaction is a business combination or affects tax or accounting profit.

A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised or that they will reverse. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Deferred tax assets and liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and the same taxation authority.

n) Inventories

Inventories are valued at the lower of cost, including related overheads, and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and the overheads incurred in bringing inventories to their present location and condition. Cost is calculated on a weighted average cost basis.

o) Trade and other receivables

Trade receivables are carried at original invoice price (which is the fair value of the consideration receivable) less provision made for impairment of these receivables. At each reporting date the Group makes an assessment of credit risk by considering reasonable and supportable information that may indicate increases in credit risk. The amount of credit risk provision is the difference between the original carrying amount and the recoverable amount, being the present value of expected cash flows receivable. The amount of the provision is recognised in the consolidated income statement.

p) Financial instruments

Recognition

The Group recognises financial assets and liabilities in the consolidated balance sheet when it becomes a party to the contractual provisions of the instrument.

Financial assets and liabilities are offset and the net amount is reported in the consolidated balance sheet when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

Measurement

When financial assets and liabilities are initially recognised, they are measured at fair value being the consideration given or received plus directly attributable transaction costs.

In determining estimated fair value, investments are valued at quoted bid prices on the trade date.

Loans and receivables comprise loans and advances other than purchased loans. Originated loans and receivables are initially recognised in accordance with the policy stated above and subsequently remeasured at amortised cost using the effective interest method. Allowance for impairment is estimated on a case-by-case basis.

The Group uses derivative financial instruments such as forward foreign exchange contracts and interest rate derivatives to hedge risks associated with foreign exchange fluctuations and interest rate risk. These are designated as cash flow hedges. At the inception of the hedge relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument that is used in a hedging relationship is highly effective in offsetting changes in cash flows of the hedged item.

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are deferred in equity. The gain or loss relating to the ineffective portion is recognised immediately in the consolidated income statement.

2 Summary of significant accounting policies continued

Amounts deferred in equity are recycled in the consolidated income statement in the periods when the hedged item is recognised in the consolidated income statement, in the same line of the consolidated income statement as the recognised hedged item. However, when the forecast transaction that is hedged results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the asset or liability.

Hedge accounting is discontinued when the Group revokes the hedging relationship, the hedging instrument expires or is sold, terminated, or exercised, or no longer qualifies for hedge accounting. Any cumulative gain or loss deferred in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in the consolidated income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was deferred in equity is recognised immediately in the consolidated income statement.

Derecognition

A financial asset is derecognised when the Group loses control over the contractual rights that comprise that asset. This occurs when the rights are realised, expire or are surrendered. A financial liability is derecognised when it is extinguished. Originated loans and receivables are derecognised on the date they are transferred by the Group.

Impairment of financial assets

The Group assesses credit risk at each balance sheet date by considering reasonable and supportable information that may indicate whether a financial asset or group of financial assets is impaired.

q) Cash and cash equivalents

Cash and cash equivalents comprise cash at bank and in hand, short-term deposits held on call or with maturities of less than three months at inception and highly liquid investments that are readily convertible into known amounts of cash and are subject to insignificant risk of changes in value, and bank overdrafts.

r) Borrowings

Borrowings are initially recognised at the fair value of the consideration received less directly attributable transaction costs. After initial recognition, borrowings are subsequently measured at amortised cost using the effective interest method.

s) Trade payables

Trade payables are carried at the amounts expected to be paid to counterparties.

t) Income tax

Income tax for the year comprises current and deferred tax. Income tax is recognised in the consolidated income statement except to the extent that it relates to items charged or credited directly to equity, in which case it is recognised in equity. Current tax expense is the expected tax payable on the taxable income for the year and any adjustment to tax payable in respect of previous years.

u) Provisions

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, and it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate can be made of the amount. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

v) Employee benefits

The Group operates defined benefit post-retirement benefit schemes and defined contribution pension schemes.

Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised in the consolidated income statement in the periods during which services are rendered by employees.

Notes to the consolidated financial statements

continued

2 Summary of significant accounting policies continued

Defined benefit plans

The liability recognised in the consolidated balance sheet for defined benefit schemes is the present value of the schemes' liabilities less the fair value of the schemes' assets. The operating and financing costs of defined benefit schemes are recognised separately in the consolidated income statement. Operating costs comprise the current service cost, any gains or losses on settlement or curtailments, and past service costs. Net interest income and expense on net defined benefit assets and liabilities is determined by applying discount rates used to measure defined benefit obligations at the beginning of the year to net defined benefit assets and liabilities at the beginning of the year and is included in finance income and costs. Remeasurements arising from defined benefit plans comprise actuarial gains and losses, the return on plan assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest). The Group recognises them immediately in other comprehensive income and all other expenses related to defined benefit plans in employee benefit expenses in profit or loss. Surpluses are recognised where, on wind-up the Group has unconditional right to any surplus and Trustees do not have unilateral power to alter members' benefits.

Termination benefits

Termination benefits are recognised as an expense when the Group is committed demonstrably, without realistic possibility of withdrawal, to a formal detailed plan to either terminate employment before the normal retirement date, or to provide termination benefits as a result of an offer made to encourage voluntary redundancy. Termination benefits for voluntary redundancies are recognised as an expense if the Group has made an offer of voluntary redundancy, it is probable that the offer will be accepted, and the number of acceptances can be estimated reliably.

Short-term employee benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided. A liability is recognised for the amount expected to be paid under short-term cash bonus or profit-sharing plans if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee, and the obligation can be estimated reliably.

Share-based payments

Certain employees of the Group receive part of their remuneration in the form of share-based payment transactions, whereby employees render services in exchange for shares or rights over shares (equity-settled transactions). The cost of equity-settled transactions with employees is measured at fair value at the date at which they are granted. The fair value of share awards with market-related vesting conditions is determined by an external consultant and the fair value at the grant date is expensed on a straight-line basis over the vesting period based on the Group's estimate of shares that will eventually vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date at which point the estimate is adjusted to reflect the actual outcome of awards which have vested. No adjustment is made to the fair value after the vesting date even if the awards are forfeited or not exercised.

w) Own shares

Own equity instruments which are re-acquired (own shares) are recognised at cost and deducted from equity. No gain or loss is recognised in the consolidated income statement on the purchase, sale, issue or cancellation of the Group's own equity instruments. Any difference between the carrying amount and the consideration paid to acquire such equity instruments is recognised within equity.

x) Foreign currency translation

The functional currency for each entity in the Group is determined with reference to the currency of the primary economic environment in which it operates. Transactions in currencies other than the functional currency are initially recorded at the functional currency rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the rate of exchange ruling at the balance sheet date. Exchange gains and losses on settlement of foreign currency transactions translated at the rate prevailing at the date of the transactions, or the translation of monetary assets and liabilities at period end exchange rates, are taken to the income statement. Non-monetary assets and liabilities denominated in foreign currencies that are stated at historical cost are translated to the functional currency at the foreign exchange rate ruling at the date of the transaction.

On consolidation, income statements of subsidiaries are translated into sterling at average rates of exchange. Balance sheet items are translated into sterling at period end exchange rates. Exchange differences on the retranslation are taken to equity. Exchange differences on foreign currency borrowings financing those net investments are also dealt with in equity and are reported in the statement of comprehensive income. All other exchange differences are charged or credited to the income statement in the year in which they arise. On disposal of an overseas subsidiary any cumulative exchange movements relating to that subsidiary held in the translation reserve are transferred to the consolidated income statement.

3 Segmental reporting

The Group is organised into three divisions, as shown below, according to the nature of the products and services provided. Each of these divisions represents an operating segment in accordance with IFRS 8 Operating segments and there is no aggregation of segments. The chief operating decision maker is the Board of Directors. The operating segments are:

- Power and Connectivity – The Power and Connectivity division designs and manufactures power application products and connectivity devices which enable the capture and wireless transfer of data. We collaborate with our customers to develop innovative solutions to optimise their electronic systems;
- Global Manufacturing Solutions – The Global Manufacturing Solutions division provides manufacturing services and engineering solutions for our product divisions and to customers that often require a lower volume and higher mix of different products. We manufacture complex integrated product assemblies for our customers and provide engineering services including designing testing solutions and value-engineering; and
- Sensors and Specialist Components – The Sensors and Specialist Components division works with customers to develop standard and customised solutions including sensors and power management devices. Our solutions improve the precision, speed and reliability of critical aspects of our customers' applications.

During the year management responsibility for the Kuantan, Malaysia based Magnetics business was transferred from the Sensors and Specialist Components operating segment to the Power and Connectivity operating segment. In 2018 the Malaysian Magnetics business generated revenue of £17.5 million and underlying operating profit of £2.8 million.

The key performance measure of the operating segments is underlying operating profit. Refer to note 8 for a definition of underlying operating profit.

Corporate costs – Resources and costs of the head office managed centrally but deployed in support of the operating units are allocated to segments based on a combination of revenue and operating profit. Resources and costs of the head office which are not related to the operating activities of the trading units are not allocated to divisions and are separately disclosed, equivalent to the segment disclosure information, so that reporting is consistent with the format that is used for review by the chief operating decision maker. This gives greater transparency of the underlying operating profits for each segment.

The accounting policies of the reportable segments are the same as the Group's accounting policies as shown in note 2.

Group financing (including finance costs and finance income) and income taxes are managed on a Group basis and are not allocated to operating segments.

Goodwill is allocated to the individual cash generating units which may be smaller than the segment of which they are part.

a) Income statement information – continuing operations

						2019
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	138.2	213.2	126.8	478.2	–	478.2
Underlying operating profit	16.5	15.4	15.3	47.2	(7.2)	40.0
Adjustments to underlying operating profit (note 8)						(21.2)
Operating profit						18.8
Net finance costs						(3.7)
Profit before taxation						15.1

Notes to the consolidated financial statements

continued

3 Segmental reporting continued

2018¹

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	115.5	181.8	132.2	429.5	–	429.5
Underlying operating profit	11.2	11.3	18.5	41.0	(7.6)	33.4
Adjustments to underlying operating profit (note 8)						(16.9)
Operating profit						16.5
Net finance costs						(1.9)
Profit before taxation						14.6

¹ Restated for the transfer of the Malaysian Magnetics business from the Sensors and Specialist Components division to the Power and Connectivity division.

There are no significant sales between segments.

b) Segment assets and liabilities

£million	Assets		Liabilities	
	2019	2018 ¹	2019	2018 ¹
Power and Connectivity	172.7	126.0	26.0	23.3
Global Manufacturing Solutions	128.1	111.0	68.8	47.3
Sensors and Specialist Components	122.8	124.8	23.0	18.0
Segment assets and liabilities	423.6	361.8	117.8	88.6
Pensions	21.2	24.9	4.6	8.4
Unallocated	82.0	104.1	135.5	114.3
Total assets/liabilities	526.8	490.8	257.9	211.3

£million	Capital expenditure		Depreciation and amortisation	
	2019	2018 ¹	2019	2018 ¹
Power and Connectivity	4.9	6.1	4.9	3.5
Global Manufacturing Solutions	5.2	3.5	5.2	3.5
Sensors and Specialist Components	9.0	9.5	7.9	6.6
Total	19.1	19.1	18.0	13.6

¹ Restated for the transfer of the Malaysian Magnetics business from the Sensors and Specialist Components division to the Power and Connectivity division.

Unallocated assets of £82.0 million (2018: £104.1 million) comprise deferred tax of £7.5 million (2018: £6.1 million), cash of £60.2 million (2018: £40.6 million) and income tax of £4.3 million (2018: £1.6 million), assets associated with the central corporate function of £10.0 million (2018: £9.5 million) and goodwill and intangibles recognised on the acquisition of Stadium Group plc of Enil (2018: £46.3 million).

Unallocated liabilities of £135.5 million (2018: £114.3 million) comprise borrowings (excluding leases) of £111.7 million (2018: borrowings (including finance leases) of £82.3 million), deferred tax of £4.6 million (2018: £4.8 million), income tax of £8.0 million (2018: £13.2 million) and liabilities associated with the central corporate function of £11.2 million (2018: £14.0 million).

3 Segmental reporting continued

c) Geographic information

Revenue by destination

The Group operates on a global basis. Revenue from external customers by geographical destination is shown below. Management monitor and review revenue by region rather than by individual country given the significant number of countries where customers are based.

£million	2019	2018
United Kingdom	139.4	122.4
Rest of Europe	89.6	79.8
North America	141.7	121.9
Central and South America	0.6	1.1
Asia	103.1	100.7
Rest of the World	3.8	3.6
Total continuing operations	478.2	429.5

No individual customer directly accounts for more than 10% of Group revenue. Revenue from services is less than 1% of Group revenues. All other revenue is from the sale of goods.

Non-current assets

The carrying amount of non-current assets, excluding deferred tax assets and pensions, analysed by the geographical area is shown below:

£million	2019	2018
United Kingdom	126.7	122.7
Rest of Europe	0.5	0.1
North America	106.5	107.3
Central and South America	4.7	3.6
Asia	12.9	10.9
	251.3	244.6

d) Market information

Revenue by market

The Group operates in the following markets.

£million	2019	2018
Transportation	54.5	51.2
Aerospace and defence	106.7	80.4
Industrial	201.2	205.4
Medical	115.8	92.5
	478.2	429.5

Notes to the consolidated financial statements

continued

4 Acquisitions

On 22 March 2019 the Group acquired the entire equity share capital of Power Partners Inc. for an initial cash consideration of \$1.6 million (£1.2 million). An additional \$1.3 million (£1.0 million) may become payable subject to business performance over the next two years, of which £1.0 million has been accrued at year end giving total consideration of £2.2 million. From the date of acquisition to the year end the business generated revenue of £3.3 million and operating profit of £0.5 million.

The provisional fair value of the net assets acquired were £1.3 million, including identifiable intangible assets of £0.8 million and other assets of £0.5 million, resulting in goodwill recognised on acquisition of £0.9 million.

The acquisition enhances our technology capabilities in power products and improves our medical market access accelerating our organic technology roadmap and US medical market presence. The goodwill recognised on acquisition represents the Group's view of the future earnings growth potential of the acquired businesses. The provisional fair values are based on the information currently available; if new information obtained within one year of the date of acquisition about facts and circumstances that existed at the date of acquisition identifies adjustments to the above amounts, or any additional provisions that existed at the date of acquisition, then the accounting for the acquisition will be revised.

Had the acquisition been completed on 1 January, the full year revenue and underlying operating profit would have been £487.5 million and £40.1 million respectively, compared to £487.2 million and £40.0 million as reported.

On 17 April 2018 the Group acquired the entire equity share capital of Stadium Group plc for £45.8 million in cash and assumed net debt of £13.9 million. On 1 June 2018 the Group acquired the entire equity share capital of Precision Inc. for an initial cash consideration of \$23.5 million (£17.6 million), a further \$0.5 million (£0.4 million) working capital adjustment paid in cash. An additional \$1.1 million (£0.8 million) was due based on business performance and was settled in cash in February 2019. The measurement periods closed on 17 April 2019 and 1 June 2019 with no further adjustment to provisional fair values shown below:

£million	Stadium Group plc	Precision Inc
Non-current assets		
Property, plant and equipment	4.1	1.2
Identifiable intangible assets	22.1	8.2
Deferred tax assets	2.3	–
Current assets/(liabilities)		
Inventory	14.6	2.0
Trade and other receivables	13.1	2.9
Cash/(overdraft)	(3.6)	0.4
Borrowings – current	(10.3)	–
Trade and other payables	(14.3)	(2.1)
Income taxes payable	(0.1)	–
Provisions – current	(0.9)	–
Non-current liabilities		
Pensions	(4.5)	–
Deferred tax liability	(4.0)	–
	18.5	12.6
Consideration paid		
Cash	45.8	18.0
Deferred consideration	–	0.8
Goodwill	27.3	6.2

The acquisitions accelerate the Group's strategy of building leading positions where increasing electrification is fuelling the demand for the Group's highly engineered electronic solutions. The goodwill recognised on acquisition represents the Group's view of the future earnings growth potential and the technical know-how in the acquired businesses.

5 Discontinued operations

The profit from discontinued operations shown in the consolidated income statement relates to release of tax and divestment provisions of £3.4 million (2018: £0.4 million) held in respect of disposals completed in earlier years. The net cash flow from discontinued operations included in the consolidated cash flow statement is shown below:

£million	2019	2018
Disposal of subsidiaries	–	1.5
Tax arising on disposal of subsidiaries	(1.2)	(2.9)
Net cash flow	(1.2)	(1.4)

6 Finance costs and finance income

£million	2019	2018
Interest income	0.1	0.1
Interest income on pension surplus	0.8	0.4
Finance income	0.9	0.5
Interest expense	3.0	1.8
Interest on lease liabilities	1.0	–
Interest expense on pension liabilities	0.2	0.2
Amortisation of arrangement fees	0.4	0.4
Finance costs	4.6	2.4
Net finance costs	3.7	1.9

7 Profit for the year

Profit from continuing operations for the year is stated after charging/(crediting):

£million	2019	2018
Depreciation of property, plant and equipment	10.4	9.8
Depreciation of right-of-use assets	3.5	–
Amortisation of intangible assets ¹	8.6	8.6
Net foreign exchange losses/(gains)	2.5	(1.4)
Cost of inventories recognised as an expense	361.4	318.8
Research and development	11.5	10.2
Staff costs (see note 12)	135.6	126.9
Acquisition and disposal related costs (excluded from underlying operating profit)	3.6	7.2
Remuneration of Group Auditors:		
– audit of these financial statements	0.5	0.3
– audit of financial statements of subsidiaries of the Company	0.6	0.6
– assurance services ²	0.1	–
Government grants credited	0.1	0.1
Share-based payments	2.9	3.1
Profit on disposal of property, plant and equipment (excluded from underlying operating profit)	–	3.6

¹ Included within amortisation of intangible assets is £4.5 million (2018: £4.8 million) reported within items excluded from underlying operating profit.

² Assurance services of £60 thousand related to the half-year review (2018: £42 thousand comprising £39 thousand relating to the half-year review and £3 thousand for assistance with a UK grant review).

Notes to the consolidated financial statements

continued

8 Alternative performance measures

These financial statements include alternative performance measures that are not prepared in accordance with IFRS. These alternative performance measures have been selected by management to assist them in making operating decisions because they represent the underlying operating performance of the Group and facilitate internal comparisons of performance over time.

Alternative performance measures are presented in these financial statements as management believes they provide investors with a means of evaluating performance of the Group on a consistent basis, similar to the way in which management evaluates performance, that is not otherwise apparent on an IFRS basis, given that certain non-recurring, infrequent or non-cash items that management does not believe are indicative of the underlying operating performance of the Group are included when preparing financial measures under IFRS.

These non-IFRS measures should not be considered in isolation from, as substitutes for, or superior to financial measures prepared in accordance with IFRS.

The Directors recognise the following alternative performance measures: underlying operating profit, free cash flow, cash conversion, organic revenue growth, underlying EPS, underlying effective tax rate and return on invested capital.

Underlying operating profit

This has been defined as operating profit from continuing operations excluding the impacts of significant restructuring programmes; significant one-off items including property disposals, business acquisition, integration and divestment related activity; and the amortisation of intangible assets recognised on acquisition. Business acquisition and divestment related items include the writing off of the pre-acquisition profit element of inventory written up on acquisition, other direct costs associated with business combinations and adjustments to contingent consideration related to acquired businesses. Restructuring includes significant changes in footprint (including movement of production facilities) and significant costs of management changes.

Costs associated with restructuring, acquisitions and disposals are uncertain with regard to their timing and size and therefore their inclusion within underlying operating profit could mislead the reader of the accounts.

£million	2019		2018	
	Operating profit	Tax	Operating profit	Tax
As reported	18.8	(1.2)	16.5	(1.6)
Restructuring and other				
Restructuring	(12.8)	3.0	(2.7)	0.4
Property items	–	–	3.6	–
Pensions past service charge	(0.4)	0.1	(5.8)	1.1
	(13.2)	3.1	(4.9)	1.5
Acquisition related costs				
Release of acquisition current tax provision	–	–	–	0.6
Amortisation of intangible assets arising on business combinations	(4.5)	1.0	(4.8)	1.2
Other acquisition related costs	(3.5)	0.5	(7.2)	0.4
	(8.0)	1.5	(12.0)	2.2
Total items excluded from underlying measure	(21.2)	4.6	(16.9)	3.7
Underlying measure	40.0	(5.8)	33.4	(5.3)

8 Alternative performance measures continued

Restructuring £13.2 million (2018: £4.9 million)

In the year ended 31 December 2019 total restructuring costs amounted to £13.2 million of which £8.7 million related to ongoing restructuring of the footprint of the Sensors and Specialist Components division (comprising impairment of right-of-use assets, property, plant and equipment resulting from the planned closure of one of our facilities in Mexicali, Mexico (£3.9 million) and the closure of our office in Brea, California (£0.3 million) and £4.5 million of other costs), £2.1 million to restructuring the site footprint acquired with the Stadium Group, £1.2 million to restructuring the site footprint of the Power and Connectivity division, £0.8 million for other restructuring and £0.4 million to a pension past service charge as a result of UK pensions schemes having to equalise male and female members' benefits in respect of guaranteed minimum pensions ('GMP').

In the year ended 31 December 2018 total restructuring costs amounted to £4.9 million of which £2.7 million related to costs associated with site restructuring, a profit arising on the sale of property (£3.6 million) and a pension past service charge (£5.8 million) as a result of UK pensions schemes having to equalise male and female members' benefits in respect of guaranteed minimum pensions.

Acquisition and disposal related costs £8.0 million (2018: £12.0 million)

In the year ended 31 December 2019 acquisition and disposal related costs amounted to £8.0 million which comprises £4.5 million of amortisation of acquired intangible assets and £3.5 million of other acquisition related costs largely relating to the integration of Stadium Group plc and Precision Inc., the acquisition of Power Partners Inc. and the acquisition of the aerospace and defence power supply business of Excelitas Technologies Corporation.

In the year ended 31 December 2018 acquisition and disposal related costs amounted to £12.0 million which comprises £4.8 million of amortisation of acquired intangible assets and £7.2 million of other acquisition related costs derived primarily from the acquisitions of Stadium Group plc and Precision Inc.

Free cash flow

This has been defined as net cash flow from operating activities less cash flow from investing activities (excluding acquisitions and disposal proceeds and tax arising thereon) less interest paid.

£million	2019	2018
Net cash flow from operating activities	35.9	25.1
Net cash flow from investing activities	(21.6)	(84.2)
Add back: Acquisition of business	2.4	63.9
Add back: Dividends paid by subsidiary to former shareholders	–	0.8
Add back: Cash with acquired businesses	(0.1)	3.2
Add back: Disposal of subsidiaries	–	(1.5)
Add back: Tax arising from disposal of subsidiaries	1.2	2.9
Payment of lease liabilities previously reported as operating leases	(4.0)	–
Interest paid	(4.1)	(1.7)
Free cash flow	9.7	8.5

Cash conversion

This is the underlying operating cash flow post capex (underlying EBITDA less net capital expenditure (excluding property disposals), capitalised development expenditure, working capital and non-cash movements) divided by underlying operating profit. Cash conversion measures how effectively we convert profit into cash and tracks the management of our working capital and capital expenditure.

Notes to the consolidated financial statements

continued

8 Alternative performance measures continued

£million	2019	2018
Underlying operating profit	40.0	33.4
Underlying operating cash flow	57.4	48.4
Purchase of property, plant and equipment	(14.0)	(13.4)
Proceeds from sale of plant and equipment and grants received	0.4	0.3
Development expenditure	(3.9)	(3.7)
Purchase of other intangibles	(0.7)	(2.1)
Underlying operating cash flow post capex	39.2	29.5
Cash conversion	98%	88%

Organic revenue growth

This is the percentage change in revenue from continuing operations in the current year compared to the prior year, excluding the effects of currency movements and acquisitions. This measures the underlying growth of the business.

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total
2019 revenue	138.2	213.2	126.8	478.2
Acquisitions	(19.5)	(6.3)	–	(25.8)
2019 revenue (excluding acquisitions)	118.7	206.9	126.8	452.4
2018 revenue	115.5	181.8	132.2	429.5
Foreign exchange impact	1.2	2.2	4.2	7.6
2018 revenue at 2019 exchange rates	116.7	184.0	136.4	437.1
Organic revenue growth (%)	2%	12%	(7%)	4%

Underlying earnings per share

This is the profit for the year attributable to the owners of the Company adjusted to exclude the items not included within underlying operating profit divided by the weighted average number of shares in issue during the year. Underlying EPS is a standard metric to determine corporate profitability for shareholders and it is a measure used as one of the performance conditions in the Group's Long-term Incentive Plan. See note 11 for the calculation of underlying earnings per share.

Underlying effective tax rate

This is defined as the tax charge adjusted to exclude items not included within underlying operating profit and other non-underlying tax items divided by underlying profit before tax, which is also adjusted to exclude the items not included within underlying operating profit.

£million	2019	2018
Underlying profit	40.0	33.4
Net interest	(3.7)	(1.9)
Underlying profit before tax	36.3	31.5
Underlying tax	5.8	5.3
Underlying effective tax rate	16.0%	16.8%

Return on invested capital

This is defined as underlying operating profit for the year divided by average invested capital for the year. Average invested capital excludes pensions, provisions, tax balances, derivative financial assets and liabilities, cash and borrowings. This measures how efficiently assets are utilised to generate returns with the target of exceeding the cost to hold the assets.

£million	2019	2019 ¹	2018
Underlying profit	40.0	39.2	33.4
Average invested capital	354.0	338.6	289.8
Return on invested capital	11.3%	11.6%	11.5%

¹ Amounts adjusted for the impact of IFRS 16 (underlying operating profit is adjusted to remove right-of-use asset depreciation and add back IAS17 operating lease rentals. Invested capital excludes right-of-use assets).

9 Taxation

a) Analysis of the tax charge for the year

£million	2019	2018
Current tax		
Current income tax charge	3.7	6.3
Adjustments in respect of current income tax of previous year	(3.1)	(2.9)
Total current tax charge	0.6	3.4
Deferred tax		
Relating to origination and reversal of temporary differences	1.4	(1.3)
Change in tax rate	0.1	0.1
Recognition of previously unrecognised deferred tax assets	(0.9)	(0.6)
Total deferred tax charge/(credit)	0.6	(1.8)
Total tax charge in the income statement – continuing operations	1.2	1.6

UK tax is calculated at 19% (2018: 19%) of taxable profits. Overseas tax is calculated at the tax rates prevailing in the relevant countries. The Group's effective tax rate for the year from continuing operations was 7.9% (the underlying tax rate was 16.0%, see note 8).

Included within the total tax charge above is a £4.6 million credit relating to items reported outside underlying profit (2018: £3.7 million).

b) Reconciliation of the total tax charge for the year

£million	2019	2018
Profit before tax from continuing operations	15.1	14.6
Profit before tax multiplied by the standard rate of corporation tax in the UK of 19% (2018: 19%)	2.9	2.8
Effects of:		
Impact on deferred tax arising from changes in tax rates	0.1	0.1
Overseas tax rate differences	1.0	1.2
Items not deductible for tax purposes or income not taxable	1.6	1.2
Adjustment to current tax in respect of prior periods	(3.1)	(2.9)
Recognition of previously unrecognised deferred tax assets	(0.9)	(0.6)
Current year tax losses and other items not recognised	(0.4)	(0.2)
Total tax charge reported in the income statement	1.2	1.6

The enacted UK corporation tax rate applicable from 1 April 2017 is 19% and from 1 April 2020 is 17%.

The adjustment to current tax in respect of prior periods largely relates to the release of tax provisions in respect of concluded disputes and uncertainties.

The overall aim of the Group's tax strategy is to support business operations by ensuring a sustainable tax rate, mitigating tax risks in a timely and cost-efficient way and complying with tax legislation in the jurisdictions in which the Group operates. It is however inevitable that the Group will be subject to routine tax audits or is in ongoing disputes with tax authorities in the multiple jurisdictions it operates within. This is much more likely to arise in situations involving more than one tax jurisdiction. Differences in interpretation of legislation (e.g. EU Law), of global standards (e.g. OECD guidance) and of commercial transactions undertaken by the Group between different tax authorities are one of the main causes of tax exposures and tax risks for the Group.

In order to manage the risk to the Group an assessment is made of such tax exposures and provisions are created using the best estimate of the most likely amount to be incurred within a range of possible outcomes. The resolution of the Group's tax exposures can take a considerable period of time to conclude and, in some circumstances, it can be difficult to predict the final outcome.

The Group's current tax liability at 31 December 2019 includes tax provisions of £7.3 million (2018: £10.9 million). The Group believes the range of possible outcomes is tax liabilities of £5.4 million (2018: £7.4 million) to £7.4 million (2018: £11.4 million).

Notes to the consolidated financial statements

continued

9 Taxation continued

c) Deferred tax

The amounts of deferred taxation assets/(liabilities) provided in the financial statements are as follows:

£million	At 31 December 2018	Impact of adoption of IFRS 16	Adjusted balance at 1 January 2019	Continuing operations	Recognised on acquisition	Recognised in equity/ OCI	Net exchange translation	As at 31 December 2019
Intangible assets	(9.5)	–	(9.5)	0.7	(0.2)	–	–	(9.0)
Property, plant and equipment	2.1	–	2.1	(0.4)	–	–	0.2	1.9
Deferred development costs	(1.1)	–	(1.1)	0.2	–	–	(0.1)	(1.0)
Retirement benefit obligations	(2.8)	–	(2.8)	(1.5)	–	1.7	0.1	(2.5)
Inventories	1.0	–	1.0	0.5	–	–	–	1.5
Provisions	4.0	–	4.0	0.1	–	–	(0.2)	3.9
Tax losses	2.8	–	2.8	1.0	–	–	(0.2)	3.6
Unremitted overseas earnings	(1.2)	–	(1.2)	(0.5)	–	–	–	(1.7)
Share-based payments	1.3	–	1.3	(0.1)	–	0.1	–	1.3
Short-term timing differences	4.7	0.8	5.5	(0.6)	–	–	–	4.9
Net deferred tax asset	1.3	0.8	2.1	(0.6)	(0.2)	1.8	(0.2)	2.9
Deferred tax assets	6.1							7.5
Deferred tax liabilities	(4.8)							(4.6)
Net deferred tax asset	1.3							2.9

£million	As at 1 January 2018	Continuing operations	Recognised on acquisition	Recognised in equity/ OCI	Net exchange translation	As at 31 December 2018
Intangible assets	(5.9)	0.6	(4.0)	–	(0.2)	(9.5)
Property, plant and equipment	2.9	(0.8)	–	–	–	2.1
Deferred development costs	(1.0)	(0.1)	–	–	–	(1.1)
Retirement benefit obligations	(2.2)	–	0.8	(1.6)	0.2	(2.8)
Inventories	1.0	–	–	–	–	1.0
Provisions	2.8	1.1	0.1	–	–	4.0
Tax losses	0.6	0.9	1.3	–	–	2.8
Unremitted overseas earnings	(0.9)	(0.3)	–	–	–	(1.2)
Share-based payments	2.8	(0.5)	–	(1.0)	–	1.3
Short-term timing differences	3.5	0.9	0.1	–	0.2	4.7
Net deferred tax asset	3.6	1.8	(1.7)	(2.6)	0.2	1.3
Deferred tax assets	5.6					6.1
Deferred tax liabilities	(2.0)					(4.8)
Net deferred tax asset	3.6					1.3

9 Taxation continued

At 31 December 2019, the gross amount and expiry date of losses available for carry forward are as follows:

£million	Expiring within 5 years	Expiring within 6-10 years	Unlimited	Total
Losses for which a deferred tax asset has been recognised	–	–	12.8	12.8
Losses for which no deferred tax asset has been recognised	0.5	–	9.5	10.0
Deferred tax asset	0.5	–	22.3	22.8

At 31 December 2018, the gross amount and expiry date of losses available for carry forward are as follows:

£million	Expiring within 5 years	Expiring within 6-10 years	Unlimited	Total
Losses for which a deferred tax asset has been recognised	–	–	12.1	12.1
Losses for which no deferred tax asset has been recognised	0.5	–	9.5	10.0
Deferred tax asset	0.5	–	21.6	22.1

At 31 December 2019, the Group had no other items for which no deferred tax assets have been recognised (2018: £nil).

10 Dividends

	2019 pence per share	2019 £million	2018 pence per share	2018 £million
Final dividend for prior year	4.55	7.4	4.05	6.6
Interim dividend for current year	2.10	3.4	1.95	3.1
	6.65	10.8	6.00	9.7

The Directors recommend a final dividend of 4.9 pence per share which when combined with the interim dividend of 2.1 pence per share gives a total dividend for the year of 7.0 pence per share. The Group has a progressive dividend policy. The final dividend will be paid on 15 May 2020 to shareholders on the register on 24 April 2020.

11 Earnings per share

Basic earnings per share is calculated by dividing the profit attributable to owners of the Company by the weighted average number of shares in issue during the year.

Underlying earnings per share is based on the underlying profit after interest and tax.

Pence	2019	2018
Basic earnings per share		
Continuing operations	8.5	8.0
Discontinued operations	2.1	0.3
Total	10.6	8.3
Pence	2019	2018
Diluted earnings per share		
Continuing operations	8.4	7.8
Discontinued operations	2.0	0.3
Total	10.4	8.1

Notes to the consolidated financial statements

continued

11 Earnings per share continued

The numbers used in calculating underlying, basic and diluted earnings per share are shown below.

Underlying earnings per share:

£million	2019	2018
Continuing operations		
Profit for the year attributable to owners of the Company	13.9	13.0
Restructuring and other	13.2	4.9
Acquisition related costs	8.0	12.0
Tax effect of above items (see note 8)	(4.6)	(3.7)
Underlying earnings	30.5	26.2
Underlying earnings per share (pence)	18.7	16.2
Diluted underlying earnings per share (pence)	18.3	15.7

The weighted average number of shares in issue is as follows:

Million	2019	2018
Basic	163.1	161.8
Adjustment for share awards	3.3	4.6
Diluted	166.4	166.4

12 Employee information

The average number of full time equivalent employees (including Directors) during the year from continuing operations was:

Number	2019	2018
By function		
Production	4,178	4,118
Sales and distribution	347	323
Administration	288	273
	4,813	4,714
By division		
Power and Connectivity	1,478	1,017
Global Manufacturing Solutions	1,546	1,391
Sensors and Specialist Components	1,789	2,306
Total	4,813	4,714

Aggregate emoluments, including those of Directors, for the year were:

£million	2019	2018
Wages and salaries	105.2	99.6
Social security charges	23.0	19.9
Employers' pension costs	3.5	3.0
Defined benefit pension costs	1.0	1.3
Share based payments expense	2.9	3.1
	135.6	126.9

Remuneration in respect of the Directors was as follows:

£million	2019	2018 ¹
Emoluments	2.7	3.7

1 Restated. See details of individual Directors' remuneration, pension benefits and share awards shown in the Directors' Remuneration Report on pages 91 to 98.

12 Employee information continued

Key management personnel

The remuneration of key management during the year was as follows:

£million	2019	2018
Short-term benefits	4.7	4.3
Pension and other post-employment benefit expense	0.1	0.1
Share based payments	1.9	1.5
Termination payments	–	0.1
	6.7	6.0

In accordance with IAS 24 Related party disclosures, key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly. Key management personnel comprise the Directors, Company Secretary and other members of the Executive Management Board. Their compensation is considered and recommended to the Board by the Remuneration Committee.

13 Right-of-use assets

£million	Land and buildings	Other	Right-of-use assets
Cost			
At 31 December 2018	–	–	–
Impact of adoption of IFRS 16	31.4	0.9	32.3
Adjusted balance at 1 January 2019	31.4	0.9	32.3
Transfer	–	0.5	0.5
Additions	0.4	0.2	0.6
Businesses acquired	0.2	–	0.2
Net exchange adjustment	(0.4)	–	(0.4)
At 31 December 2019	31.6	1.6	33.2
Depreciation			
At 31 December 2018	–	–	–
Impact of adoption of IFRS 16	14.3	–	14.3
Adjusted balance at 1 January 2019	14.3	–	14.3
Transfer	–	0.1	0.1
Depreciation charge	3.0	0.5	3.5
Impairment	2.7	–	2.7
Net exchange adjustment	(0.2)	–	(0.2)
At 31 December 2019	19.8	0.6	20.4
Net book value			
At 31 December 2019	11.8	1.0	12.8
At 31 December 2018	–	–	–

In 2019 the Group identified indicators of impairment due to the closures of our office in Brea, California (£0.3 million), a UK facility within IoT Solutions (£0.5 million) and the planned closure of one of our facilities in Mexicali, Mexico (£1.9 million). As a result, an impairment of £2.7 million was recognised within items excluded from underlying operating profit; £2.2 million within Sensors and Specialist Components, £0.5 million within Power and Connectivity.

Assets with a net book value of £0.4 million previously treated as plant and equipment held under finance leases were transferred from property, plant and equipment.

Notes to the consolidated financial statements

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14 Property, plant and equipment

£million	Land and buildings	Plant and equipment	Total
Cost			
At 1 January 2018	26.6	164.7	191.3
Additions	1.8	11.4	13.2
Businesses acquired	1.2	4.1	5.3
Disposals	(2.9)	(6.6)	(9.5)
Transfers	0.2	(0.2)	–
Net exchange adjustment	1.0	6.8	7.8
At 1 January 2019	27.9	180.2	208.1
Additions	2.3	11.6	13.9
Disposals	(1.3)	(6.6)	(7.9)
Transfer	–	(0.5)	(0.5)
Net exchange adjustment	(0.7)	(4.9)	(5.6)
At 31 December 2019	28.2	179.8	208.0
Depreciation and impairment			
At 1 January 2018	12.8	136.7	149.5
Depreciation charge	1.1	8.7	9.8
Disposals	(2.6)	(6.4)	(9.0)
Net exchange adjustment	0.5	5.6	6.1
At 1 January 2019	11.8	144.6	156.4
Depreciation charge	1.2	9.2	10.4
Impairment	1.9	0.1	2.0
Disposals	(1.3)	(6.4)	(7.7)
Transfer	–	(0.1)	(0.1)
Net exchange adjustment	(0.4)	(3.7)	(4.1)
At 31 December 2019	13.2	143.7	156.9
Net book value			
At 31 December 2019	15.0	36.1	51.1
At 31 December 2018	16.1	35.6	51.7

Included within land and buildings is an investment property with a carrying value of £0.1 million (2018: £0.1 million) and a fair value of £0.7 million (2018: £0.7 million). In 2019 assets with a net book value of £0.4 million previously treated as plant and equipment held under finance leases were transferred from property, plant and equipment.

In 2019 the Group identified indicators of impairment due to the planned closure of one of our facilities in Mexicali, Mexico. As a result, an impairment of £2.0 million was recognised within items excluded from underlying operating profit.

15 Goodwill

£million

Cost	
At 1 January 2018	100.3
Additions	33.5
Net exchange adjustment	4.1
At 1 January 2019	137.9
Additions	0.9
Net exchange adjustment	(2.7)
At 31 December 2019	136.1

Goodwill is attributed to the following cash-generating units ('CGU') in the divisions shown below:

£million	2019	2018
Power and Connectivity:		
Power Solutions	35.1	35.3
IoT Solutions	27.6	27.3
Global Manufacturing Solutions:		
Global Manufacturing Solutions	18.6	18.3
Sensors and Specialist Components:		
Variable Components	28.9	30.1
Optoelectronics	21.6	22.5
Roxspur	2.1	2.1
Resistors	2.2	2.3
	136.1	137.9

The Group tests goodwill impairment annually or more frequently if there are indications that goodwill might be impaired. The recoverable amounts of the CGUs are determined from value in use calculations using conservative assumptions. The key assumptions for the value in use calculations are those regarding the discount rates, growth rates and operating cash projections during the period for which management have detailed plans. Management estimate discount rates using pre-tax rates that reflect current market assessments of the Group's time value of money and the risks specific to the CGU being measured.

As part of the annual budgeting and strategic planning processes, the Group prepares cash flow forecasts for the following five years. The growth rate assumed after this five-year period is based on long-term GDP projections capped at long-term inflation rates of the primary market for the CGU, in perpetuity. In 2019 the long-term inflation rate used was 1.6% for the UK businesses, 1.6% for the US businesses and 3.0% for the Chinese businesses (2018: 1.6% for the UK businesses, 1.4% for the US businesses and 3.0% for the Chinese businesses).

The growth rates assume that demand for our products remains broadly in line with the underlying economic environment in the long-term future. Taking into account our expectation of future market conditions, we believe that the evolution of selling prices and cost measures put into place will lead to a sustained improvement in profitability.

Notes to the consolidated financial statements

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15 Goodwill continued

The pre-tax discount rates used to discount the forecast cash flows are shown below:

	2019	2018
Power Solutions	11.5%	11.1%
IoT Solutions	11.7%	–
Global Manufacturing Solutions	12.3%	12.4%
Variable Components	13.8%	13.3%
Optoelectronics	13.8%	14.0%
Roxspur	11.4%	11.1%
Resistors	12.8%	12.7%

No impairment losses have been recognised in the current or prior year as recoverable amounts exceed the total carrying value of assets for all of the CGUs by the following amounts:

£million	2019	2018
Power Solutions	118.7	64.5
IoT Solutions	29.9	–
Global Manufacturing Solutions	148.7	159.3
Variable Components	16.4	15.7
Optoelectronics	58.1	50.5
Roxspur	11.4	15.9
Resistors	21.4	74.3
	404.6	380.2

A key assumption in the value in use test is the projected performance of the CGUs based on cash flow forecasts. The recoverable amounts associated with the goodwill balances are based on these performance projections and based on current forecast information do not indicate that any goodwill balance is impaired. If a company's actual performance does not meet these projections this could lead to an impairment of the goodwill in future periods.

Sensitivity analysis has been performed on the operating cash flow projections. Cash flows can be impacted by changes to sales projections, sales prices, direct costs and replacement capital expenditure.

The Directors have not identified changes in significant assumptions that would cause the carrying value of recognised goodwill to exceed its recoverable amount.

16 Other intangible assets

£million	Product development costs	Patents, licences and other	Customer relationships	Total
Cost				
At 1 January 2018	5.3	28.0	25.3	58.6
Additions	3.7	2.1	–	5.8
Businesses acquired	0.8	2.7	26.8	30.3
Net exchange adjustment	0.4	0.2	0.4	1.0
At 1 January 2019	10.2	33.0	52.5	95.7
Additions	3.9	0.7	–	4.6
Businesses acquired	–	0.1	0.7	0.8
Disposals	–	(0.2)	–	(0.2)
Net exchange adjustment	(0.4)	(0.2)	(0.4)	(1.0)
At 31 December 2019	13.7	33.4	52.8	99.9
Amortisation				
At 1 January 2018	2.4	21.0	7.9	31.3
Charge for the year	1.3	4.5	2.8	8.6
Impairment	–	0.3	–	0.3
Net exchange adjustment	0.2	0.1	0.2	0.5
At 1 January 2019	3.9	25.9	10.9	40.7
Charge for the year	1.8	3.2	3.6	8.6
Disposals	–	(0.2)	–	(0.2)
Net exchange adjustment	(0.2)	(0.2)	(0.1)	(0.5)
At 31 December 2019	5.5	28.7	14.4	48.6
Net book value				
At 31 December 2019	8.2	4.7	38.4	51.3
At 31 December 2018	6.3	7.1	41.6	55.0

Included within patents, licences and other are intangible assets under construction with a carrying value of £0.7 million (2018: £1.0 million).

Included within the amortisation charge for the year is £4.5 million (2018: £4.8 million) included within items excluded from underlying profit.

17 Inventories

£million	2019	2018
Raw materials	60.3	52.7
Work in progress	21.1	21.6
Finished goods	21.4	22.1
	102.8	96.4

Inventories are stated after deduction of a provision for slow moving and obsolete items of £20.0 million (2018: £20.8 million).

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18 Trade and other receivables

£million	2019	2018
Trade receivables	66.4	64.6
Prepayments	4.8	5.1
Other receivables	7.4	6.5
	78.6	76.2

Provisions for impairment in respect of trade receivables are shown in note 22(d)(ii).

19 Trade and other payables

£million	2019	2018
Current liabilities		
Trade payables	50.9	49.5
Taxation and social security	5.0	4.0
Other payables, accruals and deferred income	48.0	42.5
	103.9	96.0
Non-current liabilities		
Accruals and deferred income	0.2	0.1

20 Provisions

£million	Reorganisation	Legal, warranty and other	Total
At 1 January 2018	1.9	5.4	7.3
Businesses acquired	–	0.9	0.9
Utilised	(1.0)	(1.1)	(2.1)
Released	–	(1.8)	(1.8)
Arising during the year	–	0.1	0.1
At 1 January 2019	0.9	3.5	4.4
Utilised	(0.5)	(0.4)	(0.9)
Released	–	(0.5)	(0.5)
Arising during the year	1.6	0.7	2.3
Exchange differences	(0.1)	–	(0.1)
At 31 December 2019	1.9	3.3	5.2

The reorganisation provision of £1.9 million includes £1.3 million in respect of restructuring of the Sensors and Specialist Components division (comprising severance costs of £1.0 million, £0.2 million in respect of the Brea, California office closure and £0.1 million of other costs), £0.1 million for closure of our Taishan, China facility within the Power and Connectivity division and £0.1 million of other costs.

A further £0.4 million relates to the restructuring programme undertaken in association with the closure of the Boone, North Carolina operations. Work has been performed to rectify soil contamination that occurred as a result of past production practices, with £0.5 million utilised during the period. The provision is based upon the Group's estimate of the scope of further work. There is inherent uncertainty in the extent of further work required, which is dependent upon final approval of the remediation work. If approval is not obtained this could result in additional work being undertaken. However, it is considered unlikely that the total costs of the exercise will exceed a maximum threshold of £1.0 million, compared to the £0.4 million provided.

20 Provisions continued

Legal, warranty and other claims represent the best estimate for the cost of settling outstanding product and other claims, warranty provisions created on the disposal of businesses and provision for the cost of acquisitions. The utilisation relates to a customer claim in Kuantan, Malaysia (£0.3 million), costs associated with the acquisition of Stadium (£0.1 million) and costs associated with the disposal of the Transportation Sensing and Control division in 2017 (£0.1 million). The release of £0.5 million relates to surplus costs provided on the disposal of the Transportation Sensing and Control division in 2017 and surplus property costs relating to a vacant site. The charge to the consolidated income statement (£0.7 million) relates to costs incurred in the integration of the Stadium and Precision businesses.

The Group has, on occasion, been required to enforce commercial contracts and to defend itself against proceedings brought by other parties. Provisions are made for the expected costs associated with such matters, based on past experience of similar items and other known factors, taking into account professional advice received, and represent management's best estimate of the likely outcome. The timing of utilisation of these provisions is frequently uncertain, reflecting the complexity of issues and the outcome of various court proceedings and negotiations. Contractual and other provisions represent the Directors' best estimate of the cost of settling future obligations although there is a higher degree of judgement involved. Unless specific evidence exists to the contrary, these provisions are shown as current.

Whilst the closing balance of the provision represents management's best estimate of the likely costs to be incurred in settling these matters there is uncertainty around the outcome. The most significant elements of the provision relate to product warranty claims and warranties given to the buyer of the Transportation Sensing and Control division in respect of product supplied by that business in the period prior to the sale in 2017. The amounts of both of these liabilities are dependent upon the number and value of claims received. The Group makes estimates of the most likely outcome based upon past experience. In total the estimation of the range of possible outcomes is an increase in those liabilities by £0.2 million to a decrease of £2.5 million.

No provision is made for proceedings which have been or might be brought by other parties against Group companies unless management, taking into account professional advice received, assesses that it is more likely than not that such proceedings may be successful. Contingent liabilities associated with such proceedings have been identified, but the Directors are of the opinion that any associated claims that might be brought can be resisted successfully, and therefore the possibility of any material outflow in settlement in excess of amounts provided is assessed as remote.

The timing of the utilisation of these amounts is uncertain as they are subject to commercial negotiation and legal process in different jurisdictions. Where possible the Group has purchased insurance cover to protect itself from these exposures.

Notes to the consolidated financial statements

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21 Borrowings and lease obligations

£million	Maturity	Currency of denomination	Current	Non-current	Total
At 31 December 2019					
£180 million multi-currency revolving credit facility	2023	GBP	–	95.5	95.5
	2023	USD	–	17.7	17.7
Lease liabilities			3.8	13.8	17.6
Loan arrangement fee			–	(1.5)	(1.5)
Total			3.8	125.5	129.3
At 31 December 2018					
£180 million multi-currency revolving credit facility	2023	GBP	–	65.0	65.0
	2023	USD	–	18.5	18.5
Finance leases			0.4	0.2	0.6
Loan arrangement fee			–	(1.8)	(1.8)
Total			0.4	81.9	82.3

In May 2016 the Group signed a five-year £150 million multi-currency revolving credit facility and a further uncommitted incremental accordion facility of £30 million. In December 2018 the Group entered into an agreement to extend the facility with a syndicate of six banks comprising Barclays Bank, Bank of Ireland, Comerica Bank, Fifth Third Bank, HSBC Bank and National Westminster Bank. The maturity date of the facility was extended from May 2021 to November 2023. In addition, the facility size was increased from £150 million to £180 million, with a further uncommitted accordion facility of £30 million. As at 31 December 2019 £113.2 million of the facility was drawn down. Arrangement fees with amortised cost of £1.5 million have been netted off against these borrowings.

The interest margin payable on the facility is based on the Group's compliance with financial covenants (frozen IFRS net debt/underlying EBITDA) and is payable on a floating basis above £LIBOR, €LIBOR or \$LIBOR depending on the currency of denomination of the loan.

Undrawn facilities

At 31 December 2019, the total borrowing facilities available to the Group amounted to £238.6 million (2018: £222.6 million). At 31 December 2019, the Group had available £70.1 million (2018: £101.1 million) of undrawn committed borrowing facilities (comprising the main facility £66.8 million (2018: £96.5 million) and China £3.3 million (2018: £4.6 million) and £39.2 million (2018: £39.2 million) of undrawn uncommitted borrowing facilities, representing overdraft lines and the accordion facility.

22 Financial risk management

The main risks arising from the Group's financial instruments are foreign exchange risk, interest rate risk, credit risk and liquidity risk. These risks arise from exposures that occur in the normal course of business and are managed by the Group's Treasury department in close co-operation with the Group's business divisions and operating companies, under the oversight of a Treasury Committee which is chaired by the Chief Financial Officer. The responsibilities of the Group's Treasury department include the monitoring of financial risks, management of cash resources, debt and capital structure management, approval of counterparties and relevant transaction limits, and oversight of all significant treasury activities undertaken by the Group. The Group Treasury department operates as a service centre to the business divisions of the Group and not as a profit centre.

A Group Treasury policy has been approved by the Board of Directors and is periodically updated to reflect developments in the financial markets and the financial exposure facing the Group.

The Group's principal financial instruments comprise borrowings, cash and cash equivalents and derivatives used for risk management purposes. The Group's borrowings, surplus liquidity and derivative financial instruments are monitored and managed centrally by the Group's Treasury department.

The Group's accounting policies with regard to financial instruments are detailed in note 2(p).

a) Derivatives, financial instruments and risk management

The Group uses derivative financial instruments to manage certain exposures to fluctuations in exchange rates and interest rates. The Group does not hold any speculative financial instruments.

The Group is exposed to transactional and translation foreign exchange risk. Transactional foreign exchange risk arises from sales or purchases by a Group company in a currency other than that company's functional currency. Translational foreign exchange risk arises on the translation of profits earned in overseas currencies into GBP and the translation of net assets denominated in overseas currencies into GBP, the Group's functional currency.

To mitigate transactional foreign exchange risk, wherever possible, Group companies enter into transactions in their functional currencies with customers and suppliers. When this is not possible, hedging strategies are undertaken through the use of forward currency contracts for up to two years ahead.

The Group's interest rate management policy is to maintain a balance between fixed and floating rates of interest on borrowings and deposits, and to use interest rate derivatives when appropriate and pre-approved by the Treasury Committee.

The forward currency contracts have been designated as cash flow hedges and the mark to market valuation of these derivatives at 31 December 2019 is taken to the hedging reserve within equity. At 31 December 2019, the Group had a net derivative financial liability of £1.2 million (2018: £1.7 million).

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22 Financial risk management continued

b) Foreign exchange risk

The Group's exposure to foreign currency is shown below:

£million	GBP	USD	Euro	Other	Total
31 December 2019					
Trade and other receivables	–	15.8	2.8	0.1	18.7
Cash and cash equivalents	0.6	7.0	1.5	2.5	11.6
Borrowings	–	(17.6)	–	–	(17.6)
Lease liabilities	–	–	(0.2)	(1.7)	(1.9)
Trade and other payables	(0.1)	(9.7)	(1.5)	(2.9)	(14.2)
	0.5	(4.5)	2.6	(2.0)	(3.4)
31 December 2018					
Trade and other receivables	–	17.8	3.1	0.5	21.4
Cash and cash equivalents	1.1	5.4	1.5	1.1	9.1
Borrowings	–	(18.5)	–	–	(18.5)
Trade and other payables	(0.2)	(12.1)	(1.7)	(7.1)	(21.1)
	0.9	(7.4)	2.9	(5.5)	(9.1)

A 10% strengthening of GBP against the following currencies at 31 December would have decreased profit after tax by the amounts shown below. This analysis assumes that all other variables, in particular interest rates, remain constant.

£million	2019	2018
US dollar	1.0	0.8
Euro	0.2	0.3

A 10% weakening of GBP against the above currencies at 31 December would have had an equal but opposite effect on the above currencies to the amount shown above, on the basis that all other variables remain constant.

The Group finances operations by obtaining funding through external borrowings and, where they are in foreign currencies, these borrowings may be designated as net investment hedges. This enables gains and losses arising on retranslation of these foreign currency borrowings to be charged to other comprehensive income, providing a partial offset in equity against the gains and losses arising on translation of the net assets of foreign operations.

Foreign currency borrowings of £17.6 million (2018: £18.5 million) have been treated as a net investment hedge and exchange differences on retranslation have been recognised in equity.

c) Interest rate risk

The Group has financial assets and liabilities which are exposed to changes in market interest rates. Changes in interest rates primarily impact borrowings by changing their future cash flows (floating rate debt) or their fair value (fixed rate debt) and deposits. The Group's objective is to manage this interest rate exposure through the use of interest rate derivatives.

22 Financial risk management continued

The exposure of the Group's financial assets and liabilities to interest rate risk is as follows:

£million	Floating rate	Fixed rate	Non-interest bearing	2019 total
Financial assets				
Trade and other receivables	–	–	71.1	71.1
Cash and cash equivalents	60.2	–	–	60.2
Derivative financial instruments	–	–	0.9	0.9
Total financial assets	60.2	–	72.0	132.2
Financial liabilities				
Borrowings (including interest effects of derivatives)	(88.9)	(24.3)	1.5	(111.7)
Lease liabilities	–	(17.6)	–	(17.6)
Trade and other payables	–	–	(100.6)	(100.6)
Derivative financial instruments	–	–	(2.1)	(2.1)
Total financial liabilities	(88.9)	(41.9)	(101.2)	(232.0)

At 31 December 2019, 22% of borrowings was at a fixed rate when including the effect of derivatives (2018: 30% of borrowings including the effect of derivatives and finance leases).

£million	Floating rate	Fixed rate	Non-interest bearing	2018 total
Financial assets				
Trade and other receivables	–	–	69.0	69.0
Cash and cash equivalents	40.6	–	–	40.6
Derivative financial instruments	–	–	0.4	0.4
Total financial assets	40.6	–	69.4	110.0
Financial liabilities				
Borrowings	(59.0)	(24.5)	1.8	(81.7)
Finance leases	–	(0.6)	–	(0.6)
Trade and other payables	–	–	(93.5)	(93.5)
Derivative financial instruments	–	–	(2.1)	(2.1)
Total financial liabilities	(59.0)	(25.1)	(93.8)	(177.9)

The interest charged on floating rate financial liabilities is based on the relevant benchmark rate (such as LIBOR). Interest on financial instruments classified as fixed rate is fixed until the maturity of the instrument.

Considering the net debt position of the Group at 31 December 2019, any increase in interest rates would result in a net loss in the consolidated income statement, and any decrease in interest rates would result in a net gain. The effect on profit after tax of a 1% movement in interest rate, based on the year end floating rate borrowings, with all other variables held constant, is estimated to be £0.7 million (2018: £0.5 million).

d) Credit risk

Exposure to credit risk arises as a result of transactions in the Group's ordinary course of business and is applicable to all financial assets. Investments in cash and cash equivalents and derivative financial instruments are with approved counterparty banks and other financial institutions. Counterparties are assessed prior to, during, and after the conclusion of transactions to ensure exposure to credit risk is limited to an acceptable level. The maximum exposure with respect to credit risk is represented by the carrying amount of each financial asset on the consolidated balance sheet.

Notes to the consolidated financial statements

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22 Financial risk management continued

Credit risk relating to trade receivables

The Group's major exposure to credit risk is in respect of trade receivables. Given the number and geographical spread of the Group's ultimate customers and the solvency of major trade debtors, credit risk is believed to be limited. The Group is not reliant on any particular customer in the markets in which it operates and there is no significant concentration of credit risk. The Group regularly monitors its exposure to bad debts in order to minimise this exposure.

The Group has strict procedures in place to manage the credit risk on trade receivables. Customer credit risk is managed by each operating company within a division but is subject to Group oversight to ensure that each division's customer credit risk management system operates in a prudent and responsible manner. Credit evaluations are performed for all customers and credit limits are established based on internal or external rating criteria. The credit quality of the Group's significant customers is monitored on an ongoing basis, and receivables that are neither past due nor impaired are considered of good credit quality. Letters of credit or payments in advance are obtained where customer credit quality is not considered strong enough for open credit.

Trade receivables are denominated in the currencies in which the Group trades. The Group's policy is that receivables and payables not in the functional currency of the subsidiary concerned are, in the main, hedged through forward foreign currency exchange contracts.

There were no material impairments of trade receivables as at 31 December 2019 or 2018. The solvency of the debtor and their ability to repay the receivables were considered in assessing the impairment of such assets.

(i) Risk for trade receivables by geographical regions

The maximum exposure to credit risk for trade receivables at 31 December by geographic areas was:

£million	2019	2018
Europe (including UK)	35.9	32.6
North America	17.9	19.0
Asia	12.1	12.0
Rest of the World	0.5	1.0
	66.4	64.6

(ii) Impairment losses

The ageing of trade receivables at 31 December was:

£million	Gross	2019 Impairment	Gross	2018 Impairment
Not past due	56.4	–	57.3	–
Past due 0 – 60 days	9.7	(0.1)	7.1	(0.1)
Past due 61 – 120 days	0.6	(0.2)	0.4	(0.1)
More than 120 days	0.1	(0.1)	0.1	(0.1)
	66.8	(0.4)	64.9	(0.3)

22 Financial risk management continued

The movement in the provision for impairment in respect of trade receivables during the year was as follows:

£million	2019	2018
At 1 January	(0.3)	(0.4)
Released	0.1	0.1
Businesses acquired	–	(0.1)
Charged to income statement	(0.2)	–
Utilised	–	0.1
At 31 December	(0.4)	(0.3)

(iii) Credit risk related to other financial assets and cash deposits

Credit risk relating to the Group's other financial assets, principally comprising cash and cash equivalents, other receivables and derivative financial instruments arises from the potential default of counterparties. Credit risk arising from balances with banks and financial institutions is monitored by the Group's Treasury department. Investment of cash and deposits are made only with approved counterparties of high credit worthiness and are reviewed on a regular basis to take account of developments in financial markets.

No material exposure is considered to exist by virtue of the possible non-performance of the counterparties to derivative financial instruments and other receivables.

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at 31 December was:

£million	2019	2018
Other receivables	4.7	4.5
Cash and cash equivalents	60.2	40.6
Derivative financial instruments (current assets)	0.9	0.4

e) Liquidity risk

The Group maintains a balance between availability of funding and maximising investment return on cash balances through the use of short-term cash deposits, credit facilities and longer-term debt instruments. Management regularly reviews the funding requirements of the Group.

The Group's policy is to centrally manage debt and surplus cash balances.

At 31 December 2019, the Group had £70.1 million of undrawn committed borrowing facilities (2018: £101.1 million) and £39.2 million (2018: £39.2 million) of undrawn uncommitted borrowing facilities.

Maturity of financial assets and liabilities

The table below analyses the Group's financial assets and liabilities, which will be settled on a gross basis, into relevant maturity groups based on the remaining period at the balance sheet date to the contractual maturity date.

£million	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total
31 December 2019						
Trade and other receivables	7.9	62.3	0.9	–	–	71.1
Cash and cash equivalents	60.2	–	–	–	–	60.2
	68.1	62.3	0.9	–	–	131.3
Borrowings	–	–	–	(111.7)	–	(111.7)
Lease liabilities	–	(0.7)	(3.1)	(11.2)	(2.6)	(17.6)
Trade and other payables	–	(84.9)	(15.0)	(0.6)	(0.1)	(100.6)
	–	(85.6)	(18.1)	(123.5)	(2.7)	(229.9)

Notes to the consolidated financial statements

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22 Financial risk management continued

At 31 December 2019 the Group had derivative financial instruments hedging a notional contractual amount of £134.9 million (2018: £113.3 million) of foreign exchange, £86.2 million (2018: £96.9 million) maturing within one year and £48.7 million maturing in more than one year (2018: £19.4 million). In addition, at 31 December 2019 the Group had derivative financial instruments hedging a notional contractual amount of £24.3 million (2018: £24.5 million) of interest rate risk all maturing in more than one year.

£million	On demand	Less than 3 months	3 to 12 months	1 to 5 years	Over 5 years	Total
31 December 2018						
Trade and other receivables	7.1	60.9	1.0	–	–	69.0
Cash and cash equivalents	40.6	–	–	–	–	40.6
Borrowings	–	–	–	(81.7)	–	(81.7)
Finance leases	–	(0.1)	(0.3)	(0.2)	–	(0.6)
Trade and other payables	–	(91.3)	(2.1)	–	(0.1)	(93.5)
	–	(91.4)	(2.4)	(81.9)	(0.1)	(175.8)

The following are the contractual maturities of borrowings (2018: borrowings and finance leases) including contractual future interest payments and commitment fees:

£million	Carrying Amounts	Contractual Cash Flows	Within 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years
31 December 2019	(111.7)	(125.4)	(3.2)	(2.4)	(2.4)	(117.4)	–
31 December 2018	(82.3)	(95.9)	(2.9)	(2.9)	(2.7)	(2.3)	(85.1)

f) Fair value of financial assets and liabilities

IFRS 13 Fair Value Measurement requires an analysis of those financial instruments that are measured at fair value at the end of the year in a fair value hierarchy. In addition, IFRS 13 requires financial instruments not measured at fair value but for which fair value is disclosed to be analysed in the same fair value hierarchy:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices); and
- Level 3 – inputs for the asset or liability that are not based on observable market data (i.e. unobservable inputs).

Set out below is a comparison by class of the carrying amounts and fair value of the Group's financial instruments that are carried in the financial statements.

£million	Fair value hierarchy	2019		2018	
		Carrying value	Fair value	Carrying value	Fair value
Held at amortised cost					
Cash and cash equivalents	n/a	60.2	60.2	40.6	40.6
Trade and other receivables	n/a	71.1	71.1	69.0	69.0
Trade and other payables	n/a	(100.6)	(100.6)	(93.5)	(93.5)
Borrowings	n/a	(111.7)	(111.7)	(81.7)	(81.7)
Held at fair value					
Derivative financial instruments (assets)	2	0.9	0.9	0.4	0.4
Derivative financial instruments (liabilities)	2	(2.1)	(2.1)	(2.1)	(2.1)
Held at depreciated cost					
Investment properties	3	0.1	0.7	0.1	0.7

22 Financial risk management continued

The fair value of the financial assets and liabilities are included at the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The following methods and assumptions were used to estimate the fair values:

- cash and cash equivalents, trade and other receivables, trade and other payables approximate to their carrying amounts largely due to the short-term maturities of these instruments;
- the fair value of borrowings is estimated by discounting future cash flows using rates currently available for debt and remaining maturities;
- the fair value of derivative financial instrument assets (£0.9 million) and liabilities (£2.1 million) are estimated by discounting expected future cash flows using current market indices such as yield curves and forward exchange rates over the remaining term of the instrument (level 2); and
- the fair value of investment properties are based on market valuations obtained through third party valuations (level 2).

g) Capital management

The overriding objectives of the Group's capital management policy are to safeguard and support the business as a going concern through the business cycle and to maintain an optimal capital structure by reducing the Group's overall cost of capital. The Board considers equity shareholders' funds as capital.

The Group maintains a balance between availability of funding and maximising investment return on cash balances through the use of short-term cash deposits, credit facilities and longer-term debt instruments, and management regularly reviews the funding requirements of the Group.

Dividends are paid when the Board consider it appropriate to do so, taking into account the availability of funding. The Group has a progressive dividend policy.

The Group has net debt of £69.1 million (2018: £41.7 million). Included within the debt facilities are certain financial covenants related to frozen IFRS net debt/underlying EBITDA and underlying EBITDA/net finance charges for which compliance certificates are produced on a 12-month rolling basis every half year. All financial covenants were fully complied with during the year and up to the date of approval of the financial statements.

23 Retirement benefit schemes

Defined contribution schemes

The Group operates 401(k) plans in North America and defined contribution arrangements in the rest of the world. The assets of these schemes are held independently of the Group. The total contributions charged by continuing operations in respect of defined contribution schemes were £3.5 million (2018: £3.0 million).

Defined benefit schemes

At 31 December 2018 the Group operated three defined benefit schemes in the UK (the TT Group (1993) Pension Scheme, the Stadium Group Retirement Benefits Plan (1974) and the Southern & Redfern Ltd Retirement Benefits Schemes) and overseas defined benefit schemes in the USA. These schemes are closed to new members and the UK schemes are closed to future accrual. In order to improve governance of the UK pension schemes, as well as drive cost efficiency, the Stadium Group Retirement Benefits Plan (1974) was merged into the TT Group (1993) Pension Scheme (the TT Group scheme) with effect from 29 March 2019.

The TT Group scheme commenced in 1993 and increased in size in 2006, 2007 and 2019 through the merger of UK former schemes following a number of acquisitions. The parent company is the sponsoring employer in the TT Group scheme. The TT Group scheme is governed by TTG Pension Trustees Limited (the "Trustee") that has control over the operation, funding and investment strategy in consultation with the Group.

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23 Retirement benefit schemes continued

The TT Group scheme exposes the Group to actuarial risks such as longevity risk, currency risk, inflation risk, interest rate risk and market (investment) risk. The Group is not exposed to any unusual, entity specific or scheme specific risks, but given the material nature of the TT Group scheme, the Group has developed a comprehensive strategy covering the following areas to manage the financial risk associated with it:

- Maintaining a long-term working partnership with the Trustee to ensure strong governance of risks within the TT Group scheme. The TT Group scheme is a long term undertaking and is managed accordingly, in order to provide security to members' benefits and value for money to the Group.
- A prudent investment strategy is pursued by seeking risk-rewarded long-term returns whilst removing the majority of liability mismatching unrewarded risks. As such, the Group has in place financial hedging that aims to remove the majority of interest rate and inflation related risks. At the current level there is no significant impact on the reported accounting deficit of a 10bps fall in interest rates (which would be otherwise a circa £9 million increase if the hedge were not in place) thereby reducing volatility. This strategy has been in place for a number of years protecting the TT Group scheme's position since December 2013 when yields commenced a prolonged decline.
- The Group recognises that seeking rewarded risk returns in its investment strategy could lead to short-term fluctuations in funding levels depending on market conditions. The Group considers that by maintaining a good relationship with the Trustee, it will be able to utilise flexibility in the funding regime to even out the impact of short-term market underperformance to enhance predictability of Group pension contributions. This creates a suitable balance between the needs of the TT Group scheme, the Group, and the Members.

The Trustee's investment strategy mitigates the majority of these risks. Market (investment) risk is addressed by diversification across asset classes and managers within those assets classes. With regard to currency risk, where possible the Scheme fully hedges its currency risk with respect to fixed income and alternative assets, through investing in currency-hedged vehicles. The Scheme has equity exposure held on both a hedged, and unhedged basis. Whilst there is no specific currency hedging policy in place, the Scheme aims to hedge between 30-70% of its non-sterling currency exposure with respect to equity investments.

In addition, the Trustee has a framework in place to hedge a proportion of the Scheme's interest rate and inflation exposures. This framework is managed by investing in both physical and, for efficiency, derivative investments; and has a target to hedge 80% of the interest rate and 85% of the inflation linked liabilities measured on an economic basis. The target hedge level is kept under review and any change would be in consultation with the Group.

The Trustee does not currently hedge the longevity risk, although prudent assumptions are made regarding anticipated longevity for the purposes of the actuarial valuation.

The Trustee, in conjunction with the Group, has a duty to ensure that the TT Group scheme has an appropriate funding strategy in place that meets any local statutory requirements. The objective, which has been negotiated and agreed between the Group and the Trustee, is that the TT Group scheme should target and then maintain 100% funding on a basis that should ensure benefits can be paid as they fall due. Any shortfall in the assets relative to the funding target will be financed over a period that ensures the contributions are reasonably affordable to the Group.

The weighted average duration of the TT Group scheme defined benefit obligation is 16 years.

The Trustee allocates the TT Group scheme's assets across a range of investments to help diversify and manage risks. In particular a significant portion of the assets are in investments that aim to broadly match the term and nature of the liabilities.

UK legislation requires the Trustee to carry out funding valuations at least every three years and to target full funding against a basis that prudently reflects the TT Group scheme's risk exposure.

The triennial valuation of the TT Group scheme as at April 2019 showed a net surplus of £0.3 million against the Trustee's funding objective compared with a deficit of £46.0 million at April 2016. As the scheme was fully funded at the 2019 triennial valuation date, there is no requirement for the Company to pay deficit repair contributions. In addition to the statutory funding objective, the Trustee and Company have agreed to move towards a 'self-sufficiency' funding target, under which once full funding is achieved the likelihood of the Trustee requiring subsequent contributions from the Company is significantly reduced. To support the scheme's long-term funding target of self-sufficiency the Company has agreed to pay additional fixed contributions of £5.3 million, £5.5 million, £5.7 million and £4.4 million to be paid in the years 2020 to 2023.

23 Retirement benefit schemes continued

In the year ended 31 December 2019 the Group made contributions of £5.1 million to the TT Group scheme and £0.1 million to the Stadium Group Retirement Benefits Plan (1974) under the existing recovery plans in place. In addition, the outstanding deficit contribution payments due under the Stadium Group Retirement Benefits Plan (1974)'s recovery plan were accelerated and £3.4 million was paid into the scheme immediately prior to the merger. The total payments made in year ended 31 December 2019 in respect of UK schemes was £8.6 million.

In addition, the Company has set aside £2.5 million to be utilised in agreement with the Trustee for reducing the long-term liabilities of the TT Group scheme.

A High Court judgment regarding the equalisation of GMP was published on 26 October 2018. The judgment itself related to the Lloyds Banking Group's pension schemes and requirements to equalise scheme benefits, to address the inherent inequality between genders caused by GMP legislation. GMP is the minimum benefit that must be provided by a pension scheme to a member who had been contracted out of the State Earnings-Related Pension Scheme (SERPS) between 6 April 1978 and 5 April 1997. This ruling has implications for all occupational pension schemes; including the Group's UK schemes; that were contracted out of SERPS on a defined benefit basis between 17 May 1990 and 5 April 1997.

The UK schemes liabilities at 31 December 2018 included an allowance for the potential additional cost of allowing for GMP equalisation of £5.8 million and an additional £0.4 million was recognised in the year ended 31 December 2019. These allowances have been recognised in the consolidated income statement within items excluded from underlying operating profit. The assumptions underpinning the estimate are based on market conditions at the time of the judgement, namely a discount rate of 2.8%, RPI inflation of 3.4%, CPI inflation of 2.4% and using S2 mortality tables.

An actuarial valuation of the USA defined benefit schemes was carried out by independent qualified actuaries in 2019 using the projected unit credit method. Pension scheme assets are stated at their market value at 31 December 2019.

An analysis of the pension surplus/(deficit) by scheme is shown below:

£million	2019	2018
TT Group (1993)	21.2	24.7
Southern & Redfern	–	0.2
Stadium Group (1974)	–	(4.1)
USA schemes	(4.6)	(4.3)
Net surplus	16.6	16.5

Given the nature of the Group's control of the TT Group and Southern and Redfern Schemes under the Schemes' rules, pension surpluses have been recognised under IFRIC 14.

The principal assumptions used for the purpose of the actuarial valuations for the Group's primary defined benefit schemes were as follows:

%	TT Group 2019	TT Group 2018	Stadium Group 2018
Discount rate	2.00	2.90	2.90
Inflation rate (RPI)	3.10	3.30	3.30
Increases to pensions in payment (LPI 5% pension increases)	3.00	3.15	3.30
Increases to deferred pensions (CPI)	2.20	2.30	2.30

The mortality tables applied by the actuaries at 31 December 2019 were S2 tables with 105% (male)/106% (female) weighting for pensioners and 108% (male)/105% (female) weighting for non-pensioners with a 1.5% long-term rate of improvement in conjunction with the CMI 2018 projections. The assumptions are equivalent to life expectancies as follows:

Current pensioner aged 65: 87 years (male), 88 years (female).

Future retiree currently aged 40: 89 years (male), 91 years (female).

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23 Retirement benefit schemes continued

The mortality tables applied by the actuaries at 31 December 2018 were S2 tables with 106% (male)/107% (female) weighting for pensioners and 109% (male)/106% (female) weighting for non-pensioners with a 1.5% long-term rate of improvement in conjunction with the CMI 2017 projections.

A decrease in the discount rate by 0.1% per annum increases the liabilities by approximately £9.2 million. An increase by 0.1% per annum in the inflation rate increases the liabilities by approximately £3.5 million. An increase in the life expectancy of one year increases the liabilities by approximately £22.8 million.

The sensitivities above consider the impact of the single change shown, with the other assumptions unchanged. The inflation sensitivities allow for the consequential impact on the relevant pension increase assumptions. The sensitivity analyses have been determined based on a method that extrapolates the impact on the defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period.

The amounts recognised in respect of the pension deficit in the consolidated balance sheet are:

£million		2019	2018
Equities			
UK	Quoted	–	7.2
	Unquoted	8.7	5.0
Overseas	Quoted	3.8	44.9
	Unquoted	106.1	66.3
Government bonds			
UK	Fixed	172.6	121.7
	Index-linked	116.7	108.1
Overseas		8.3	11.7
Corporate bonds		73.8	40.5
Cash and cash equivalents		17.9	47.2
Derivatives		4.0	(3.4)
Insured assets		15.6	14.4
Other		55.6	78.0
Fair value of assets		583.1	541.6
Present value of defined benefit obligation		(566.5)	(525.1)
Net surplus recognised in the consolidated balance sheet		16.6	16.5

The schemes' assets are unquoted unless otherwise stated and do not include the Group's financial instruments nor any property occupied by, or other assets used by the Group. Unquoted overseas equity investments are valued at the net asset value of the investment. Derivatives include liability driven instruments taken out to hedge part of the scheme inflation and interest rate risks.

Amounts recognised in the consolidated income statement are:

£million	2019	2018
Scheme administration costs	1.0	1.3
Past service cost (non-underlying)	0.4	5.8
Net interest credit	0.6	0.2

The actual return on scheme assets was a gain of £67.3 million (2018: loss of £24.1 million).

23 Retirement benefit schemes continued

Changes in the present value of the defined benefit obligation are:

£million	2019	2018
Defined benefit obligation at 1 January	525.1	547.9
Businesses acquired	–	35.3
Past service charge	0.4	5.8
Interest on obligation	14.9	14.1
Remeasurements:		
Effect of changes in demographic assumptions	(5.2)	(15.7)
Effect of changes in financial assumptions	70.7	(33.0)
Effect of experience adjustments	(4.6)	0.8
Benefits paid	(34.2)	(30.8)
Exchange	(0.6)	0.7
Defined benefit obligation at 31 December	566.5	525.1
TT Group (1993)	553.3	480.1
Stadium Group (1974)	–	32.1
Southern & Redfern	1.0	0.9
USA schemes	12.2	12.0
	566.5	525.1

Changes in the fair value of the schemes' assets are:

£million	2019	2018
Fair value of schemes' assets at 1 January	541.6	559.8
Businesses acquired	–	30.8
Interest income on defined benefit scheme assets	15.5	14.3
Return on scheme assets, excluding interest income	51.8	(38.4)
Contributions by employer	9.8	6.7
Pension scheme expenses	(1.0)	(1.3)
Annuity purchase loss	(0.1)	–
Benefits paid	(34.2)	(30.8)
Exchange	(0.3)	0.5
Fair value of schemes' assets at 31 December	583.1	541.6

Notes to the consolidated financial statements

continued

24 Share capital and other reserves

Share capital

£million	2019	2018
Issued and fully paid		
164,038,978 (2018: 163,354,090) ordinary shares of 25p each	41.0	40.8

The performance conditions of the Long-term Incentive Plan awards issued in 2016 and a Restricted Share Plan award issued in 2018 were met and shares were allocated to award holders from existing shares held by an Employee Benefit Trust for nil consideration.

During the period the Company issued 684,888 ordinary shares as a result of share options being exercised under the Sharesave scheme and Share Purchase plans. The aggregate consideration received was £0.9 million, which was represented by a £0.2 million increase in share capital and a £0.7 million increase in share premium.

Other reserves

£million	Share options reserve	Merger reserve	Total
At 1 January 2018	5.0	3.4	8.4
Share based payments	(3.8)	–	(3.8)
Deferred tax on share based payments	(1.0)	–	(1.0)
Purchase of own shares	(0.9)	–	(0.9)
At 31 December 2018	(0.7)	3.4	2.7
Share based payments	0.2	–	0.2
Deferred tax on share based payments	0.1	–	0.1
Purchase of own shares	(1.8)	–	(1.8)
At 31 December 2019	(2.2)	3.4	1.2

25 Share-based payment plans

The Company has the following share-based payment plans in operation at 31 December 2019:

- Long-term Incentive Plan ('LTIP') for senior executives;
- Restricted Share Plan for certain senior executives; and
- Sharesave plans for UK employees and a Share Purchase plan for US employees.

a) Long-term Incentive Plans

Details of the LTIP awards outstanding during the year are as follows:

	2019	2018
	Number of share awards	Number of share awards
At 1 January	5,425,034	7,760,694
Granted	2,030,515	1,640,168
Forfeited	(1,076,673)	(385,329)
(Exercised/Vested)	(1,681,575)	(3,590,499)
At 31 December	4,697,301	5,425,034
Exercisable at 31 December	–	191,918

During 2018 and 2019 grants of awards were made under the LTIP for the issue of shares in 2021 and 2022 respectively. An award is a contingent right to receive shares in the future, subject to continued employment and the achievement of predetermined performance criteria. The performance targets attached to awards require the achievement of earnings per share ('EPS') and total shareholder return ('TSR') targets as detailed in the Directors' Remuneration Report on page 94.

25 Share-based payment plans continued

On 16 January, 11 March 2019 and 13 December 2019 grants of awards were made under the LTIP for the issue of up to 84,798 shares, 1,922,225 shares and 23,492 shares respectively in 2022. On 14 March, 6 June and 11 September 2018 grants of awards were made under the LTIP for the issue of up to 1,468,680 shares, 88,450 shares and 83,038 shares respectively in 2021.

The fair value of the shares was estimated at the grant date using a Monte Carlo simulation model, taking into account the terms and conditions upon which the shares were granted. This model simulates the TSR and compares it against the group of comparator companies. It takes into account historical dividend and share price fluctuations to predict the distribution of relative share price performance.

The following table lists the inputs to the model:

	2019			2018		
	Shares with a 13 December 2019 grant date	Shares with a 11 March 2019 grant date	Shares with a 16 January 2019 grant date	Shares with a 11 September 2018 grant date	Shares with a 6 June 2018 grant date	Shares with a 14 March 2018 grant date
Number of awards	23,492	1,922,225	84,798	83,038	88,450	1,468,680
Fair value at grant date	193.4p	166.3p	164.6p	210.2p	218.9p	189.8p
Share price at grant date	235.0p	202.0p	197.8p	252.5p	263.0p	228.0p
Exercise price	£nil	£nil	£nil	£nil	£nil	£nil
Expected volatility	35%	35%	33%	33%	33%	33%
Expected weighted average life at 31 December (years)	3.0	2.2	0.1	2.7	2.6	2.2

The award of shares is not affected by the risk free rate of interest since no investment is required by the recipient, and therefore no interest could be earned elsewhere. Expected volatility is based on historical share price movements.

On 11 March 2019 45,761 (14 March 2018 and 6 June 2018: 42,831 and 39,780) notional share awards were granted to senior executives which will ultimately be settled in cash. This award is subject to the same vesting criteria as the 11 March 2019 (14 March, 6 June and 11 September 2018) LTIP grant.

The LTIP grants made in 2016 that vested during 2019 vested at 86.5% of the maximum and shares were allocated to award holders from existing shares held by an Employee Benefit Trust for nil consideration.

The LTIP grants made in 2015 that vested during 2018 vested in full and shares were allocated to award holders from existing shares held by an Employee Benefit Trust for nil consideration.

b) Restricted Share Plan

On 14 March 2018 the Group granted 30,735 shares under the restricted plan. The award is subject to continuing employment with the Group, with one third vesting on the first anniversary and two thirds vesting on the second anniversary of the date of the grant. Following completion of the initial vesting period 10,245 shares vested during the year.

On 6 June 2018 the Group granted 73,717 shares under the restricted plan. The award is subject to continuing employment with the Group, with one third vesting on the first anniversary and two thirds vesting on the second anniversary of the date of the grant. Following completion of the initial vesting period 24,572 shares vested during the year.

On 16 January 2019 the Group granted 92,926 shares under the restricted plan. The award is subject to continuing employment with the Group, 57,157 shares vested in June 2019 with the remaining 35,769 shares vesting in June 2020.

On 11 March 2019 the Group granted 82,750 shares under the restricted plan. The award is subject to continuing employment with the Group, vesting in March 2020

On 26 April 2019 the Group granted 51,458 shares under the restricted plan. The award is subject to continuing employment with the Group, with half vesting in February 2020 and half vesting in February 2021.

Notes to the consolidated financial statements

continued

25 Share-based payment plans continued

On 8 August 2019 the Group granted 9,677 shares under the restricted plan. The award is subject to continuing employment with the Group, vesting in July 2021.

Details of the restricted share plan awards outstanding during the year are as follows:

	2019	2018
	Number of share awards	Number of share awards
At 1 January	104,452	962,770
Granted	236,811	104,452
Vested	(57,157)	(962,770)
At 31 December	284,106	104,452
Exercisable at 31 December	–	–

c) Sharesave schemes

The Group operates a Sharesave scheme for participating employees in the UK under a three-year plan. Employees may purchase the Group's shares at a 20% discount to the market price on the day prior to the commencement of the offer up to a maximum contribution value of £6,000 in any one year. Monthly contributions are saved with Lloyds Bank plc, via Equiniti Ltd, the Registrars, in the employee's share savings plan and will only be released to employees who remain in the Group's employment for a period of three years from commencement of the savings contract. Options become exercisable on completion of the three-year term or within six months of leaving in certain circumstances.

Date price set	Market price	Option price	Options outstanding
25 August 2016	153.0p	123.0p	25,458
24 August 2017	220.5p	178.0p	456,000
31 August 2018	260.0p	215.0p	537,079
30 August 2019	237.0p	190.0p	855,543

The fair value of the shares at grant date was as follows:

Pence	2019	2018
	83.5	76.0

Details of the Sharesave awards outstanding during the year are as follows:

	2019	2018
	Number of share awards	Number of share awards
At 1 January	1,867,255	1,723,670
Granted	874,391	662,686
Forfeited	(244,662)	(135,002)
Exercised	(622,904)	(384,099)
At 31 December	1,874,080	1,867,255
Exercisable at 31 December	25,458	107,049

The Group operates a Stock Purchase Plan for participating US employees. Under the plan employees may purchase the Group's shares at a 15% discount to the market price at the date of acquisition, up to a maximum of \$6,500 per annum. Employees save on a monthly basis and shares are purchased each quarter.

The total share-based payment charge for the year (excluding social security charge of £0.6 million (2018: £0.4 million credit)) arising from the above share scheme plans was £3.0 million (2018: £3.1 million).

26 Reconciliation of net cash flow to movement in net debt

£million	Net cash	Borrowings and lease liabilities	Unamortised loan arrangement fees	Net (debt)/funds
At 1 January 2018	46.5	(0.6)	1.1	47.0
Cash flow	(6.4)	–	–	(6.4)
Businesses acquired	–	(10.3)	–	(10.3)
Repayment of borrowings	–	15.0	–	15.0
Proceeds from borrowings	–	(86.7)	–	(86.7)
Finance lease payments	–	0.3	–	0.3
Amortisation of loan arrangement fees	–	(0.4)	–	(0.4)
Reclassification of loan arrangement fees	–	1.1	(1.1)	–
Exchange differences	0.5	(0.7)	–	(0.2)
At 1 January 2019	40.6	(82.3)	–	(41.7)
Adjustment on initial application of IFRS 16	–	(21.3)	–	(21.3)
Adjusted balance at 1 January 2019	40.6	(103.6)	–	(63.0)
Cash flow	21.6	–	–	21.6
Businesses acquired	–	(0.2)	–	(0.2)
Proceeds from borrowings	–	(30.4)	–	(30.4)
Payment of lease liabilities	–	4.4	–	4.4
Amortisation of loan arrangement fees	–	(0.4)	–	(0.4)
New finance leases	–	(0.7)	–	(0.7)
Lease disposal	–	0.4	–	0.4
Exchange differences	(2.0)	1.2	–	(0.8)
At 31 December 2019	60.2	(129.3)	–	(69.1)

Net cash includes overdraft balances of £nil (2018: £nil).

27 Contingent liabilities

The Group is subject to claims which arise in the ordinary course of business. Other than those for which provisions have been made and included within note 20, the Directors consider the likelihood of any other claims giving rise to a significant liability to be remote.

28 Capital commitments

£million	2019	2018
Contractual commitments for the purchase of property, plant and equipment	1.2	2.0

Notes to the consolidated financial statements

continued

29 Leases

The amount of lease liability recognised on initial application of IFRS 16 was £21.3 million, calculated as follows:

£million	
Operating lease commitment at 31 December 2018	20.8
Less: short-term and low-value leases recognised as an expense	(0.3)
Add: lease extensions reasonably certain to be exercised	4.2
	24.7
Impact of discounting using incremental borrowing rate	(3.4)
Lease liability at 1 January 2019 on initial application of IFRS 16	21.3

The Group has outstanding commitments under short-term and low-value leases (2018: operating leases), which fall due as follows:

£million	2019	2018
In less than one year	–	4.8
Between one and five years	0.1	12.4
After five years	–	3.6

The total cash outflow for leases is £5.6 million (2018: finance leases £0.3 million) comprising lease repayments of £4.4 million (2018: finance leases £0.3 million), interest on lease liabilities of £1.0 million (2018: £nil) and the cost of short-term and low-value leases of £0.2 million (2018: £nil).

Interest on lease liabilities is shown in note 6 and the maturity of lease liabilities is shown in note 22.

30 Related party transactions

Transactions between the Company and its subsidiaries have been eliminated on consolidation and are not disclosed in this note.

No related party transactions have taken place in 2019 or 2018 that have affected the financial position or performance of the Group.

Key management personnel and Directors' emoluments are disclosed in note 12. Details of retirement benefit schemes are disclosed in note 23.

31 Subsequent events

On 3 January 2020 the Group acquired the trade and assets of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California, for an initial cash consideration of \$17.7 million (£13.7 million) and subject to an additional adjustment dependant on the level of working capital.

The provisional fair values of the identifiable assets and liabilities acquired are as follows:

£million	
Non-current assets	
Property, plant and equipment	5.4
Current assets/(liabilities)	
Inventory	1.3
Trade and other receivables	1.8
Trade and other payables	(0.5)
	8.0
Consideration	
Cash consideration net of the impact of hedging	13.7
Goodwill and acquired intangibles	5.7

Given the limited time between the acquisition and the signing of these accounts, the valuation of intangible assets recognised on acquisition is incomplete at the date of these financial statements. The remaining provisional fair values are based on the information currently available; if new information obtained within one year of the date of the acquisition about facts and circumstances that existed at the date of the acquisition identifies adjustments to the above amounts, or any additional provisions that existed at the date of acquisition, then the accounting for the acquisition will be revised. The goodwill recognised on acquisition represents the Group's view of the future earnings growth potential and technical know-how in the acquired business.

The acquisition enhances the Group's presence in the large and growing US aerospace and defence market and extends the Group's power electronics capabilities to include power convertors, moving the Group up the value chain, in line with its strategy. This will also provide access to sole-sourced positions on growing defence programmes for the Group and new customer relationships with key US defence primes.

Company statement of financial position

at 31 December 2019

£million	Note	2019	2018
Fixed assets			
Right-of-use assets	2	1.0	–
Tangible assets	2	1.0	1.0
Intangible assets	2	3.6	4.4
Investments	3	189.3	188.3
Deferred tax asset	11	2.9	2.8
Pensions	10	21.2	24.7
		219.0	221.2
Current assets			
Debtors	4	190.7	117.3
Cash at bank and in hand		2.6	4.9
		193.3	122.2
Current liabilities			
Lease liabilities	6	0.2	0.3
Creditors: amounts falling due within one year	5	130.1	196.9
		63.0	(75.0)
Total assets less current liabilities			
		282.0	146.2
Net current assets			
		63.0	(75.0)
Total assets less current liabilities			
		282.0	146.2
Net assets			
		277.4	142.0
Capital and reserves			
Called up share capital	7	41.0	40.8
Share premium account	8	4.1	3.4
Merger reserve		3.4	3.4
Profit and loss account	9	228.9	94.4
Shareholders' funds			
		277.4	142.0

Approved by the Board of Directors on 3 March 2020 and signed on their behalf by:



Richard Tyson
Director



Mark Hoad
Director

Company statement of changes in equity

for year ended 31 December 2019

€million	Share capital	Share premium	Merger reserve	Profit and loss account	Total
At 1 January 2018	40.7	2.9	3.4	126.4	173.4
Loss for the year	–	–	–	(24.6)	(24.6)
Other comprehensive income					
Remeasurement of defined benefit pension schemes	–	–	–	9.7	9.7
Tax on remeasurement of defined benefit pension schemes	–	–	–	(1.7)	(1.7)
Total other comprehensive income	–	–	–	8.0	8.0
Transactions with owners recorded directly in equity					
Dividends paid by the Company	–	–	–	(9.7)	(9.7)
Share-based payments	–	–	–	(3.8)	(3.8)
Purchase of shares	–	–	–	(0.9)	(0.9)
Deferred tax on share-based payments	–	–	–	(1.0)	(1.0)
New shares issued	0.1	0.5	–	–	0.6
At 31 December 2018	40.8	3.4	3.4	94.4	142.0
Profit for the year	–	–	–	153.6	153.6
Other comprehensive income					
Remeasurement of defined benefit pension schemes	–	–	–	(8.3)	(8.3)
Tax on remeasurement of defined benefit pension schemes	–	–	–	1.6	1.6
Total other comprehensive income	–	–	–	(6.7)	(6.7)
Transactions with owners recorded directly in equity					
Dividends paid by the Company	–	–	–	(10.9)	(10.9)
Share-based payments	–	–	–	0.2	0.2
Purchase of shares	–	–	–	(1.8)	(1.8)
Deferred tax on share-based payments	–	–	–	0.1	0.1
New shares issued	0.2	0.7	–	–	0.9
At 31 December 2019	41.0	4.1	3.4	228.9	277.4

Notes to the Company financial statements

1 Significant accounting policies

a) Basis of preparation

The financial statements of TT Electronics plc (the "Company") were prepared in accordance with Financial Reporting Standard 101 Reduced Disclosure Framework ("FRS 101"). The amendments to FRS 101 (2013/14 Cycle) issued in July 2014 and effective immediately have been applied.

In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU ("Adopted IFRSs"), but makes amendments where necessary in order to comply with Companies Act 2006 and has set out below where advantage of the FRS 101 disclosure exemptions has been taken.

In these financial statements, the Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

- a Cash Flow Statement and related notes;
- disclosures in respect of transactions with wholly owned subsidiaries;
- disclosures in respect of capital management;
- the effects of new but not yet effective IFRSs;
- disclosures in respect of the compensation of Key Management Personnel;
- comparative movement tables for tangible and intangible fixed assets; and
- disclosures in respect of leases

The accounting policies set out in note 2 of the consolidated financial statements have, unless otherwise stated, been applied in the preparation of the Company financial statements.

Change in accounting policy

The Company has implemented IFRS 16 Leases with effect from 1 January 2019. The standard provides a single lessee accounting model, requiring lessees to recognise right-of-use assets and lease obligations for all leases unless the lease term is 12 months or less or the underlying asset has a low value. The Company has applied IFRS 16 using the modified retrospective approach under which the cumulative effect of initial application has been recognised in retained earnings at 1 January 2019 and comparative information has not been restated and continues to be reported under IAS17.

The Company previously classified leases as operating or finance leases based on whether the lease transferred substantially all the risks and rewards of ownership. Under IFRS 16, the Company recognises right-of-use assets and lease liabilities for most leases (unless the lease term is 12 months or less or the underlying asset has a low value).

The Company recognises a lease liability at the lease commencement date (or on initial application), measured as the present value of the future lease payments, discounted at the incremental borrowing rate. A corresponding right-of-use asset is recognised separately on the face of the consolidated balance sheet, net of accumulated depreciation and impairment losses. For leases recognised on initial application, the right-of-use asset is initially measured at either the carrying amount if IFRS 16 had always been applied, or an amount equal to the initially recognised lease liability.

On transition, the Company recognised £1.2 million of right-of-use assets, £1.3 million of lease liabilities and an adjustment of £0.1 million to working capital.

The Company recognised depreciation of £0.2 million in respect of right-of-use assets and interest costs of £0.1 million in respect of leases in the year ended 31 December 2019.

b) Estimation uncertainty

Judgements made by the Directors, in the application of these accounting policies that have significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year, are as follows:

- Note 10 – Defined benefit pension obligations. The defined benefit pension obligations are calculated using a number of assumptions, including future inflation, salary increases and mortality and the obligation is then discounted to its present value using an assumed discount rate. The pension deficit has been calculated using the assumptions set out in note 23 of the consolidated financial statements; and
- Note 5 – Accruals. The Company makes appropriate provision on a consistent basis for restructuring and other normal trading exposures with estimates being made regarding the timing of future payments.

1 Significant accounting policies continued

c) Going concern

Details of the Directors' assessment of the Company's ability to continue in operational existence for at least 12 months from the date of signing these financial statements are shown in note 1 of the consolidated financial statements and in the Governance and Directors' Report on page 62.

d) Investments

Fixed asset investments in subsidiaries are carried at cost less provision for impairment.

e) Own shares held by Employee Benefit Trust

Transactions of the Company-sponsored Employee Benefit Trust are treated as being those of the Company and are therefore reflected in the Company's financial statements. In particular, the Trust's purchases of shares in the Company are debited directly to equity.

2 Fixed assets

£million	Intangible assets	Plant, equipment and vehicles	Right-of-use assets
Cost			
At 1 January 2019	18.4	1.3	–
Impact of adoption of IFRS 16	–	–	1.2
Adjusted balance at 1 January 2019	18.4	1.3	1.2
Additions	0.5	0.2	–
Disposals	–	(0.3)	–
At 31 December 2019	18.9	1.2	1.2
Depreciation			
At 1 January 2019	14.0	0.3	–
Charge for the year	1.3	0.2	0.2
Disposals	–	(0.3)	–
At 31 December 2019	15.3	0.2	0.2
Net book value			
At 31 December 2019	3.6	1.0	1.0
At 31 December 2018	4.4	1.0	–

Included within intangible fixed assets are assets under construction with a carrying value of £0.7 million (2018: £1.0 million).

Notes to the Company financial statements

continued

3 Fixed asset investments

£million	Subsidiary undertakings
Cost	
At 1 January 2019	252.0
Additions	1.0
At 31 December 2019	253.0
Provisions	
At 1 January and 31 December 2019	63.7
Net book value	
At 31 December 2019	189.3
At 31 December 2018	188.3

The Company's subsidiary undertakings and their locations are shown in note 14. Shareholdings are held indirectly for all principal operating subsidiary undertakings.

During the year the Company assumed the net liabilities amounting to £1.0 million associated with the Stadium Group pension scheme. No consideration was received in exchange for assuming these liabilities and the Company has therefore recorded an additional investment.

4 Debtors

£million	2019	2018
Amounts falling due within one year		
Amounts owed by subsidiary undertakings	190.0	115.5
Prepayments, accrued income and other receivables	0.7	1.8
	190.7	117.3

5 Creditors

£million	2019	2018
Amounts falling due within one year		
Trade creditors	2.4	2.2
Amounts owed to subsidiary undertakings	122.1	187.2
Taxation and social security	1.0	1.6
Accruals and deferred income	4.6	5.9
	130.1	196.9

6 Lease obligations

£million	Current	Non-current	Total
At 31 December 2019			
Lease liabilities	0.2	1.0	1.2
At 31 December 2018			
Finance Leases	0.3	–	0.3

7 Share capital

£million	2019	2018
Issued, called up and fully paid		
164,038,978 (2018: 163,354,090) ordinary shares of 25p each	41.0	40.8

The performance conditions of the Long-term Incentive Plan awards issued in 2016 and a Restricted Share Plan award issued in 2018 were met and shares were allocated to award holders from existing shares held by an Employee Benefit Trust for nil consideration. During the period the Company issued 684,888 ordinary shares as a result of share options being exercised under the Sharesave scheme and Share Purchase plans. The aggregate consideration received was £0.9 million, which was represented by a £0.2 million increase in share capital and a £0.7 million increase in share premium.

8 Share-based payments

Details of share-based payments are shown in note 26 of the consolidated financial statements.

9 Profit for the year

As permitted by Section 408 of the Companies Act 2006, the Company has elected not to present its profit and loss account for the year. The profit after tax of the Company for the year was £153.6 million (2018: £24.6 million loss). The auditor's remuneration for audit services is disclosed in note 7 of the consolidated financial statements.

10 Pension schemes

Defined benefit scheme

On 29 March 2019 the existing TT Group pension scheme merged with the Stadium Group pension scheme and the Company assumed the net liabilities of £1.0 million for no consideration at that date.

The triennial valuation of the TT Group scheme as at April 2019 showed a net surplus of £0.3 million against the Trustee's funding objective compared with a deficit of £46.0 million at April 2016. As the scheme was fully funded at the 2019 triennial valuation date, there is no requirement for the Company to pay deficit repair contributions. In addition to the statutory funding objective, the Trustee and Company have agreed to move towards a 'self-sufficient' funding target, under which once full funding is achieved the likelihood of the Trustee requiring subsequent contributions from the Company is significantly reduced. To support the scheme's long-term funding target of self-sufficiency the Company has agreed to pay additional fixed contributions extending to 2023 to the TT Group scheme. These planned contributions amount to £5.3 million, £5.5 million, £5.7 million and £4.4 million to be paid in the years 2020 to 2023.

In addition, the Company has set aside £2.5 million to be utilised in agreement with the Trustee for reducing the long-term liabilities of the scheme. Further details of the scheme are provided in note 23 of the consolidated financial statements.

Defined contribution scheme

The Company operates a Group personal pension plan for employees and pays contributions to administered pension insurance plans. The Company has no further payment obligation once the contributions have been paid. Payments to the defined contribution scheme are charged as an expense as they are incurred. The total contributions charged by the Company including employee salary exchange contributions in respect of the year ended 31 December 2019 were £0.6 million (2018: £0.5 million).

11 Deferred tax

The deferred tax asset of £2.9 million comprises £1.3 million in respect of share-based payments (2018: £1.2 million) the movement in which has been recognised in equity (£0.1 million); £1.2 million in respect of non-current assets (2018: £1.3 million) the movement in which has been recognised in profit (£0.1 million); and £0.4 million in respect of tax losses (2018: £0.3 million) the movement in which has been recognised in profit (£0.1 million).

The deferred tax liability of £3.6 million is in respect of the pension asset (2018: £4.2 million), the movement in which has been recognised in equity (£1.6 million) and profit (£1.0 million).

12 Commitments under operating leases

The Company has outstanding commitments under non-cancellable short-term and low-value leases of £nil (2018: operating lease commitments of £0.5 million, £0.2 million falling due in one year and £0.3 million falling due between two and five years).

13 Related party transactions

During 2019 and 2018, the Company did not have any related party transactions other than with wholly owned subsidiaries.

Notes to the Company financial statements

continued

14 Subsidiary undertakings

The following entities are 100% owned with only ordinary shares in issue, unless otherwise stated. The country of incorporation matches the country in which the registered office/principal place of business is located.

Name of subsidiary undertaking	Registered office/principal place of business
TT Electronics Ltd	(1)
AB Electronics (Suzhou) Co., Ltd (in liquidation)	(2)
Dongguan Arlec Electrical Products Co. Limited (capital contribution)	(3)
Shanghai Hongbian Electronics Co. Limited (capital contribution)	(4)
Taishan Precision International Co. Limited	(5)
TT Electronics Integrated Manufacturing Services (Suzhou) Co., Ltd	(2)
Ying Si Ke Electrical Products Co. Limited (capital contribution)	(3)
TT Electronics SAS	(6)
TT Electronics GmbH	(7)
Precision International Holdings Limited	(8)
Stadium Asia Limited	(9)
STMC Limited	(9)
TT Electronics Srl	(10)
BI Technologies Corporation SDN BHD (ordinary and preference shares)	(11)
BI Technologies S.A. de C.V.	(12)
Optron de Mexico S.A. de C.V.	(13)
TT Electronics Asia Pte Ltd	(14)
TT Electronics Sweden AB	(15)
Aero Stanrew SARL	(16)
AB Connectors Limited	(17)
AB Electronic Components Limited	(18)
Abtest Limited	(19)
Aero Stanrew Group Limited (ordinary and preference shares) ^{1,2}	(20)
Aero Stanrew Limited	(20)
Automotive Electronic Systems Limited ¹	(18)
BI Technologies Limited ²	(18)
Cable Realisations Limited (in liquidation)	(18)
Commendshaw Limited ²	(18)
Controls Direct Limited ²	(18)
Crystalate Electronics Limited	(18)
Dale Electric International Limited ^{1,2}	(18)
Deltight Washers Limited ²	(18)
Ferrus Power Limited ²	(18)
Fox Industries Limited ²	(18)
Hale End Holdings Limited ²	(18)
Kingslo Limited ²	(18)
KRP Power Source (UK) Limited ²	(18)
Linton and Hirst Group Limited ²	(18)
Midland Electronics Limited	(18)
MMG Linton and Hirst Limited ²	(18)
Nulectrohms Limited ²	(18)
Rodco Limited (60% owned) ^{1,2}	(18)
Roxspur Measurement & Control Limited	(18)
Semelab Limited	(21)

14 Subsidiary undertakings continued

Name of subsidiary undertaking	Registered office/principal place of business
Sensit Limited ²	(18)
Stadium Electrical Holdings Limited ²	(18)
Stadium Electronics Limited ²	(18)
Stadium IGT Limited	(18)
Stadium Power Limited	(18)
Stadium United Wireless Limited	(18)
Stadium Wireless Devices Limited ²	(18)
Stadium Zirkon UK Limited ²	(18)
Stontronics Limited	(18)
The Brearley Group Limited ²	(18)
TT Asia Holdings Limited	(18)
TT Automotive Electronics Limited ²	(18)
TT Electronics Advanced Technology Centre (Nottingham) Limited	(18)
TT Electronics Europe Limited ^{1,2}	(18)
TT Electronics Fairford Limited	(22)
TT Electronics Group Holdings Limited ¹	(18)
TT Electronics Holdco Limited	(18)
TT Electronics Integrated Manufacturing Services Limited	(18)
TT Electronics IoT Solutions Limited ¹	(18)
TT Group Limited ²	(18)
TT Power Solutions Limited ²	(18)
TTE Trustees Limited ^{1,2}	(18)
TTG Investments Limited ¹	(18)
TTG Nominees Limited ^{1,2}	(18)
TTG Pension Trustees Limited ^{1,2}	(18)
TTG Properties Limited ¹	(18)
TT-UR Precision Resistors Limited	(18)
Valuegolden Limited ²	(18)
Welwyn Components Limited	(23)
Welwyn Electronics Limited ²	(18)
Wolsey Comcare Limited ²	(18)
Zirkon Holdings Limited	(18)
AB Interconnect, Inc.	(24)
Apsco Holdings, Inc	(24)
BI Technologies Corporation	(24)
Cletronics N.A. Inc.	(25)
International Resistive Company Inc	(24)
International Resistive Company of Texas, LLC	(26)
Optek Technology Inc	(24)
Power Partners, Inc	(27)
Precision, Inc.	(28)
Stadium Group, Inc	(25)
TT Electronics Integrated Manufacturing Services, Inc	(29)
TT Electronics Power Solutions (US), Inc	(25)
TT Group Industries, Inc.	(24)

Notes to the Company financial statements

continued

14 Subsidiary undertakings continued

- (1) Newton Industrial Park, Christchurch, Barbados, West Indies
- (2) 158-24 Hua Shan Road, Snd Suzhou, 215129, China
- (3) 4th Building, F Zone, Zheng Wei Science Park, Dongkeng Town, Dongguan City, Guangdong, China
- (4) Room 404-A69, East of Building 1, 29 Jia Tai Road, China (Shanghai) Pilot Free Trade Zone, China
- (5) 4/F No 132 Fu Cheng Avenue, Taishan City, China
- (6) 4 place Louis Armand, 75012 Paris, France
- (7) Max-Lehner-Strasse 31, 85354, Freising, Germany
- (8) Room RA21, 6th Floor, Woon Lee Commercial Building, No. 7-9 Austin Avenue, Tsim Sha Tsui, Kowloon, Hong Kong
- (9) Unit A, 3/F, Bamboos Centre, 52 Hung To Road, Kwun Tong, Kowloon, Hong Kong
- (10) Via Santa Redegonda N. 11, Milano, Italy
- (11) Lot 6.05, Level 6, KPMG tower, 8 First Avenue, Bandar Utama 47800 Petaling Jaya, Selangor, Darul Ehsan, Malaysia
- (12) Ave Circulo de la Amistad No.102, Parque Industrial Mexicali IV, Mexico
- (13) Ave Rio Bravo 1551-a, Parque Industrial Rio Bravo, CD. Juarez Chihuahua, Mexico
- (14) 2 Shenton Way, #18-01 SGX Centre 1, 068804, Singapore
- (15) Gullfossgatan 3, 164 40 Kista, Sweden
- (16) 60 avenue de l'Uma, La Soukra 2036, Tunisia
- (17) Abercynon, Mountain Ash, Rhondda Cynon Taff, CF45 4SF, Wales
- (18) Fourth Floor, St Andrews House, West Street, Woking, Surrey, GU21 6EB, England
- (19) Unit 1, Tregwilym Industrial Estate, Rogerstone, Newport, Gwent, NP10 9YA, Wales
- (20) Unit 1 Gratton Way, Roundswell Business Park, Barnstaple, Devon, EX31 3AR, England
- (21) Coventry Road, Lutterworth, Leicestershire, LE17 4JB, England
- (22) London Road, Fairford, Gloucestershire, GL7 4DS, England
- (23) Welwyn Electronics Park, Bedlington, Northumberland, NE22 7AA, England
- (24) Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, United States
- (25) CT Corporation System, Corporation Trust Center, 1209 Orange Street, Wilmington, DE 19801, United States
- (26) Corporation Service Company, 211 East 7th Street, Suite 620, Austin, TX 78701-3218, United States
- (27) 43 Broad Street, Suite B206, Hudson, MA01749, United States
- (28) 1700 Freeway Boulevard, Minneapolis, MN 55430, United States
- (29) CT Corporation System, 4400 Easton Commons Way, Suite 125, Columbus, OH43219, United States

1 Shares held directly by TT Electronics plc.

2 Dormant UK subsidiary.

Five-year record

£million (unless otherwise stated)	2019	2018	2017 ¹	2016 ²	2015
Revenue	478.2	429.5	361.1	332.7	509.9
Operating profit	18.8	16.5	20.0	18.8	16.3
Underlying operating profit ³	40.0	33.4	24.3	20.6	21.7
Profit before taxation	15.1	14.6	17.7	14.3	13.8
Underlying profit before taxation ³	36.3	31.5	22.0	16.1	19.2
Earnings	13.9	13.0	15.7	11.9	10.4
Underlying earnings ³	30.5	26.2	19.4	10.3	14.0
Earnings per share (pence)	8.5	8.0	9.7	7.3	6.5
Underlying earnings per share (pence) ³	18.7	16.2	10.9	6.4	8.8
Dividends – paid and proposed	11.4	10.5	9.4	9.0	8.9
Dividend per share – paid and proposed (pence)	7.0	6.5	5.8	5.6	5.5
Average number of shares in issue	163.1	161.8	161.7	162.2	159.2
Net (debt)/funds	(69.1)	(41.7)	47.0	(55.4)	(56.1)
Total equity	268.9	279.5	304.1	233.4	187.4

Notes

1 Results for 2017 have been restated for IFRS 15.

2 Results for 2016 have been restated for IFRS 15 and re-presented to exclude discontinued operations.

3 Operating profit, profit before taxation, earnings and earnings per share exclude the impact of restructuring costs, asset impairments and acquisition and disposal related costs.

Additional information

R&D spend

Definition: R&D spend is defined as the cash spent on research and development activities expressed as a percentage of revenue for those divisions incurring R&D spend.

Employee engagement

Definition: We use our employee survey to measure how our employees feel about working in TT using a scale of 1 (low) to 7 (high) against eight factors (as surveyed by Best Companies Ltd).

Safety performance

Definition: Safety performance is quantified as the number of occupational injuries resulting in three or more days' absence per 1,000 employees. This KPI allows us to compare our performance with that of our peers. We use a UK benchmark published by the Health and Safety Executive and apply this to all of our facilities worldwide, reflecting our commitment to raising standards globally.

Underlying EBITDA

Definition: Underlying EBITDA is underlying operating profit, excluding depreciation of property, plant and equipment including right-of-use assets and amortisation of intangible assets charged to underlying operating profit.

Underlying operating profit margin

Definition: Underlying operating profit divided by revenue.

Glossary

AGM	Annual General Meeting	LLP	Limited liability partnership
BE Inspired	a TT initiative to deliver improved employee performance	LTIP	Long Term Incentive Plan
BE Lean	a TT initiative to improve operational efficiency	M&A	Mergers and Acquisitions
BE TT	Build Expertise in TT	MoD	Ministry of Defence
bn	billion	NED	Non-Executive Director
bps	basis point	NVQ	National Vocational Qualification
CAGR	Compound Annual Growth Rate	OECD	Organisation for Economic Co-operation and Development
CEO	Chief Executive Officer	OEM	Original Equipment Manufacturer
CFO	Chief Financial Officer	OTTP	On Time To Promise
CGU	Cash Generating Unit	PBT	Profit Before Tax
CPI	Consumer Prices Index	PCBA	Printed Circuit Board Assembly
CREST	Certificateless Registry for Electronic Share Transfer	PIE	Pensions Increase Exchange
CSR	Corporate and Social Responsibility	PLC	Public Limited Company
DEFRA	Department for Environment, Food and Rural Affairs	PSEE	People, Social, Environmental and Ethics
EBT	Employee Benefit Trust	Q	Quarter (year)
EICC	Electronics Industry Citizenship Coalition	R&D	Research and Development
EMB	Executive Management Board	RBA	Responsible Business Alliance
EPS	Earnings Per Share	RMB	Chinese Yuan
ESG	Environmental, Social and Governance	RNS	Regulatory News Service
EU	European Union	ROIC	Return on Invested Capital
EVP	Executive Vice President	RPI	Retail Price Index
FBU	Fair, Balanced and Understandable	RSP	Restricted Share Plan
FRC	Financial Reporting Council	SERPS	State Earnings-Related Pension Scheme
FRS	Financial Reporting Standards	STEM	Science, Technology, Engineering and Mathematics
FTSE	Financial Times Stock Exchange	the Board	The Board of Directors of TT Electronics plc
GBP	Pounds Sterling (£)	the Code	UK Corporate Governance Code
GMS	Global Manufacturing Solutions	the Company	TT Electronics plc
H	Half (year)	the Directors	The Directors of TT Electronics plc
HR	Human Resources	the Group	TT Electronics plc and its subsidiaries
HSE	Health Safety & Environmental	TSR	Total Shareholder Return
IAS	International Accounting Standards	TT	TT Electronics plc
IASB	International Accounting Standards Board	TT Way	TT's aspired culture
IFRS	International Financial Reporting Standards	UK	United Kingdom of Great Britain and Northern Ireland
IoT	Internet of Things	UN	United Nations
IT	Information Technology	Underlying EBITDA	Underlying Earnings Before Interest, Taxes, Depreciation and Amortisation
KPI	Key Performance Indicator	USA/US	United States of America
LIBOR	London Interbank Offered Rate		

Shareholder information

Annual General Meeting

The Annual General Meeting will be held on 6 May 2020 at 10.00 am at the offices of Allen & Overy LLP, One Bishops Square, London E1 6AD.

Results

Announcement of 2020 half year results – mid-August 2020.

Preliminary announcement of 2020 results – mid-March 2021.

Annual Report 2020 – to be posted April 2021.

Dividends

For the year ended 31 December 2019, the Board has recommended increasing the final dividend to 4.9 pence per share. This, when combined with the interim dividend of 2.1 pence per share, gives an increased total dividend of 7.0 pence per share (2018: 6.5 pence per share). Payment of the final dividend will be made on 15 May 2020 to shareholders on the register on 24 April 2020.

Multiple accounts on the shareholder register

If you have received two or more copies of this document, this means that there is more than one account in your name on the shareholder register. This may be caused by either your name or address appearing on each account in a slightly different way. For security reasons, the Registrars will not amalgamate the accounts without your written consent.

If you would like any multiple accounts combined into one account, please write to Equiniti Limited at the address given below.

Share dealing services

Shareview Dealing is a telephone and internet service provided by Equiniti. It offers a simple and convenient way of buying and selling TT Electronics plc shares.

Log on to www.shareview.co.uk/dealing or call 0845 603 7037 between 8.00 am and 4.30 pm, Monday to Friday (except bank holidays), for more information about this service and for details of the rates and charges. Please note that telephone lines remain open until 6.00 pm for enquiries.

A daily postal dealing service is also available and a form together with terms and conditions can be obtained by calling 0371 384 2248*. Commission is 1.90 per cent with a minimum charge of £70.

ShareGift

ShareGift is a charity share donation scheme for shareholders, administered by The Orr Mackintosh Foundation. It is especially for those who may wish to dispose of a small parcel of shares whose value makes it uneconomical to sell on a commission basis. Further information can be obtained at www.sharegift.org or from Equiniti.

Shareholder enquiries

Equiniti maintain the register of members of the Company. If you have any queries concerning your shareholding, or if any of your details change, please contact the Registrars:

Equiniti Limited
Aspect House
Spencer Road
Lancing
West Sussex
BN99 6DA

Telephone 0371 384 2396* (or +44 121 415 7047 if calling from outside the United Kingdom)

Equiniti also offer a range of shareholder information on-line at www.shareview.co.uk

Website

Information on the Group's financial performance, activities and share price is available at www.ttelectronics.com

* Lines are open from 8.30 am to 5.30 pm, Monday to Friday (except bank holidays).

Notes

Notes

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