TT Electronics plc

Results for the year ended 31 December 2022

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A management presentation for analysts and investors will be held today at 0900hrs and can be accessed on https://stream.brrmedia.co.uk/broadcast/63d3e966777efd4a8b516f5b.

A recording of the presentation and Q&A session will be available on the website later in the day.

A PDF of this full year announcement is available for download from https://www.ttelectronics.com/investors/investor-highlights/reports-presentations-videos/.

Results for the year ended 31 December 2022

2022 performance ahead of expectations with strong momentum into 2023

£ million (unless otherwise stated)	Adjusted Results[1]				Statutory Results	
	2022	2021	Change	Change constant fx	**2022**	2021
Revenue	**617.0**	476.2	30%	22%	**617.0**	476.2
Operating profit/(loss)	**47.1**	34.8	35%	19%	**(3.4)**	19.3
Operating profit margin	**7.6%**	7.3%	30bps	(20)bps	**(0.6)%**	4.1%
Profit/(loss) before taxation	**40.4**	31.5	28%	13%	**(10.1)**	16.0
Earnings/(loss) per share	**18.2p**	14.5p	26%	11%	**(7.5)p**	7.3p
Return on invested capital	**10.5%**	9.1%				
Cash conversion	**33%**	65%				
					2022	2021
Free cash flow[1]					**(13.1)**	(1.3)
Net debt[1]					**138.4**	102.5
Leverage[1]					**2.0x**	1.7x
Dividend per share					**6.3p**	5.6p

Financial Highlights

- Record order intake in 2022 (book to bill of 118%) and strong revenue growth reflecting our successful positioning in structural growth markets and new project and customer wins
    - Full year revenue up 22% year-on-year at constant currency
    - Organic revenue growth of 20% (c.6% pass through, 3% price, 11% volume)
- Adjusted operating profit up 19% at constant currency reflecting growth, self-help actions and recovery of cost inflation – much improved H2 performance as anticipated
    - Adjusted operating margin of 7.6%, 8.1% excluding impact of pass-through revenue
- Statutory operating loss of £3.4m (including a one off, non-cash impairment charge of £23.1m and non-cash pension settlement charge of £11.8m), statutory basic EPS of (7.5)p
- Free cash outflow reflects investment in working capital to support growth
- Leverage back into target range and reduced by 0.4x from June 2022 as expected
- Total dividend increase of 13% to 6.3p, reflecting strong performance and positive outlook

Operational Highlights

- Excellent business development success, over 50 significant contract awards delivering over £125 million of multi-year revenues
- Very strong growth from 40 largest key accounts
- Cross-divisional collaboration driving new business wins
- Self-help programme reaching conclusion and delivering benefits ahead of schedule
- Margin enhancing Ferranti acquisition expanded technical capabilities and is performing ahead of plan
- Pension buy-in completed saving £6m a year in ongoing cash contributions

- Delivered a 54% reduction in Scope 1&2 emissions, meeting target a year ahead of plan[2], Net Zero Scope 1&2 by 2035.

Outlook

- Continued order momentum through Q4 resulting in circa 90% of planned 2023 revenues covered at the end of December, including GMS fully booked
- Strong free cash flows and a continued reduction in leverage expected in 2023
- Disciplined approach to pricing of the order book, continued growth of the business and actions taken in 2022 underpin our confidence in further progress in 2023

Richard Tyson, Chief Executive Officer, commented:

"2022 was a year of strong operational and financial progress. We delivered excellent top line growth for the Group as we executed on our record order book, which reflected a significant number of new customer wins, incremental business opportunities with existing customers, and market share gains. Our teams across the Group have performed exceptionally well in a year characterised by significant volatility, ongoing supply chain issues and cost inflation. At the same time, we have completed our programme of site rationalisation and finalised the buy-in of our UK pension scheme.

TT is well-aligned with global mega trends, driving demand from high-growth markets. While we are mindful of the wider macro environment, we enter 2023 with good momentum underpinned by a strong order book. This unprecedented visibility, coupled with further benefits of our self-help programme, mean we are confident in our ability to deliver further progress in 2023."

About TT Electronics

TT Electronics is a global provider of engineered electronics for performance critical applications.

TT solves technology challenges for a sustainable world. TT benefits from enduring mega trends in structurally high-growth markets including healthcare, aerospace, defence, electrification and automation. TT invests in R&D to create designed-in products where reliability is mission critical. Products designed and manufactured include sensors, power management and connectivity solutions. TT has design and manufacturing facilities in the UK, North America, Sweden and Asia.

Notes

1. *Throughout this announcement we refer to a number of alternative performance measures which provide additional useful information. The Directors have adopted these measures to provide additional information on the underlying trends, performance and position of the Group with further details set out on pages 19 to 21. The adjusted measures used are set out in the 'Reconciliation of KPIs and non IFRS measures' section on pages 43 to 50.*
2. *Against our 2019 baseline.*

CHIEF EXECUTIVE OFFICER'S REVIEW

Introduction

2022 has been a year of excellent growth for TT. This reflects a significant number of new customer wins and incremental business opportunities with existing customers, alongside continued market share gains. The growth in revenue and the strong order intake also reflect multi-year programme wins and the positive structural trends evident in our end markets. Our teams across the Group have executed exceptionally well in the continuing challenging environment, given the significant supply chain and cost headwinds, to deliver a strong trading performance with very good profit growth, ahead of expectations.

With the strength in order intake our order book provides excellent levels of forward visibility. At the end of December, the order book gives us visibility over circa 90 per cent of planned 2023 revenues. This compares with 77% revenue visibility at the same time last year, and 59 per cent at December 2020.

The repositioning of TT is evident in our performance in 2022 as we continue to unlock the potential of the Group and benefit from the structural growth in our end markets. Our relationships with customers are longer term and more collaborative, resulting in new wins and a greater share of wallet. Our top 40 OEM customers now account for 58 per cent of our revenue (up from 56 per cent in 2021) and saw 27 per cent revenue growth in the year. We have also progressed efforts to build an environmentally sustainable business, which remains central to our strategic decision-making, particularly when we consider the opportunities presented by the move to a lower carbon world for our design-led technologies.

The Group's performance was led by outstanding results in our Sensors and Specialist Components (S&SC) and GMS businesses. While timing issues on some key aerospace and defence programmes in Power and Connectivity (P&C) in the first half depressed revenues (on a constant currency basis) and impacted our operational performance, there was a substantial recovery in the second half.

We expect to deliver £13-14 million of full run-rate benefits in 2023 from our investment in the self-help programme which contributed circa £4 million of benefits in 2022, ahead of plan, in addition to the £6 million delivered to 2021. We are pleased with the progress made so far to deliver this significant programme, which is an important component of our path to double-digit operating margins.

During the year organic investment in the business totalled £22.7m; we have invested £11.0 million in research and development (R&D) and £11.7 million in capital expenditure to support growth and the development and enhancement of our pipeline of new products.

The integration of the Ferranti acquisition has progressed well and as planned; we will move production to a new facility in Greater Manchester in Q3.

Environmental, social and governance (ESG) principles are central to our purpose and deeply embedded in our business model and strategy. We have made further progress in 2022 to reduce our Scope 1 and Scope 2 carbon emissions. These have decreased by 23 per cent in the year to 12,166 tonnes and are down 54 per cent against our 2019 baseline, meaning we have achieved our near-term goal one year ahead of plan. In adjusting for revenue growth within the business, the intensity ratio improved from 55.7 in 2019 to 19.7 in 2022. This improvement has been achieved due to our energy efficiency actions and further switching to the use of electricity from renewable sources. During 2022 we completed an initial review of the resilience of our strategy to climate-related risks and opportunities using an external consultant. We will undertake further work in this regard during 2023.

Our embedded values were central to our approach during the pandemic, leading to a series of actions to make our workplaces safe and secure and to protect and support employees whose dedication and commitment ensured delivery for our customers. Accordingly, during 2022 we supported our employees impacted by higher inflation on costs of living with appropriate regional responses, whilst continuing to manage the impact of COVID-19 on our employees in Asia. Given the increased cost of living, which has disproportionately impacted our lowest earners, we have supported them through a variety of pro-active regional actions including an additional cost of living support payment to eligible UK employees.

Results and operations

Revenue for the year was £617.0 million. This was 22 per cent higher than the prior year at constant currency and 20 per cent higher on an organic[1] basis, with a significant acceleration of growth in the second half of the year. Adjusted operating profit increased by 35 per cent and by 19 per cent on a constant currency basis compared to 2021, reflecting the benefits of volume growth and our self-help programme. A much improved second half performance was in part driven by the expected recovery in our P&C division. The business performance in GMS was ahead of expectations and S&SC produced outstanding results over the year.

We continue to experience supply chain challenges with extended lead times, component shortages and notable cost inflation. Through our collaboration with customers, our investment in inventory and our actions to source some components on an expedited basis, organic revenue growth accelerated to 31 per cent in the second half of 2022. We estimate that cost inflation in the year amounted to circa £40 million. This was fully recovered by re-pricing our offerings and working collaboratively with our customers. Of the increase circa £28 million was cost pass-through. This relates to materials where there has been very significant cost inflation which is being transparently passed on to customers with no margin mark-up. Even excluding these pass-through revenues, organic growth was still an excellent 14 per cent.

There has been exceptionally strong order intake across the Group, reflecting underlying growth in our markets and new customer wins, as well as customers committing earlier to secure capacity and give us greater visibility. Customer demand remains robust, but we are vigilant to any changes in demand. Order intake for 2022 was 118 per cent of revenues, which we grew 20 per cent organically. We secured over 50 significant contract wins that will deliver over £125 million of multi-year revenues. Our collaborative approach to deliver solutions based on our technical expertise has been a key factor in winning new orders. We are focused on leveraging expertise across the Group to pursue cross selling opportunities and deepening our relationships with our top customers. Much of this effort is led by the GMS division which is integral to converting these opportunities and increasingly showcases the capabilities of the P&C division.

Adjusted operating profit was £47.1 million, 19 per cent higher than the prior year at constant currency. The adjusted operating margin was 7.6 per cent. Excluding zero margin pass-through revenues, adjusted operating margin was 8.1 per cent. After the impact of adjusting items, including restructuring, pension, acquisition and disposal costs, and a non-cash asset impairment, the Group's full-year statutory operating loss was £3.4 million. The non-cash impairment of

[1] *See 'Reconciliation of KPIs and non-IFRS measures' on pages 43 to 50.*

£23.1 million is shown within the Power and Connectivity division and is linked to an increase in discount rates, coupled with revised forecasts for the Connectivity business in the context of a weaker macro-economic environment and the impact of the evolution of the COVID pandemic on the potential demand for COVID testing. Cashflow impacting adjusting items totalled £11.1 million.

Adjusted EPS increased to 18.2 pence (2021: 14.5 pence), reflecting the improved adjusted operating profit in the period. Basic earnings per share (EPS) was a loss of 7.5 pence (2021: profit 7.3 pence). The increase in adjusted operating profit was more than offset by the increase in non-cash adjusting items set out below.

During the year we completed the cash spend on our self-help programme to support margin improvement. We also invested in inventory to support our high levels of growth, our increased customer order book and supply chain constraints on certain component parts. Cash conversion of 33 per cent (2021: 65 per cent) reflected this investment and included a working capital outflow totalling £38.8 million. The working capital outflow was mainly a result of investment in inventory to support the significant growth in order intake. This was exacerbated by material cost inflation and high value pass-through materials secured with customer agreement. We had anticipated a modest improvement in the second half, but this was adversely impacted by higher than anticipated receivables due to the exceptionally strong organic revenue growth as well as a small number of larger value receivables which arrived post year-end.

In 2022 we completed the buy-in of our UK defined benefit pension scheme. This buy-in secures pension benefits for circa 5,000 members and their dependents. The Scheme's circa £360 million of liabilities are now matched by an insurance policy, and TT no longer bears any investment, longevity, interest rate or inflation risk in respect of the Scheme. There was a benefit to the Group's 2022 free cash flow of £6 million and there is an equivalent annual improvement to free cash flow in future years.

On a statutory basis, cash flow from operating activity was £12.7 million (2021: £14.3 million). There was a free cash outflow of £13.1 million (2021: £1.3 million outflow). Dividend payments totalled £10.2 million (2021: £11.4 million). We ended the year with net debt of £138.4 million (2021: £102.5 million), including IFRS 16 lease liabilities of £23.1 million (2021: £22.6 million).

At 31 December 2022 leverage was 2.0 times (2021: 1.7 times), within the Board's target leverage range of 1-2 times, and down 0.4 times from June 2022, as anticipated. We are confident this downward trajectory will continue as EBITDA increases and as we deliver a material step-up in free cash flow in 2023.

Our return on invested capital was 10.5 per cent in 2022, increasing by 140 basis points due to the growth in adjusted operating profit, even with the additional investment in working capital.

Dividend

Given our strong trading performance in 2022 and the positive outlook for 2023 and beyond, the Board is proposing a final dividend of 4.3 pence per share. The total cash cost of this dividend will be approximately £7.6 million. This, when combined with the interim dividend of 2.0 pence per share gives an increase of 13 per cent in the total dividend to 6.3 pence (2021: 5.6 pence per share). Payment of the dividend will be made on 26 May 2023, to shareholders on the register at 28 April 2023.

Our strategy

We solve technology challenges for a sustainable world, creating solutions that enable our customers to make products that are cleaner, smarter and healthier and that will benefit our planet and people. We create value through supplying products and services that meet our customers' sustainability ambitions in our target markets of healthcare, aerospace & defence and automation & electrification.

We have positioned the Group in structurally growing, higher added value markets with long-term customer partnerships. The success of this strategy is reflected in the revenue growth in 2022 and order book strength into 2023. We believe the growth rates in our end markets have the potential to be higher than the combined 3-5 per cent we have previously cited. This, combined with our ability to outperform given our business development success with higher growth, blue-chip customers, means we now believe market growth of 4-6 per cent over the medium term is achievable, and that TT will exceed it. Our strategy is designed to generate optimum returns for all our stakeholders while maintaining strong capital discipline, delivering strong cash generation and careful use of the balance sheet to facilitate continued investment.

Our markets

Healthcare (28 per cent of Group revenue)

In healthcare, we provide design and manufacturing solutions for a range of diagnostic, surgical and direct patient care devices critical to the identification, treatment and prevention of disease. Growth is driven by a combination of ageing populations, growing patient expectations and the importance of digitalisation; electronics plays a central role in advancing the progress of medical technology.

We have steadily increased our exposure to this attractive end market from 13 per cent of Group revenue in 2015. Our power, connectivity and sensor technologies span the modern surgical suite from patient monitoring and therapeutic devices to surgical navigation, diagnostic equipment and life sciences. By supporting our life sciences partners, we are collectively improving laboratory automation systems and enabling samples to be collected and analysed with minimal human intervention, the benefits of which are improved data reliability and accuracy, minimised wastage, and time-efficient procedures. By supporting the development of smaller, lighter, more precise surgical devices, we are enabling reduced size of incisions, shortened recovery times, and improved overall patient outcomes. In addition, by improving the portability and ease of use of diagnostics, we are increasing the availability of medical imaging to point-of-care facilities. This promotes earlier detection and better monitoring, hence supporting measures taken to address the rising prevalence of cancer, cardiac, neurological, and musculoskeletal disorders.

COVID-19 has accelerated trends in the digital transformation, automation and robotics of healthcare which can be served by TT specialisms including interventional healthcare devices, patient monitoring and laboratory equipment.

Pent-up demand, post pandemic, for deferred elective surgery and for large installations for hospital or life science applications are expected to be supportive of market growth over the next few years.

Aerospace and Defence (15 per cent of Group revenue)

In aerospace and defence we provide solutions for high-reliability applications across a broad range of platforms operating on land, air and sea. Growth is driven by increasing electrification of these platforms, which supports fuel efficiency and safety. Throughout 2022 the commercial aerospace market has shown steady recovery from pandemic levels; with the gradual alleviation of travel restrictions and release of pent-up demandin China expected to support further growth in 2023. Fundamentally, the need for more efficient, safer, and environmentally friendly aircraft remains.

This drives demand for increasingly advanced electronic systems and applications, complemented by demand from a growing, globalised middle-class population who exhibit greater propensity to travel.

The defence electronics manufacturing market exhibits consistent, moderate expansion as governments invest to maintain state-of-the-art capabilities. However, in the aftermath of the Russian invasion of Ukraine and despite recessionary fears, heightened geopolitical tensions mean we are likely to see a pick-up in defence spending. In defence, our central focus is on next generation requirements for high-density power electronics and electrical machines collaborating with our customers on the development of technologies that reduce size, weight, power, and cost (SWaP-C), while simultaneously enhancing command, control, communications, computing, intelligence, surveillance, and reconnaissance (C4ISR) capabilities. We have been successful recently in providing more integrated, design-led solutions, demonstrating our ability to deliver SWaP-C improvements.

Automation and Electrification (37 per cent of Group revenue)

In automation and electrification markets, we are continuing to invest in developing capabilities to address the needs of sophisticated automation and connectivity applications. Customers rely on us to help solve their toughest automation and electrification challenges; streamlining their supply chains, increasing their efficiency and helping them bring smart, new products to the market. Growth is being driven by factors including demand for sustainable solutions to improve energy efficiency, the use of robotics to improve productivity and the increasing use of remote asset tracking. Within electrification, our priority is in developing capabilities which will support increasing energy efficiency and connectivity. Core focus areas include complex systems integrations and AC and DC power conversion technologies. We are increasingly able to develop complete, high-value products and durable components featuring higher voltages. The positive long-term growth drivers in this market give us confidence that demand will increase for our power, sensing and connectivity solutions.

Distribution sales channel (20 per cent of Group revenue)

We grew our revenues through distributors again in 2022 and this area now represents 20 per cent of our overall sales. The demand from distributors comes from a very wide range of customers and end markets but is, in large part, driven by the same mega trends supporting our focus end markets including rapid technological change and digital transformation.

Creating value through technology and capital investment

We prioritise organic investment in technology and capital to support new project growth, this totalled £22.7 million in 2022. A key part in the step change in dialogue with our customers in recent years has been our focus on R&D. This has resulted in us becoming firmly embedded with our customers, enabling us to stay ahead of their needs and meet the challenges they set us. We are also investing in capital to support growth programmes for our customers. Our investment is focused on bringing higher growth, innovative, sustainable products to market. These typically yield higher returns and development is often undertaken in partnership with our customers. Our investment strategy includes leveraging acquired complementary capabilities targeted through mergers and acquisitions (M&A).

Our R&D cash investment in the year was £11.0 million (2021: £11.4 million), representing 3.7 per cent (2021: 4.5 per cent) of the aggregate revenue of our product businesses, with the reduction mainly a result of the conclusion of the development phase of our encoder project which has now moved into the new product introduction phase. Capital expenditure totalled £11.7 million (2021: £14.9 million).

The pipeline of new products coming to market continues to grow, including in areas where we have extended our technical capabilities through acquisition. Examples include:

- Our Power and Connectivity business has been working on an Aerospace Technology Institute (ATI) funded project developing high power DC/DC power conversion for increased electrification of military aerospace, commercial aerospace and hybrid electric and fully electric aircraft.
- We continue to invest in the surgical navigation and robotics market. This segment is experiencing sustained double-digit growth and is driven by several emerging clinical applications that provide the physician with exceptionally accurate catheter placement, often eliminating the need for harmful radiation. The miniaturised and highly accurate characteristics of our technologies enable access to parts of the anatomy that in the past were difficult to navigate including the lung, brain and heart. Additionally, new applications for improved navigation needs have emerged to diagnose breast cancer.
- We are currently investing in a combination of AC/DC and DC/DC power conversion technologies in direct response to demand from aerospace and defence customers, as well as ruggedised wire harness and magnetic capabilities. These investments build upon our existing capabilities and give us a wider platform to support major aerospace and defence customers, many of whom require power solutions that feature higher voltages and/or efficiency improvements from legacy designs.

Creating value through margin enhancement

The pursuit of higher margins through our self-help programme, organic and inorganic growth, remains core to the Group's strategy. In 2022 progress to delivering double-digit adjusted operating margins was impeded by pass-through revenue which is creating a temporary headwind to margin progression. Nevertheless, Group adjusted operating margin still improved from 7.3 per cent to 7.6 per cent overall. Excluding the impact of pass-through revenues, adjusted operating margin was 8.1 per cent. We anticipate pass-through revenues to become less pronounced by 2024.

Our significant self-help programme, designed to reduce our footprint and fixed cost base, is nearing completion. Spend on this programme was completed in 2022 as we consolidated the Covina business into the Torotel site at Kansas City, which has created one power business in North America. Production at Covina ceased in December 2022 and the establishment of this new production in Kansas City will be completed in H1 2023. Our new facility in Plano, Texas is now up and running and the qualification is substantially complete, with the final qualifications determined by customer demand. Furthermore, in 2022 we established a new clean room at Bedlington to support the products transferred from Lutterworth. With the majority of qualification activities at both Bedlington and Plano completed in 2022, we expect to be operating at higher, and more efficient, levels of production in 2023.

The total cash spend for the self-help programme was £22.2 million with £8.5 million spent in 2022, comprising restructuring cash spend of £7.1 million and project capital expenditure of £1.4 million (2021 spend: £10.2 million, including £2.3 million of restructuring cash spend (net of £9.1 million after costs from property disposals) and

£7.9 million of project capital expenditure). With the addition of the Covina transfer to the programme, the previously guided full run-rate benefits of £11-12 million increased to £13-14 million, which we expect to realise in 2023.

The gradual reversal of the pass-through margin impact, operational leverage on growth and the elimination of inefficiencies underpins our confidence in achieving double-digit margins.

Creating value from mergers & acquisitions

We are delighted with the Ferranti Power and Control (Ferranti) acquisition which completed in January 2022. In combining this business into our Power and Connectivity division, we utilised our well-defined integration model, which incorporates major business processes including operations, procurement, finance, legal, IT and human resources. The business is performing ahead of our expectations, has already secured new orders under our ownership and is also set to benefit from the extension of demand for programmes which had been expected to tail off over the next few years. Ferranti will move to new bespoke facilities in Greater Manchester, as planned, during 2023.

While leverage has reduced, we are mindful that it remains temporarily near the top end of our target range, reflecting the investment in inventory to execute our order book and support our high revenue growth. We continue to monitor an active pipeline of opportunities while we focus on free cash flow generation and leverage reduction to generate capacity for further M&A.

Environmental, social and governance (ESG)

Understanding and managing the impact of our business operations on the environment is an important part of the way we do business. Not only do we develop, design, engineer and manufacture products that enable reduced environmental impacts for our customers, but we are also optimising our own operations to reduce our environmental impact. We seek to have a wider positive impact on society by understanding and prioritising employee needs, doing business responsibly and reaching out to our local communities. Our products address resource scarcity, protect health, improve energy efficiency, support renewables and assist productivity and connectivity. We are positioned to benefit from mega trends that are driving sustainable growth.

We remain at the forefront of delivering technologies that meet the ever-increasing demand for cleaner energy, smart monitoring systems and home automation. Our products can be found in a range of applications including:

- Renewable energy generation and smart grid metering
- Power management and energy control systems
- Water and wastewater measurement and monitoring

We are moving at pace to reduce our carbon emissions and have set ourselves a target to be Net Zero by 2035 for our Scope 1 & 2 emissions.

In 2022 we made excellent progress on our ESG milestones and have reduced our Scope 1 & 2 carbon emissions by 54 per cent from our baseline set in 2019, achieving our 2023 target of delivering a 50 per cent reduction a year ahead of plan. This has been accomplished by switching to renewable tariffs, further site rationalisation, transferring manufacturing capability and capacity to modern, green facilities and local site energy saving initiatives. Our 2022 emissions are a further 23 per cent lower than in 2021. Our intensity ratio, which measures our Scope 1 & 2 emissions against our revenue has reduced to 19.7, down from 55.7 in 2019. All our sites that are able to purchase electricity on renewable tariffs are now doing so.

As we look forward, further reductions in our carbon emissions will require other measures such as infrastructure and process projects to reduce electricity consumption and investment in solar power or other renewables and we will be ready to benefit from renewables gradually coming on stream in China. In 2022 we undertook feasibility studies for onsite solar projects and now the transition to solar panels, to provide a renewable source of energy, is underway. Our first solar project at Kuantan in Malaysia was installed in 2022 and commissioned early in 2023. Each of our manufacturing sites has its own energy efficiency plan to include further rolling out of LED lighting, eliminating waste electricity, replacing inefficient legacy equipment or reorganising space to save heating/lighting and managing shift patterns.

During the year we have progressed our assessment of our Scope 3 emissions, in particular areas of materiality for the Group to better understand our emissions. We have commenced measurement and internal reporting of six categories: transportation (upstream and downstream), purchased goods and services, business and employee travel and waste. Three categories have been set aside for further review after evaluation in 2022, these are capital goods, use of sold products and end of life treatment of sold products.

Using an external advisor, TT has recently undertaken high-level scenario analysis to test the resilience of our strategy to climate-related risks and opportunities identified across one physical and two transition scenarios and different time periods. This yielded valuable information on next steps and was a precursor to a more detailed Climate Related Scenario Analysis which we will undertake in 2023. TT has a corporate partnership with the Carbon Disclosure Project (CDP) Supply Chain Management team to help measure our supply chain emissions. The data gathered allows us to create a database, develop data gathering and measurement tools, assess the relevance and magnitude of each category, and put robust plans in place to reduce emissions. We will report on these plans once established.

Our continuing progress on ESG matters has been recognised externally, having received a rating of ‘AA’ in the latest MSCI ESG Ratings assessment and we have a ‘C’ rating from CDP.

ESG matters including culture, strategy, regulatory compliance, risk and internal controls are controlled as part of our overall governance and risk management frameworks, ultimately overseen by senior management and the Board. An update on key health, safety and environmental (including sustainability) metrics is provided at each Board meeting and in-depth reviews are undertaken on at least an annual basis.

Our teams are passionate about finding solutions to the world’s toughest technology challenges and delivering for customers. We champion knowledge, skills, innovation, problem solving and service in four key areas: power, connectivity, sensing and manufacturing & engineering. We set out to attract, promote and retain the best, diverse, talented people and we are focused on developing expertise at all levels of the organisation.

Engaging employees by continually building our culture, communicating, listening and supporting is an important part of what we do every day. The re-launch of our Group intranet, ConnecTT, has enhanced our employee ability to communicate, share resources and hosts a range of employee communities.

Our employees have continued to support their local communities and fundraise for local and national causes. We encourage our teams to take an active role in their local communities, whether fundraising and volunteering for chosen charities or committing time and resources to promoting STEM education and careers. The resilience, contribution, and dedication of our employees in all regions has been remarkable over this pro-longed period of uncertainty. We will continue to focus on supporting them as they are critical to the success of TT.

We undertake a Group-wide employee engagement survey every 12-18 months and use pulse surveys to get up to date feedback and an indication of progress. The results are reviewed by the Board and our Senior Independent Director, Jack Boyer, participates directly in people matters through membership of the People Social Environmental and Ethics Committee.

Outlook

2022 was a year of strong operational and financial progress. We delivered excellent top line growth for the Group as we executed on our record order book, which reflected a significant number of new customer wins, incremental business opportunities with existing customers, and market share gains. Our teams across the Group have performed exceptionally well in a year characterised by significant volatility, ongoing supply chain issues and cost inflation. At the same time, we have completed our programme of site rationalisation and finalised the buy-in of our UK pension scheme.

TT is well-aligned with global mega trends, driving demand from high-growth markets. While we are mindful of the wider macro environment, we enter 2023 with good momentum underpinned by a strong order book. This unprecedented visibility, coupled with further benefits of our self-help programme mean we are confident in our ability to deliver further progress in 2023.

FINANCIAL OVERVIEW

Group revenue was £617.0 million (2021: £476.2 million). This included a £7.9 million contribution from acquisitions and currency translation benefit of £31.5 million. Group revenue was 22 per cent higher than the prior year at constant currency and 20 per cent higher on an organic basis. Excluding the zero margin pass-through revenues, organic growth was still 14 per cent, split approximately 11 per cent volume growth and 3 per cent pricing. Sales volumes across our key markets have been buoyant and the strength of our order book, and the pipeline of new business opportunities, gives us confidence that growth will continue. Our order book reached record levels in the second half of 2022.

The Group’s adjusted operating profit was £47.1 million (2021: £34.8 million) and statutory operating loss was £(3.4) million (2021: £19.3 million profit) after a charge for items excluded from adjusted operating profit of £50.5 million (2021: £15.5 million) including:

- Restructuring and other costs of £20.2 million (2021: £7.8 million) comprising:
    - Restructuring costs of £6.4 million (2021: £8.1 million) including £2.7 million relating to the restructure of the North America Resistors business (including pre-production costs at our new Plano facility), £2.0 million relating to the closure of our Lutterworth site, and £1.7 million relating to relocation of production facilities in the USA, as part of our self-help programme, and

- Pension costs of £13.8 million (2021: £0.3 million credit) relating to pension projects which included £11.8 million non-cash settlement costs for an enhanced transfer value exercise and £2.0 million of cash costs associated with this exercise and the scheme buy-in project.

- Acquisition and disposal costs totalled £7.2 million (2021: £7.7 million) comprising £1.2 million (2021: £2.6 million) of integration and acquisition costs relating primarily to the Ferranti acquisition, which completed early in 2022. Amortisation of intangible assets arising on business combinations was £6.0 million (2021: £5.1 million).
- Non-cash impairment costs totalled £23.1 million (2021: £nil) being an impairment in respect of the IoT Technology Products business including £5.4 million of assets associated with the Virolens project. This impairment is shown within the Power and Connectivity division and is linked to an increase in discount rates, coupled with revised forecasts for the business in the context of a weaker macro-economic environment and impact of the evolution of the COVID pandemic on the potential demand for COVID testing.

The adjusted operating margin of 7.6 per cent (2021: 7.3 per cent) reflects the benefits of growth and our self-help programme. We successfully offset increases in input costs through price increases.

The net finance cost was £6.7 million (2021: £3.3 million) with the increase being mainly due to a combination of higher base rates and higher drawn debt levels. The Group's overall tax charge was £3.1 million (2021: £3.2 million), including a £5.3 million credit (2021: £3.0 million credit) on items excluded from adjusted profit. The adjusted tax charge was £8.4 million (2021: £6.2 million), resulting in an effective adjusted tax rate of 20.8 per cent (2021: 19.6 per cent).

Adjusted EPS increased to 18.2 pence (2021: 14.5 pence), reflecting the improved adjusted operating profit in the period. Basic earnings per share (EPS) was a loss of 7.5 pence (2021: profit 7.3 pence). The increase in adjusted operating profit was more than offset by the increase in non-cash adjusting items set out above.

Adjusted operating cash inflow after capex was £15.7 million (2021: £22.7 million inflow). Improved profitability was more than offset by a working capital outflow of £38.8 million (2021: £14.7 million outflow), including a £40.4 million investment in inventory to support the strong order book and impacted by supply chain constraints. Capital and development expenditure of £14.0 million (2021: £16.8 million) reflected investment to support growth and as part of the self-help programme. This resulted in adjusted operating cash conversion of 33 per cent (2021: 65 per cent). On a statutory basis, cash flow from operating activity was £12.7 million (2021: £14.3 million).

There was a free cash outflow of £13.1 million (2021: outflow £1.3 million), net of £11.1 million of restructuring and acquisition related costs (2021: £5.9 million), relating to the self-help programme and acquisition costs associated with the Ferranti acquisition. There were no pension contribution payments in the year (2021: £5.5 million) due to the buy-in of the UK scheme as detailed below.

Investments in acquisitions totalled £8.3 million (2021: £0.5 million) relating to the Ferranti Power and Control acquisition in January 2022. Dividend payments totalled £10.2 million (2021: £ 11.4 million).

At 31 December 2022, the Group's net debt was £138.4 million (31 December 2021: £102.5 million), including £23.1 million of lease liabilities (31 December 2021: £22.6 million). Leverage at 31 December 2022, consistent with the bank covenants, was 2.0 times (31 December 2021: 1.7 times).

Pension buy-in

In November 2022, the Trustee of the TT Electronics Pension Scheme (the "Scheme") purchased a bulk annuity insurance policy from Legal and General Assurance Society Limited, covering all liabilities required to pay all future defined benefit pensions for the Scheme's circa 5,000 members and any eligible dependents. The purchase of this insurance policy was the successful culmination of extensive work over the last few years by TT and the Scheme Trustees. The insurance policy was purchased using existing assets held within the Scheme, without the need for TT to make any additional contributions.

TT is not required to make any future contributions into the Scheme regarding defined benefit liabilities and the buy-in delivers greater security to the Scheme's members. The Scheme's circa £360 million of liabilities are now matched by the insurance policy, and TT no longer bears any investment, longevity, interest rate or inflation risk in respect of the Scheme. There was an immediate benefit to the Group's current year cash flow of £6 million in 2022 and there is an equivalent annual improvement to free cash flow in future years.

DIVISIONAL REVIEW

POWER AND CONNECTIVITY

The Power and Connectivity division develops 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.

	2022	2021	Change	Change constant fx
Revenue	**£154.2m**	£140.2m	10%	5%
Adjusted operating profit[1]	**£7.9m**	£7.8m	1%	(9)%
Adjusted operating profit margin[1]	**5.1%**	5.6%	(50)bps	(80)bps

[1] See note 1 on page 3 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to the section titled 'Reconciliation of KPIs and non IFRS measures' on pages 43 to 50 of this document.

Revenue increased by £14.0 million to £154.2 million (2021: £140.2 million) and includes a £7.9 million revenue contribution from Ferranti Power & Control which we acquired in January 2022 and a currency benefit of £7.2 million. Organic revenue was 1 per cent lower dampened by the timing of programme revenues, the closure of the Akron, Ohio facility and the transfer of activity from Lutterworth to Bedlington.

Adjusted operating profit increased by £0.1 million to £7.9 million (2021: £7.8 million). Included within this was a profit contribution of £1.9 million from the Ferranti acquisition and there was a £0.9 million foreign exchange benefit. The organic reduction in operating profit was mainly driven by reduced revenues and site inefficiencies including the impact of COVID disruptions in the first half. The operating profit contribution from the division stepped up materially from £2.1 million in the first half to £5.8 million in the second half as anticipated. The adjusted operating margin was 5.1 per cent (2021: 5.6 per cent) for the full year and 6.8 per cent in the second half.

Order intake has been good in the year, running well ahead of revenues giving us confidence of a return to growth in 2023 which will support further margin improvement. With the consolidation of activities into the Kansas City site, following closure of the Covina site, combined with the transfer of activity from Lutterworth to Bedlington now completed, we are well placed to benefit from these operational efficiencies in 2023.

There have been some notable contract awards during the year, including:

- We were awarded a contract from long-term partner Honeywell Aerospace to support the design of a new power supply for next-generation inertial navigation units. This partnership highlights TT's market responsiveness, innovation and long-standing expertise in demanding defence and military applications
- Our work on the Boxer programme (the main UK army vehicle programme) has expanded with significant additional contracts wins. Following on from the power electronics assembly contract and the subsequent award for the design and development of electrical cable harness systems for the Challenger 3 upgrade project, we have recently cross sold our expertise into GMS. We are already contracted to provide complex, high reliability power electronics assemblies to the Boxer vehicles and will lead the design, production and delivery of the battery control units enabling increased efficiency of the vehicle power management system as well as the command display units providing signalling and communications functionality on every Boxer vehicle
- Recent significant advances have allowed electromagnetic tracking to become an emerging technology of choice for new clinical applications. This adoption is leading to a dramatic upsurge in related procedure volume. Working with a new customer, a medical equipment manufacturer, on its electromagnetic (EM) tracking system, which incorporates TT's EM micro-coil sensors, we have taken the system from prototype to full launch and this tracking system is now used for diagnosing certain cancers
- Environmental innovation from ZapCarbon in combination with our electronics technology and IoT powered monitoring expertise brought to the mass market the Healthy Homes Sensor. This sensor is designed for use in social housing as a means to combat fuel poverty and unhealthy living conditions. Our battery operated, cellular connected sensor can detect unsafe humidity conditions long before mould occurs thus improving the health for occupants of social housing and preventing the need for costly remediation work.

In January 2022 we completed the £8.3 million acquisition of Ferranti Power and Control, based in Greater Manchester, which designs and manufactures mission-critical complex power and control sub-assemblies for blue chip customers in high-reliability and high-performance end markets, primarily aerospace and defence. One of the principal benefits of the acquisition is that it brings the skills to provide full-service capabilities from design, assembly, manufacturing, and testing including environmental stress screening and inspection through to service.

Ferranti adds further technology capability, IP and scale to our Power business. It brings valuable long-term customer relationships and programmes with leading global aerospace, defence and industrial OEMs operating in highly regulated markets with significant barriers to entry through necessary industry accreditations and customer approvals.

Ferranti is a mid-teens operating margin business, and in this, our first year of ownership, the acquisition has generated a return on invested capital in excess of the Group's WACC. We expect to generate cost synergies of circa £0.4 million by year three.

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.

	2022	2021	Change	Change constant fx
Revenue	**£323.0m**	£220.1m	47%	37%
Adjusted operating profit[1]	**£25.2m**	£18.3m	38%	23%
Adjusted operating profit margin[1]	**7.8%**	8.3%	(50)bps	(90)bps

[1] See note 1 on page 3 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to the section titled 'Reconciliation of KPIs and non IFRS measures' on pages 43 to 50 of this document.

Revenue increased by £102.9 million to £323.0 million (2021: £220.1 million) including a currency benefit of £15.4 million, with organic revenue 37 per cent higher. The organic revenue performance reflects strong growth from our existing customer base, particularly from our healthcare and automation & electrification end markets. There was strong growth in all geographic regions. Pass-through revenue was around £32 million which has created a technical head wind to margin progression. Excluding this pass-through revenue, the operating margin was 8.7 per cent.

This division has again performed incredibly well in 2022, as momentum built reflecting the targeted move towards customers who are winners in their own markets and provide opportunity to grow share of wallet. Work on positioning GMS as a partner to customers to win long-term incremental business is reflected in our order book growth. The addition of GMS capability to the Kuantan site in Malaysia, back in 2020, has added value through the expansion of our high-level assembly capabilities to a variety of key customers. The division's planned revenues for 2023 are fully covered and it has started to secure revenue for 2024. Given the significant increase in revenues in 2022, GMS will make incremental capital investment in 2023 to enhance capacity in existing facilities.

Adjusted operating profit increased by £6.9 million to £25.2 million (2021: £18.3 million), including a £2.2 million foreign exchange benefit. The constant currency increase reflects operational leverage on the organic growth and the full recovery of inflationary costs. The adjusted operating profit margin was 7.8 per cent (2021: 8.3 per cent), impacted by the pass-through revenues, without which margins would have been 8.7 per cent.

The order book growth has been underpinned by several multi-million-pound wins, a number of which extend beyond 12 months. We continue to see that our power customers require manufacturing capability and so our GMS and P&C divisions are partnering to provide this solution. Packages secured on the Boxer programme illustrate how we are able to expand our involvement in a programme from initial work within Power and Connectivity to providing PCBAs through GMS. We continue to improve our understanding of how to leverage these opportunities from the customer perspective.

In late December, TT was delighted to receive an award for best-in-class performance as one of AMI's top performing suppliers for outstanding technical and operational achievements in areas including quality, service, lead time, delivery, cost and responsiveness. We believe this award reinforces our reputation as a trusted partner across multiple geographies.

Overall, the GMS division is in excellent shape, the order pipeline is stronger than ever, and our enhanced customer relationships and business development initiatives are delivering revenue and order book growth. GMS has achieved a step change in its margin profile over recent years, reflecting the value of the service we bring to our customers, reliability, and the value engineering and testing capability we offer. We believe GMS margins can improve incrementally with growth.

In 2022, a key component of the revenue and order book growth reflected large, ongoing programmes with our blue-chip customers in healthcare and automation. In addition, there have been a number of significant new customer awards which will impact future years. Some examples include:

- TT has been awarded a substantial five-year agreement with a leading systems integrator in commercial aerospace worth circa £50 million, for the manufacture of complex electronic assemblies for aircraft braking systems. This award further strengthens our longstanding collaboration with this customer and reflects its confidence in our expertise in demanding military and aerospace applications.
- Following several years of prototype development and supply chain support, TT has been selected as a strategic manufacturing partner to support multiple line replaceable units (LRUs) that comprise the Honeywell Anthem avionics suite. Unveiled in late 2021, the Honeywell Anthem flight deck is the industry's first cloud-connected cockpit system. Anthem is powered by a flexible software platform that can be customised for virtually every type of aircraft, including large passenger and cargo planes, business jets, helicopters, general aviation aircraft and the rapidly emerging class of advanced air-mobility (AAM) vehicles. TT will be providing engineering support, manufacturing, and full systems integration for this next-generation avionics programme over the next 12 years.
- 2022 saw strong revenue growth on a number of new projects for a world-leading life sciences customer. These included high level assemblies for a Gas Chromatography Mass Spectrometer. Such machines are used in spectrometry elemental isotope analysis to understand the chemistry and composition of materials and healthcare and life sciences. Other key projects with this customer include a DNA sequencer and high-end analytical instruments for radiation detection

SENSORS AND SPECIALIST COMPONENTS

The Sensors and Specialist Components division works with customers to develop high-specification 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.

	2022	2021	Change	Change constant fx
Revenue	**£139.8m**	£115.9m	21%	12%
Adjusted operating profit[1]	**£21.8m**	£16.4m	33%	20%
Adjusted operating profit margin[1]	**15.6%**	14.2%	140bps	110bps

[1] See note 1 on page 3 for an explanation of alternative performance measures. Adjusting items are not allocated to divisions for reporting purposes. For further discussion of these items please refer to the section titled 'Reconciliation of KPIs and non IFRS measures' on pages 43 to 50 of this document.

Revenue increased by £23.9 million to £139.8 million (2021: £115.9 million) including a currency benefit of £8.9 million. Organic revenue was 12 per cent higher, with strong growth through the division's distribution partners a key driver.

This business is in the sweet spot of enabling our customers to reach their sustainability goals with components for smart energy & city infrastructure and factory automation.

Historically, order visibility has been very limited, but more recently the order book has increased significantly reflecting strong underlying demand and also, customers committing orders further ahead to protect their supply chains and responding to lead time extensions. We have been careful to adjust our commercial terms, where possible, to orders that are non-cancellable, non-refundable and in some cases, non-reschedulable.

Adjusted operating profit increased by £5.4 million to £21.8 million (2021: £16.4 million) with a currency benefit of £1.7 million. The constant currency operating profit growth reflects the benefits of our self-help programme and the strong operational leverage on our revenue growth. We have benefited from our agility in adapting our pricing strategies to offset material and freight cost increases.

At our new facility in Plano, Texas we have invested in capacity and having substantially completed qualification, are now improving yields which is enabling volumes to be produced at higher rates. We are very focused on improving our customer experience.

There were a number of favourable developments during the year which will benefit the business, including:

- We secured repeat business with a major US defence prime, for a sole source, opto isolator used on power-up boards installed as safety critical, precision navigational aids, for guided defence systems
- The U.S. team secured two different optical sensor opportunities with a medical device company, for use in a blood analyser. These sensors are used in the disposable test vessel cartridges designed for the Werfen GEM 5000 blood gas analyser. The sensors are critical to detect the proper loading of the cartridge as its alignment with the analyser optics, for spectral measurements, is essential for proper execution of the test.
- Schneider Electric – We secured a contract to provide a thick-film resistor that met the high-reliability requirements of a Schneider Gas-insulated switchboard utilised in electricity distribution. The end customer for this product is France’s main electricity distribution company which supplies 95 per cent of the market.

OTHER FINANCIAL INFORMATION

Summary of Adjusted results

To assist with the understanding of earnings trends, the Group has included within its non-GAAP alternative performance measures including adjusted operating profit and adjusted profit. Further information is contained in the 'Reconciliation of KPIs and non IFRS measures' on pages 43 to 50. A reconciliation of statutory to adjusted profit numbers is set out on page 21.

A summary of the Group's adjusted results is set out below:

£ million	2022	2021
Revenue	**617.0**	476.2
Operating profit	**47.1**	34.8
Operating margin	***7.6%***	*7.3%*
Net finance expense	**(6.7)**	(3.3)
Profit before tax	**40.4**	31.5
Tax	**(8.4)**	(6.2)
Tax rate	***20.8%***	*19.6%*
Profit after tax	**32.0**	25.3
Weighted average number of shares	***175.8 million***	*174.8 million*
EPS	**18.2p**	14.5p

Cash flow, net debt and leverage

The table below sets out Group cash flows and net debt movement:

£ million	**2022**	2021
Adjusted operating profit	**47.1**	34.8
Depreciation and amortisation	**16.1**	16.1
Net capital expenditure[1]	**(11.7)**	(14.9)
Capitalised development expenditure	**(2.3)**	(1.9)
Working capital	**(38.8)**	(14.7)
Other	**5.3**	3.3
Adjusted operating cash flow after capex.	**15.7**	22.7
Adjusted operating cash conversion	***33%***	*65%*
Net interest and tax	**(13.4)**	(8.7)
Lease payments	**(4.3)**	(3.9)
Restructuring, acquisition and disposal related costs[1]	**(11.1)**	(5.9)
Retirement benefit schemes	**-**	(5.5)
Free cash flow	**(13.1)**	(1.3)
Dividends	**(10.2)**	(11.4)
Lease payments	**4.3**	3.9
Equity issued/acquired	**0.4**	1.4
Acquisitions & disposals	**(8.3)**	(0.5)
Other	**(3.0)**	(0.5)
Increase in net debt	**(29.9)**	(8.4)
Opening net debt	**(102.5)**	(83.9)
New, acquired, modified and surrendered leases	**(2.3)**	(10.8)
Borrowings acquired	**(0.2)**	-
FX and other	**(3.5)**	0.6
Closing net debt	**(138.4)**	(102.5)

1 In 2021 Restructuring, acquisition and disposal related costs' comprises proceeds on surplus property disposals of £9.1m

At 31 December 2021 the Group's net debt was £138.4 million (31 December 2021: £102.5 million). Included within net debt was £23.1 million of lease liabilities (31 December 2021: £22.6 million).

Consistent with the Group's borrowing agreements, which exclude the impact of IFRS 16 Leases, leverage ratio was 2.0 times at 31 December 2022 (31 December 2021: 1.7 times). Net interest cover was 7.4 times (31 December 2021: 13.5 times). The Group's debt covenants state that the leverage ratio must not exceed 3.0 times and that interest cover must be more than 4.0 times.

Reconciliation of Adjusted results

Details of the reasons for and uses of adjusted measures are included in the section titled 'Reconciliation of KPIs and non IFRS measures' on pages 43 to 50 of this announcement.

£ million	2022	2021
Operating (loss)/profit	**(3.4)**	19.3
Adjusted to exclude:		
Restructuring and other items		
Restructuring	**6.4**	9.8
Property disposals	**-**	(1.7)
Pension restructuring costs	**2.0**	-
Pension enhanced value transfer value	**11.8**	-
Pension and past service charge	**-**	(0.3)
Asset impairments		
Goodwill impairment	**17.7**	-
Other impairments	**5.4**	-
Acquisition related costs		
Amortisation of intangible assets arising on business combinations	**6.0**	5.1
Ferranti acquisition and integration costs	**1.1**	0.5
Torotel acquisition and integration costs	**0.1**	1.5
Other acquisition costs	**-**	0.2
Aborted acquisition and disposal costs	**-**	0.4
Total operating reconciling items	**50.5**	15.5
Adjusted operating profit	**47.1**	34.8
(Loss)/profit before tax	**(10.1)**	16.0
Total operating reconciling items (as above)	**50.5**	15.5
Adjusted profit before tax	**40.4**	31.5
Taxation charge on adjusted profit	**(8.4)**	(6.2)
Adjusted profit after taxation	**32.0**	25.3

Cautionary statement

This report contains forward-looking statements. These have been made by the Directors in good faith based on the information available to them up to the time of their approval of this report. The Directors can give no assurance that these expectations will prove to have been correct. Due to the inherent uncertainties, including both economic and business risk factors underlying such forward-looking information, actual results may differ materially from those expressed or implied by these forward-looking statements. The Directors undertake no obligation to update any forward-looking statements whether as a result of new information, future events or otherwise.

Consolidated income statement

For the year ended 31 December 2022

£million (unless otherwise stated)	Note	2022	2021
Revenue	3	617.0	476.2
Cost of sales		(481.5)	(360.6)
Gross profit		135.5	115.6
Distribution costs		(29.6)	(26.9)
Administrative expenses		(109.3)	(69.4)
Operating (loss)/profit		(3.4)	19.3
Analysed as:			
Adjusted operating profit	3	47.1	34.8
Restructuring and other	7	(20.2)	(7.8)
Asset impairments	7	(23.1)	-
Acquisition and disposal related costs	7	(7.2)	(7.7)
Finance income	6	2.3	1.1
Finance costs	6	(9.0)	(4.4)
(Loss)/profit before taxation		(10.1)	16.0
Taxation	8	(3.1)	(3.2)
(Loss)/profit for the period attributable to the owners of the Company		(13.2)	12.8
EPS attributable to owners of the Company (pence)			
Basic	10	(7.5)	7.3
Diluted	10	(7.5)	7.2

Consolidated statement of comprehensive income

For the year ended 31 December 2022

£million	2022	2021
(Loss)/profit for the year	(13.2)	12.8
Other comprehensive income for the year after tax		
Items that are or may be reclassified subsequently to the income statement:		
Exchange differences on translation of foreign operations	26.9	3.4
Tax on exchange differences	(1.6)	-
Loss on hedge of net investment in foreign operations	(3.4)	(0.2)
Loss on cash flow hedges taken to equity less amounts recycled to the income statement	(2.9)	(3.2)
Deferred tax (loss)/gain on movement in cash flow hedges	(0.4)	0.5
Items that will never be reclassified to the income statement:		
Remeasurement of defined benefit pension schemes	(35.9)	35.8
Tax on remeasurement of defined benefit pension schemes	6.5	(11.4)
Total comprehensive (loss) / income for the period attributable to the owners of the Company	(24.0)	37.7

Consolidated statement of financial position

For the year ended 31 December 2022

£million	Note	2022	2021
ASSETS			
Non-current assets			
Right-of-use assets		19.6	19.6
Property, plant and equipment		54.8	50.4
Goodwill	5	155.1	156.5
Other intangible assets		53.7	51.7
Deferred tax assets		13.2	11.3
Derivative financial instruments		0.8	0.6
Pensions	12	31.3	78.4
Total non-current assets		328.5	368.5
Current assets			
Inventories		189.2	141.8
Trade and other receivables		120.3	86.2
Income taxes receivable		1.1	2.6
Derivative financial instruments		3.1	4.0
Cash and cash equivalents		65.0	68.3
Total current assets		378.7	302.9
Total assets		707.2	671.4
LIABILITIES			
Current liabilities			
Borrowings	11	3.7	1.1
Lease liabilities		4.4	4.1
Derivative financial instruments		3.6	1.3
Trade and other payables		173.2	133.9
Income taxes payable		9.6	7.1
Provisions		3.5	2.5
Total current liabilities		198.0	150.0
Non-current liabilities			
Borrowings	11	176.6	147.1
Lease liabilities		18.7	18.5
Derivative financial instruments		0.8	0.7
Deferred tax liability		12.4	20.2
Pensions	12	2.9	3.9
Provisions and other non-current liabilities		0.8	1.0
Total non-current liabilities		212.2	191.4
Total liabilities		410.2	341.4
Net assets		297.0	330.0
EQUITY			
Share capital	13	44.1	44.1
Share premium		22.9	22.6
Translation reserve		55.1	33.2
Other reserves		7.3	7.1
Retained earnings		167.6	221.0
Equity attributable to owners of the Company		297.0	328.0
Non-controlling interests		-	2.0
Total equity		297.0	330.0

Approved by the Board of Directors on 7 March 2023 and signed on their behalf by:

Richard Tyson
Director

Mark Hoad
Director

Consolidated statement of changes in equity

For the year ended 31 December 2022

£million	Share capital	Share premium	Translation Reserve	Other reserves	Retained earnings	Sub-total	Non-controlling interest	Total
At 31 December 2020	43.6	21.7	30.0	5.5	195.2	296.0	2.0	298.0
Profit for the year	-	-	-	-	12.8	12.8	-	12.8
Other comprehensive income								
Exchange differences on translation of foreign operations	-	-	3.4	-	-	3.4	-	3.4
Loss on hedge of net investment in foreign operations	-	-	(0.2)	-	-	(0.2)	-	(0.2)
Loss on cash flow hedges taken to equity less amounts recycled to the income statement	-	-	-	(3.2)	-	(3.2)	-	(3.2)
Deferred tax gain on movement in cash flow hedges	-	-	-	0.5	-	0.5	-	0.5
Remeasurement of defined benefit pension schemes	-	-	-	-	35.8	35.8	-	35.8
Tax on remeasurement of defined benefit pension schemes	-	-	-	-	(11.4)	(11.4)	-	(11.4)
Total comprehensive income	-	-	3.2	(2.7)	37.2	37.7	-	37.7
Transactions with owners recorded directly in equity								
Equity dividends paid by the Company	-	-	-	-	(11.4)	(11.4)	-	(11.4)
Share-based payments	-	-	-	3.8	-	3.8	-	3.8
Deferred tax on share-based payments	-	-	-	0.5	-	0.5	-	0.5
New shares issued	0.5	0.9	-	-	(0.3)	1.1	-	1.1
Other movements	-	-	-	-	0.3	0.3	-	0.3
At 31 December 2021	44.1	22.6	33.2	7.1	221.0	328.0	2.0	330.0
At 31 December 2021	44.1	22.6	33.2	7.1	221.0	328.0	2.0	330.0
Loss for the year					(13.2)	(13.2)	-	(13.2)
Other comprehensive income								
Exchange differences on translation of foreign operations	-	-	26.9	-	-	26.9	-	26.9
Tax on exchange differences	-	-	(1.6)	-	-	(1.6)	-	(1.6)
Loss on hedge of net investment in foreign operations	-	-	(3.4)	-	-	(3.4)	-	(3.4)
Loss on cash flow hedges taken to equity less amounts recycled to income statement	-	-	-	(2.9)	-	(2.9)	-	(2.9)
Deferred tax on movement in cash flow hedges [1]	-	-	-	0.2	(0.6)	(0.4)	-	(0.4)
Remeasurement of defined benefit pension schemes	-	-	-	-	(35.9)	(35.9)	-	(35.9)
Tax on remeasurement of defined benefit pension schemes	-	-	-	-	6.5	6.5	-	6.5
Total comprehensive income/(loss)	-	-	21.9	(2.7)	(43.2)	(24.0)	-	(24.0)
Transactions with owners recorded directly in equity								
Equity dividends paid by the Company	-	-	-	-	(10.2)	(10.2)	-	(10.2)
Share-based payments	-	-	-	4.8	-	4.8	-	4.8
Deferred tax on share-based payments	-	-	-	(1.0)	-	(1.0)	-	(1.0)
New shares issued	-	0.3	-	-	-	0.3	-	0.3
Other movements	-	-	-	(0.9)	-	(0.9)	-	(0.9)
Dividend to non-controlling interest	-	-	-	-	-	-	(2.0)	(2.0)
At 31 December 2022	44.1	22.9	55.1	7.3	167.6	297.0	-	297.0

1. During the year £0.6 million was transferred out of retained earnings and into the hedging reserve.

Consolidated statement of cash flows

For the year ended 31 December 2022

£million	Note	2022	2021
Cash flows from operating activities			
(Loss)/Profit for the year		(13.2)	12.8
Taxation	8	3.1	3.2
Net finance costs		6.7	3.3
Restructuring costs and non underlying asset impairments	7	43.3	7.8
Acquisition related costs	7	7.2	7.7
Adjusted operating profit		47.1	34.8
Adjustments for:			
Depreciation		13.9	13.6
Amortisation of intangible assets		2.2	2.5
Share based payment expense		4.8	3.8
Other items		0.5	1.1
Increase in inventories		(40.4)	(42.6)
Increase in receivables		(26.3)	(15.7)
Increase in payables and provisions		27.9	42.0
Adjusted operating cash flow		29.7	39.5
Special payments to pension funds		-	(5.5)
Restructuring and acquisition related costs		(11.1)	(15.0)
Net cash generated from operations		18.6	19.0
Net income taxes paid		(5.9)	(4.7)
Net cash flow from operating activities		12.7	14.3
Cash flows from investing activities			
Purchase of property, plant and equipment		(11.4)	(14.6)
Proceeds from sale of property, plant and equipment and government grants received		0.3	9.3
Capitalised development expenditure		(2.3)	(1.9)
Purchase of other intangibles		(0.6)	(0.5)
Acquisitions of businesses	4	(8.3)	(0.5)
Net cash flow used in investing activities		(22.3)	(8.2)
Cash flows from financing activities			
Issue of share capital	13	0.4	1.4
Interest paid		(7.5)	(4.0)
Repayment of borrowings		(149.3)	(86.9)
Proceeds from borrowings		174.3	96.4
Capital payment of lease liabilities		(4.3)	(3.9)
Other items		(1.0)	(0.5)
Dividends paid to minority shareholders		(2.0)	-
Dividends paid by the Company		(10.2)	(11.4)
Net cash flow from / (used in) financing activities		0.4	(8.9)
Net (decrease)/increase in cash and cash equivalents		(9.2)	(2.8)
Cash and cash equivalents at beginning of year	11	67.2	69.0
Exchange differences	11	3.3	1.0
Cash and cash equivalents at end of year	11	61.3	67.2
Cash and cash equivalents comprise:			
Cash at bank and in hand		65.0	68.3
Bank overdrafts		(3.7)	(1.1)
		61.3	67.2

1 General information

The information set out below, which does not constitute full financial statements, is extracted from the audited financial Statements.

- was approved by the Directors on 7 March 2023;
- have been reported on by the Group's auditor; their reports were unqualified, did not draw attention to any matters by way of emphasis and did not contain statements under s498(2) or (3) of the Companies Act 2006;
- will be available to the shareholders and the public in April 2023; and
- will be filed with the Registrar of Companies following the Annual General Meeting.

While the financial information included in this preliminary announcement has been prepared in accordance with the recognition and measurement criteria of UK adopted International Financial Reporting Standards ("IFRSs") adopted pursuant to IFRSs as issued by the IASB, this announcement does not itself contain sufficient information to comply with IFRSs. The Company expects to publish full financial statements that comply with IFRSs during April 2023.

2 Basis of preparation

Going concern

The Group has experienced continued improvement in trading momentum and strong growth on our 2021 results. The structural growth markets we have selected to focus on have moved back towards their long-term growth trajectory, the benefits of our strategic repositioning and focus on building close relationships with our clients can be seen in both the order book and financial performance of the Group.

The Group's financial position remains strong, at 31 December 2022 it had:

• £267.2 million of total borrowing facilities available (comprising committed facilities of £226.0 million and uncommitted facilities of £41.2 million representing overdraft lines and an accordion facility of £32.6 million). The Group's primary source of finance is the £147.4 million committed revolving credit facility (RCF) which was signed in June 2022 to replace the already existing RCF; at 31 December 2022 £103.6 million of this facility had been drawn down. The Group's RCF is payable on a floating rate basis above GBP SONIA, USD SOFR or EURIBOR depending on the currency of the loan and will mature in June 2026 with a one-year extension option which expires in May 2023. In February 2023 £15.0 million of uncommitted accordion facility was converted into committed RCF extending the total committed facilities to £241.0 million. In December 2021, the Group issued £75.0 million of private placement fixed rate loan notes with three institutional investors; the issue is evenly split between 7- and 10- year maturities with an average interest rate of 2.9% and covenants in line with our bank facility.

• A leverage ratio (banking covenant defined measure) of 2.0 times at 31 December 2022 compared to the RCF (and PP loan notes) covenant maximum of 3.0 times. Interest cover (banking covenant defined measure) of 7.4 times compared to the RCF (and PP loan notes) covenant minimum of 4.0 times.

The Group has prepared and reviewed cash flow forecasts across the business over the twelve-month period from the date of the approval of these financial statements, considering the Group's current financial position and the potential impact of our principal risks on divisions.

The Group's financial projections contain key assumptions surrounding revenue and operating profit growth in 2023. Under the Group's base case financial projections, the Group retains significant liquidity and covenant headroom throughout the forecast period, with both metrics improving from the position as at 31 December 2022.

The Group's financial projections have been stress tested for "business as usual" risks (such as profit growth, supply chain pressure and working capital variances), and the impact of the following principal risks: general revenue reduction, contractual risks, research and development, people and capability, supplier resilience and health and safety (occurring both individually and in unison). Principal risks which were not specifically modelled were either considered not likely to have an impact within the going concern period or their financial effect was covered within the overall downside economic risks implicit within the stress testing. Under the stress tested modelling, the liquidity headroom within the group remains adequate throughout the forecast period. Financial covenants continue to be in compliance under the stress tested model and management have a number of mitigating actions which could be undertaken if required.

2 Basis of preparation continued

The Group's downside stress test scenario has been sensitised for supply chain challenges and capacity constraints which shows a reduction in revenue and operating profit compared to the latest forecast. Despite this further reduction these projections show that the Group should remain well within its facilities headroom and within bank covenants for the 12 months following the approval of these financial statements. A "reverse" stress-test was also modelled to understand the conditions which could jeopardise the ability of the Group to continue as a going concern including assessing against covenant testing and facility headroom. The stress testing also considered mitigating actions which could be put in place. Mitigating actions included limiting capital expenditure and reducing controllable costs including items such as discretionary bonuses and pay rises. The reverse stress test is deemed to have a remote likelihood and help inform the Directors' assessment that there are no material uncertainties in relation to going concern.

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.

The Directors have assessed the future funding requirements of the Group with due regard to the risks and uncertainties to which the Group is exposed and compared them with the level of available borrowing facilities and are satisfied that the Group has adequate resources for at least twelve months from the date of signing. Accordingly, the financial statements have been prepared on a going concern basis.

Critical accounting judgements and key sources of estimation uncertainty

In the application of the Group's accounting policies the Directors are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources.

The estimates and associated assumptions are based on historical experiences and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of revision and future periods if the revision affects both current and future periods.

Critical judgements

In the course of preparing the Financial Statements, a critical judgement within the scope of paragraph 122 of IAS 1: "Presentation of Financial Statements" is made during the process of applying the Group's accounting policies.

Adjusting items

Judgements are required as to whether items are disclosed as adjusting, with consideration given to both quantitative and qualitative factors. Further information about the determination of adjusting items in the year ended 31 December 2022 is below.

There are no other critical judgements other than those involving estimates, that have had a significant effect on the amounts recognised in the financial statements. Those involving estimates are set out below.

Key sources of estimation uncertainty

Assumptions concerning the future and other key sources of estimation uncertainty at the balance sheet date, that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below.

- Notes 5 and 7 – Assumptions used to determine the carrying value of goodwill in relation to the IoT Solutions cash generating unit ("CGU"). The carrying amount of goodwill at 31 December 2022 was £155.1 million (2021: £156.5 million). Determining whether goodwill is impaired requires an estimation of the value in use of the CGUs to which the goodwill has been allocated. The value in use calculation requires management to estimate the future cash flows expected to arise from CGUs and a suitable discount rate in order to calculate present value. During the year a full impairment review was performed and an impairment charge of £17.7 million was recorded in respect of goodwill held in the IoT Solutions CGU which was recognised within the Power and Connectivity segment. Should the business experience further unforeseen deterioration of results a future impairment may be required. Further information is provided in note 7 and sensitivity analysis is provided in note 5. Following the impairment, the carrying amount of the IoT Solutions CGU's goodwill was £9.9 million (2021: £27.6 million).

2 Basis of preparation continued

- Note 8 – Taxation. Accruals for tax contingencies require management to make judgements and estimates in relation to tax authority audits 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 Group's current tax liability at 31 December 2022 includes tax provisions of £8.4 million (2021: £6.9 million). The Group believes the range of reasonable possible outcomes in respect of these exposures is tax liabilities of up to £11.1 million (2021: £9.0 million).

Alternative performance measures

The Group presents Alternative Performance Measures ("APMs") in addition to the statutory results of the Group. These are presented in accordance with the guidelines on APMs issued by the European Securities and Markets Authority ("ESMA").

Adjusted operating profit has been defined as operating profit from continuing operations excluding the impacts of significant restructuring programmes, significant one-off items including property disposals, impairment charges significant in nature and/or value, business acquisition, integration, and divestment related activity, and the amortisation of intangible assets recognised on acquisition. Acquisition and disposal 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.

In addition to the items above, adjusting items impacting profit after tax include:

- The net effect on tax of significant restructuring from strategy changes that are not considered by the Group to be part of the normal operating costs of the business; and
- The tax effects of adjustments to profit before tax.

These financial statements include alternative performance measures that are not prepared in accordance with IFRS. These alternative performance measures have been selected by the Directors 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.

The Directors consider the adjusted results to be an important measure used to monitor how the businesses are performing as this provides a meaningful reflection of how the businesses are managed and measured on a day-to-day basis and achieves consistency and comparability between reporting periods.

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 or an aggregation of operating segments in accordance with IFRS 8 'Operating Segments'. The chief operating decision maker is the Chief Executive Officer. 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; Power and Connectivity is an aggregation of two operating segments due to similarities in products and markets served;
- 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.

The key performance measure of the operating segments is adjusted operating profit. Refer to the section titled 'Reconciliation of KPIs and non IFRS measure' for a definition of adjusted profit.

3 Segmental reporting continued

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 adjusted operating profits for each segment.

Inter- segment pricing is determined on an arms length basis in a manner similar to transactions with third parties.

The Group's geographical segments are determined by the location of the Group's non-current assets and, for revenue, the location of external customers. 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

						2022
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	154.2	323.0	139.8	617.0	-	617.0
Adjusted operating profit	7.9	25.2	21.8	54.9	(7.8)	47.1
Add back: adjustments made to operating profit (note 7)						(50.5)
Operating loss						(3.4)
Net finance costs						(6.7)
Loss before taxation						(10.1)

						2021
£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total Operating Segments	Corporate	Total
Sales to external customers	140.2	220.1	115.9	476.2	-	476.2
Adjusted operating profit	7.8	18.3	16.4	42.5	(7.7)	34.8
Add back: adjustments made to operating profit (note 7)						(15.5)
Operating profit						19.3
Net finance costs						(3.3)
Profit before taxation						16.0

3 Segmental reporting continued

b) Geographic information

Revenue by destination

The Group operates on a global basis. Revenue from external customers by geographical destination is shown below. Management monitors and reviews revenue by region rather than by individual country given the significant number of countries where customers are based.

£million	2022	2021
United Kingdom	130.0	100.2
Rest of Europe	104.3	78.6
North America	236.6	182.7
Asia	144.7	113.3
Rest of the World	1.4	1.4
	617.0	476.2

Revenue from services is less than 1% of Group revenues. All other revenue is from the sale of goods.

c) Market information key customers

The Group operates in the following markets:

£million	2022	2021 [1]
Healthcare	172.0	118.8
Aerospace and defence	91.7	85.5
Automation and electrification	229.6	172.2
Distribution	123.7	99.7
	617.0	476.2

1. Revenue by market in 2021 has been represented following a reclassification of end markets for several key customers.

The Group had one customer who contributed greater than 10% of revenues (12%) in 2022 (2021: less than 10%). Revenues from this customer are recognised within the Global Manufacturing Solutions segment.

4 Acquisitions

On 7 January 2022 the Group acquired the Power and Control business of Ferranti Technologies Ltd, from Elbit Systems UK Ltd. Total cash consideration was £8.3 million comprising £10.0 million paid in January 2022 and a final £1.7 million working capital adjustment received in April 2022.

Had the acquisition been completed on 1 January 2022, the full year revenue, operating loss and adjusted operating profit would have been unchanged at £617.0 million, £3.4 million and £47.1 million respectively as reported. Ferranti Power and Control's contribution to the Group's 2022 revenue, operating loss and adjusted operating profit was £7.9 million, £0.8 million and £1.9 million respectively.

4 Acquisitions continued

Ferranti Power and Control, based in Oldham, Greater Manchester, designs and manufactures mission-critical complex power and control sub-assemblies for blue chip customers in high-reliability and high-performance end markets, primarily aerospace and defence. The acquisition brings highly skilled employees who provide full-service capabilities from design, assembly, manufacturing, and testing including environmental stress screening and inspection through to service. Ferranti Power and Control adds further technology capability, and scale to our Power business with valuable long-term customer relationships and programmes with leading global aerospace, defence and industrial OEMs operating in highly regulated markets with significant barriers to entry through necessary industry accreditations and customer approvals. The goodwill recognised on acquisition represents the Group's view on the future earnings growth potential and technical capabilities of the acquired business. None of the goodwill recognised is expected to be deductible for income tax purposes. Costs in relation to this acquisition recognised in the statement of profit or loss amounted to £0.3 million.

The fair values of the identifiable assets (including goodwill) and liabilities are presented below.

The fair value of receivables of £2.1 million is not materially different to the contractual cashflows. The amount expected to not be collected is £nil.

£million	Power and Control business of Ferranti Technologies Ltd
Non-current assets	
Right-of-use asset	0.2
Property, plant and equipment	0.4
Identifiable intangible assets	5.3
Current assets / (liabilities)	
Inventory	2.2
Trade and other receivables	2.1
Trade and other payables	(2.5)
Provisions	(3.0)
Lease liabilities	(0.2)
Deferred tax liabilities	(1.2)
Net assets of acquiree	3.3
Consideration paid	
Cash consideration	8.3
Goodwill	5.0

The acquisition balance sheet above represents the final acquisition balance after substantially completing the initial measurement period of 12 months since acquisition. During the final six months of the year there were opening balance sheet adjustments as compared to the preliminary acquisition balance sheet disclosed with the half year results. These adjustments were to increase provisions by £0.4 million reduce trade and other receivables by £0.1 million, reduce deferred tax liabilities by £0.1 million and to increase goodwill by £0.4 million.

5 Goodwill

£million

Cost	
At 1 January 2021	155.7
Net exchange adjustment	0.8
At 31 December 2021	156.5
Additions	5.0
Net exchange adjustment	11.3
At 31 December 2022	172.8
Impairment	
At 1 January 2021 and at 31 December 2021	-
Impairment	17.7
At 31 December 2022	17.7
Net book value	
At 31 December 2022	155.1
At 31 December 2021	156.5

The £5.0 million addition in goodwill in 2022 arose upon the acquisition of Power and Control business of Ferranti Technologies Ltd and is considered part of the Power Solutions CGU.

The goodwill generated as a result of acquisitions represents the premium paid in excess of the fair value of all net assets, including intangible assets, identified at the point of acquisition. The future improvements applied to the acquired businesses, achieved through a combination of revised strategic direction, operational improvements and investment are expected to result in improved profitability of the acquired businesses during the period of ownership. The combined value achieved from these improvements is expected to be in excess of the value of goodwill acquired.

Goodwill net of impairment is attributed to the following CGUs in the divisions shown below:

£million	2022	2021
Power and Connectivity:		
Power Solutions	65.6	57.0
IoT Solutions	9.9	27.6
Global Manufacturing Solutions:		
Global Manufacturing Solutions	19.5	18.4
Sensors and Specialist Components:		
Resistors	34.2	30.5
Sensors	25.9	23.0
	155.1	156.5

Impairment Testing

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. The key assumptions for the value in use calculations are those regarding the discount rates, growth rates and operating cash flow projections over a forecast period. The growth rate assumed after this forecast period is based on long-term GDP projections capped at long term growth rates (which are approximated as long-term inflation rates) of the primary market for the CGU, in perpetuity. Long-term growth rates are based on long-term forecasts for growth in the geography in which the group of CGUs operates. Long-term growth rates are determined using long-term growth rate forecasts that take into account the international presence and the markets in which each business operates.

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.

5 Goodwill continued

In determining the cost of equity, the Capital Asset Pricing Model ("CAPM") has been used. Under CAPM, the cost of equity is determined by adding a risk premium, based on an industry adjustment, to the expected return of the equity market above the risk-free return. The relative risk adjustment reflects the risk inherent in each group of CGUs relative to all other sectors and geographies on average.

The cost of debt is determined using a risk-free rate based on the cost of government bonds, and an interest rate premium equivalent to a corporate bond with a similar credit rating to TT Electronics Plc.

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.

Management has detailed plans in place reflecting the latest budget and strategic growth plan. The pre-tax discount rates and periods of management approved forecasts are shown below. The discount rates used in the annual impairment test for the year ended 31 December 2022 are shown below:

	2022			2021		
	Pre-tax discount rate	Long term growth rate	Period of forecast (years)	Pre-tax discount rate	Long term growth rate	Period of forecast (years)
Power Solutions	13.4%	1.7%	5	12.2%	1.7%	5
IoT Solutions	14.3%	1.6%	5	12.2%	1.6%	5
Global Manufacturing Solutions	13.8%	1.9%	5	13.2%	1.8%	5
Resistors	13.5%	1.6%	5	13.3%	1.6%	5
Sensors	13.2%	1.7%	5	13.8%	1.7%	5

The date of the annual impairment test was 30 September 2022 to align with internal forecasting and review processes.

Based on the impairment testing performed, an impairment charge of £17.7 million was recorded in 2022 (2021: £nil) in respect of the IoT Solutions CGU as a result of revised forecasts for the business in the context of a weaker macro-economic environment and the impact of the evolution of the COVID pandemic on the potential demand for COVID testing, coupled with an increase in discount rates. The impairment charge is shown as an adjusting item (see note 7) in conjunction with related assets in the IoT Solutions CGU. No impairment losses have been recognised in the current or prior year in respect of the other CGUs as recoverable amounts exceed carrying value of assets in respect of those businesses. Sensitivity analysis has been provided in respect of reasonably possible changes to key assumptions where applicable.

Key assumptions in the value in use test are the projected performance of the CGUs based on sales growth rates, cash flow forecasts and discount rate. Forecast sales growth rates are based on past experience adjusted for the strategic direction and near-term investment priorities within each CGU. The key assumptions include externally obtained growth rates in the key markets disclosed in note 3 and customer demand for product lines. Cash flow forecasts are determined based on historic experience of operating margins, adjusted for the impact of changes in product mix and cost-saving initiatives, including the impact of our restructuring projects and cash conversion based on historical experience.

The recoverable amounts associated with the goodwill balances which are based on these performance projections and current forecast information do not indicate that any goodwill balance, other than that for IoT Solutions, 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

Sensitivity analysis has been performed on the key assumptions; operating cash flow projections, revenue growth rates and discount rate. Cash flows can be impacted by changes to sales prices, direct costs and replacement capital expenditure; individually they are not significant assumptions. Forecast sales growth rates are based on past experience adjusted for the strategic direction and near-term investment priorities. Cash flow forecasts are determined based on historic experience of operating margins, adjusted for the impact of changes in product mix and cost-saving initiatives, including the impact of our committed restructuring projects and cash conversion based on historical experience.

5 Goodwill continued

Other than in the case of the IoT Solutions CGU where an impairment has been recognised, the Directors have not identified reasonably possible changes in significant assumptions that would cause the carrying value of recognised goodwill to exceed its recoverable amount.

As discussed in note 2, determination of the recoverable amount involves management judgement on highly uncertain matters, particularly with regard to future growth prospects in the markets in which the CGUs operate, the level of competition and discount factors. Revenue forecasts for the IoT Solutions CGU have reduced and a higher discount factor has been applied in 2022. As a result the recoverable amount of the IoT Solutions CGU was £43.8 million resulting in an impairment to goodwill of £17.7 million.

In accordance with IAS 36 'Impairment of Assets' sensitivity analysis has been carried out as illustrated below:

- a further 1 per cent increase in the discount rate would result in a reduction in value in use (and additional impairment) of £3.3 million.
- a further 1 per cent decrease in the long-term growth rate (driven by delayed product launches) would result in a reduction in value in use (and additional impairment) of £2.2 million.
- a further 5 per cent reduction in the terminal value of operating profit (driven by lower than anticipated margin) would result in a reduction in value in use (and additional impairment) of £1.4 million.

6 Finance costs and finance income

£million	2022	2021
Interest income	0.1	0.2
Net interest income on pension schemes in surplus	2.2	0.9
Finance income	2.3	1.1
Interest expense	7.1	3.1
Interest on lease liabilities	0.8	0.8
Net interest expense on pension schemes in deficit	0.1	0.1
Amortisation of arrangement fees	1.0	0.4
Finance costs	9.0	4.4
Net finance costs	6.7	3.3

Within 'Amortisation of arrangement fees' is an expense of £0.5m relating to the acceleration of capitalised loan arrangement fees following a refinancing activity as described in note 11.

7 Adjusting items

As described in note 2, adjusted profit measures are an alternative performance measure used by the Board to monitor the operating performance of the Group.

£million	2022 Operating profit	2022 Tax	2021 Operating profit	2021 Tax
As reported	(3.4)	(3.1)	19.3	(3.2)
Restructuring and other				
Restructuring	(6.4)	1.2	(9.7)	1.2
Property disposals	-	-	1.7	(0.2)
Pension restructuring costs	(2.0)	0.4	(1.5)	0.2
Pension enhanced transfer value exercise	(11.8)	2.2	-	-
Pension increase exchange exercise	-	-	1.8	(0.2)
Other items	-	-	(0.1)	-
	(20.2)	3.8	(7.8)	1.0
Asset impairments				
Goodwill impairment	(17.7)	-	-	-
Other impairments	(5.4)	1.0	-	-
	(23.1)	1.0	-	-
Acquisition and disposal related costs				
Amortisation of intangible assets arising on business combinations	(6.0)	0.3	(5.1)	(0.3)
Torotel acquisition and integration costs	(0.1)	-	(1.5)	0.6
Covina acquisition and integration costs	-	-	(0.2)	0.1
Ferranti Power and Control acquisition and integration costs	(1.1)	0.2	(0.5)	0.2
Tax losses relating to the disposal of the transportation division	-	-	-	1.3
Other acquisition and disposal related costs	-	-	(0.4)	0.1
	(7.2)	0.5	(7.7)	2.0
Total items excluded from adjusted measure	(50.5)	5.3	(15.5)	3.0
Adjusted measure	47.1	(8.4)	34.8	(6.2)

Restructuring and other £20.2 million (2021: £7.8 million)

Restructuring costs charged in the period primarily relate to cost of the Group's self-help programme which began in 2020 and it is now substantially complete.

Restructuring costs of £6.4 million comprise £2.7 million relating to the restructure of the North America Resistors business, which includes pre-production costs at our new Plano facility; £2.0 million relating to closure of our site in Lutterworth, UK, £1.5 million relating to the relocation of production facilities from Covina, USA to Kansas, USA and £0.2 million relating to the relocation of production facilities from Medina, USA to Minneapolis, USA.

Pension enhanced transfer value exercise of £11.8 million represents the settlement cost of a liability management exercise undertaken during the year ahead of the buy-in completed in 2022. Pension restructuring costs of £2.0 million relate to costs associated with the enhanced transfer value exercise and scheme buy-in (see note 12).

Prior period restructuring costs of £7.8 million primarily comprised £8.0 million, net of a £1.7 million gain on property disposals, relating to restructuring the Group's footprint, £1.5 million relating to preparing the Group's pension scheme for buy-in, £0.1 million relating to other costs, and a £1.8 million gain relating to a 'Pensions Increase Exchange' exercise whereby eligible current pension members were offered the option to exchange their non statutory pension increases for an additional amount of level pension.

7 Adjusting items continued

Asset impairments £23.1 million (2021: £nil)

During the year an impairment of £5.4 million associated with Virolens related assets (£2.8 million of inventory, £1.5 million of plant and equipment, £0.8 million of other debtors and £0.3 million of product development costs) was recognised, reducing the carrying value to £nil.

Following a detailed impairment review of goodwill completed during the year an impairment charge of £17.7 million (2021: £nil) was recognised to reduce the carrying value of the IoT Solutions CGU to the recoverable amount.

The impairments of both Virolens related assets and goodwill were as a result of revised forecasts in the context of a weaker macro-economic environment and the impact of the evolution of the COVID pandemic on the potential demand for COVID testing. The impairment charges were recognised within the Power and Connectivity segment.

Acquisition and disposal related costs £7.2 million (2021: £7.7 million)

Acquisition and disposal related costs charged in the year comprise £6.0 million (2021: £5.1 million) of amortisation of acquired intangible assets; £0.3 million (2021: £0.5 million) of acquisition costs and £0.8 million of integration costs relating to the acquisition of the Power and Control business of Ferranti Technologies Ltd. based in Oldham, UK and £0.1 million of integration costs of Torotel, Inc. (2021: £1.5 million). The prior period also included £0.4 million of costs of terminated acquisitions and £0.2 million of integration costs of the aerospace and defence power supply business of Excelitas Technologies Corp based in Covina, California.

8 Taxation

a) Analysis of the tax charge for the year

£million	2022	2021
Current tax		
Current income tax charge	9.1	5.1
Adjustments in respect of current income tax of previous year	(0.5)	(0.9)
Total current tax charge	8.6	4.2
Deferred tax		
Relating to origination and reversal of temporary differences	(3.4)	(0.4)
Change in tax rate	(1.2)	0.8
Adjustments in respect of deferred tax of previous years	(0.9)	(1.4)
Total deferred tax credit	(5.5)	(1.0)
Total tax charge in the income statement	3.1	3.2

The applicable tax rate for the period is based on the UK standard rate of corporation tax of 19% (2021: 19%). Overseas taxation is calculated at the rates prevailing in the respective jurisdictions. The Group's effective tax rate for the year was -30.7% (the adjusted tax rate was 20.8%, see section 'Reconciliation of KPIs and non IFRS measures').

The enacted UK tax rate applicable since 1 April 2017 to current year profits is 19%. An increase in UK rate has been enacted to occur from 1 April 2023 to 25%. In 2022 the impact on deferred tax as a result of this change was £1.2 million recognised in the income statement.

Included within the total tax charge above is a £5.3 million credit relating to items reported outside adjusted profit (2021: £3.0 million credit).

b) Reconciliation of the total tax charge for the year

£million	2022	2021
(Loss)/profit before tax from continuing operations	(10.1)	16.0
(Loss)/profit before tax multiplied by the standard rate of corporation tax in the UK of 19% (2021: 19%)	(1.9)	3.0
Effects of:		
Impact on deferred tax arising from changes in tax rates	(1.2)	0.8
Overseas tax rate differences	0.8	0.7
Items not deductible for tax purposes or income not taxable	8.8	2.2
Adjustment to current tax in respect of prior periods	(0.5)	(0.9)
Current year tax losses and other items not recognised	(2.0)	(1.2)
Adjustments in respect of deferred tax of previous years	(0.9)	(1.4)
Total tax charge reported in the income statement	3.1	3.2

Items not deductible for tax purposes or income not taxable includes an impairment of IoT Solutions CGU not deductible for tax purposes of £9.6 million.

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.

8 Taxation continued

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, 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 current tax liability at 31 December 2022 includes tax provisions of £8.4 million (2021: £6.9 million). The Group believes the range of reasonable possible outcomes in respect of these exposures is tax liabilities of up to £11.1 million (2021: £9.0 million).

9 Dividends

	2022 pence per share	2022 £million	2021 pence per share	2021 £million
Final dividend paid for prior year	3.80	6.7	4.70	8.2
Interim dividend declared for current year	2.00	3.5	1.80	3.2

The Directors recommend a final dividend of 4.3 pence per share. The Group has a progressive dividend policy. The final dividend will be paid on 26 May 2023 to shareholders on the register on 28 April 2023.

10 Earnings per share

Basic earnings/(loss) per share is calculated by dividing the profit/(loss) attributable to owners of the Company by the weighted average number of shares in issue during the year.

Pence	2022	2021
(Loss)/Earnings per share		
Basic	(7.5)	7.3
Diluted	(7.5)	7.2

The numbers used in calculating adjusted, basic and diluted (loss)/earnings per share are shown below. Adjusted earnings per share is based on the adjusted profit after interest and tax.

Adjusted earnings per share:

£million (unless otherwise stated)	2022	2021
Group		
(Loss)/profit for the year attributable to owners of the Company	(13.2)	12.8
Restructuring and other	20.2	7.8
Asset impairments	23.1	-
Acquisition and disposal related costs	7.2	7.7
Tax effect of above items (see note 7)	(5.3)	(3.0)
Adjusted earnings	32.0	25.3
Adjusted earnings per share (pence)	18.2	14.5
Adjusted diluted earnings per share (pence)	18.0	14.2

10 Earnings per share continued

The weighted average number of shares in issue is as follows (new shares issued in the year described in note 13):

million	2022	2021
Basic	175.8	174.8
Adjustment for share awards	2.0	3.3
Diluted	177.8	178.1

As the Group made a statutory loss, diluted statutory EPS has been calculated using the basic weighted average number of shares.

11 Reconciliation of net cash flow to movement in net debt

Net cash of £61.3 million (2021: £67.2 million) comprises cash at bank and in hand of £65.0 million (2021: £68.3 million) and overdrafts of £3.7 million (2021: £1.1 million).

£million	Net cash	Lease liabilities	Borrowings	Net debt
At 1 January 2021	69.0	(15.9)	(137.0)	(83.9)
Cash flow	(2.8)	-	-	(2.8)
Repayment of borrowings		-	86.9	86.9
Proceeds from borrowings	-	-	(96.4)	(96.4)
Payment of lease liabilities	-	3.9	-	3.9
New leases	-	(10.8)	-	(10.8)
Amortisation of loan arrangement fees	-	-	0.2	0.2
Exchange differences	1.0	0.2	(0.8)	0.4
At 31 December 2021	67.2	(22.6)	(147.1)	(102.5)
Cash flow	(9.2)	-	-	(9.2)
Businesses acquired	-	(0.2)	-	(0.2)
Repayment of borrowings	-	-	149.3	149.3
Proceeds from borrowings	-	-	(174.3)	(174.3)
Payment of lease liabilities	-	4.3	-	4.3
New leases	-	(2.3)	-	(2.3)
Net movement in loan arrangement fees	-	-	0.7	0.7
Exchange differences	3.3	(2.3)	(5.2)	(4.2)
At 31 December 2022	61.3	(23.1)	(176.6)	(138.4)

The Group's primary source of finance is the £147.4 million committed revolving credit facility (RCF), and an uncommitted accordion facility of £32.6 million, which was signed in June 2022 to replace the previously existing RCF. The Group's RCF is payable on a floating rate basis above GBP SONIA, USD SOFR or EURIBOR depending on the currency of the loan and will mature in June 2026 with a one year extension option which expires in May 2023. As at 31 December 2022, £103.6 million (31 December 2021: £73.4 million) of the facility was drawn down. Arrangement fees with amortised cost of £2.0 million (2021: £1.3 million) have been netted off against these borrowings.

In December 2021 the Group issued £75.0 million of unsecured loan notes with £37.5 million maturing in seven years and £37.5 million maturing in 10 years respectively to a collection of three counterparties.

12 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 the Group in respect of defined contribution schemes were £3.2 million (2021: £3.0 million).

Defined benefit schemes

During the year the Group operated two defined benefit schemes in the UK (the TT Group (1993) Pension Scheme 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 October 2022 the Trustees of the Southern & Redfern Ltd Retirement Benefits Scheme completed a buy-out of the scheme with a leading insurer, securing the pensions of members for the future. As a result, the assets (£0.6 million) and liabilities (£0.6 million) of the scheme have been derecognised. There was no impact on the income statement or OCI as a result of the buy-out.

The TT Group scheme commenced in 1993 and increased in size in 2006, 2007 and 2019 through the mergers of former UK 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.

In November 2022, the Trustees of the TT Group Scheme entered into a bulk annuity insurance contract with an insurer in respect of the liabilities of the defined benefit scheme. This type of deal is also known as a 'buy-in'. The insurer, Legal & General, will pay into the Scheme cash matching the benefits due to members. The Trustee is of the opinion that this investment decision is appropriate, reduces the risks in the Scheme and provides additional security for the benefits due to members of the Scheme. The Trustee continues to be responsible for running the Scheme and retains the legal obligation for the benefits provided under the Scheme.

As the buy-in policy is a qualifying insurance asset, the fair value of the insurance policy is deemed to be the present value of the obligations that have been insured. The policy secured matches the benefits due to Scheme members under the Scheme's Trust Deed and Rules.

Since the assets of the Scheme were greater than the premium required to secure the liabilities through the buy-in, the Scheme Is in a net asset position at 31 December 2022 of £31.3 million. The buy-in has resulted in a re-measurement of the Scheme's assets, with a total re-measurement loss of £37.5 million recognised in the Group Statement of Comprehensive Income. A "true-up premium/refund" may be payable to/from the insurer during 2023, subject to a data cleanse exercise to formally agree the final benefits that are covered by the buy-in contract.

Prior to the buy-in, the TT Group scheme exposed the Group to a number of actuarial risks such as longevity risk, currency risk, inflation risk, interest rate risk and market (investment) risk. The buy-in mitigates the majority of these risks and the principal risk remaining is the credit risk associated with Legal & General, which is assessed to be very low.

The last triennial valuation of the TT Group scheme as at April 2019 showed a net surplus of £0.3 million against the Trustee's statutory funding objective. As the scheme was fully funded at the 2019 triennial valuation date, there was no requirement for the Company to pay pension contributions. In addition to the statutory funding objective, the Trustee and Company 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 agreed to pay additional fixed contributions of £5.7 million and £4.4 million in the years 2022 and 2023 respectively. Due to an improvement in the funding position and favourable insurer pricing during 2022 the Company and Trustee began investigating in more detail the possibility of securing the Scheme's liabilities under a buy-in policy. As a result of the plans to secure the Scheme's liabilities under the buy-in policy, the Trustees and Company agreed that there was no requirement for any contributions falling due after 30 September 2022 to be paid to the Scheme after that date. The next triennial valuation of the TT Group scheme, as at April 2022, is expected to be completed by July 2023 and will take account of the new buy-in policy held by the Trustee.

In the year ended 31 December 2022 the Group made no funding contributions to the TT Group (1993) scheme or the Southern & Redfern Ltd Retirement Benefits Schemes.

12 Retirement benefit schemes continued

The Trustee and Company agreed that the Trustee should undertake an exercise during 2022, whereby deferred members were offered an enhanced transfer value option. In the year ended 31 December 2022 a £11.8 million settlement cost was recognised within items excluded from adjusted operating profit as a result of this exercise.

An analysis of the pension surplus/(deficit) by scheme is shown below:

£million	2022	2021
TT Group (1993)	31.3	78.4
Southern & Redfern	-	-
USA schemes	(2.9)	(3.9)
Net surplus	28.4	74.5

Amounts recognised in the consolidated income statement are:

£million	2022	2021
Scheme administration costs	(1.2)	(1.7)
Net (loss)/gain on pension projects (excluded from adjusted operating profit)	(13.8)	0.3
Net interest credit	2.1	0.9

13 Share capital

£million	2022	2021
Issued and fully paid		
176,486,627 (2021: 176,244,624) ordinary shares of 25p each	44.1	44.1

During the period the Company issued 242,003 ordinary shares as a result of share options being exercised under the Sharesave scheme and Share Purchase plans.

The performance conditions of the Long-term Incentive Plan awards issued in 2019 and Restricted Share Plan awards issued in 2019, 2020 and 2021 were met and shares were allocated to award holders from existing shares held by an Employee Benefit Trust for £nil consideration.

The aggregate consideration received for all share issues during the year was £382,814 which was represented by a £60,501 increase in share capital and a £322,314 increase in share premium.

14 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 2022 or 2021 that have affected the financial position or performance of the Group.

Principal risk and uncertainties

The Group continues to be exposed to operational and financial risks and has an established, structured approach to identifying, assessing, and managing those risks. These risks relate to the following areas: general revenue reduction; contractual risks; research and development; people and capability; supplier resilience; IT systems and information; M&A and integration; sustainability, climate change and the environment; health and safety; and legal and regulatory compliance.

Reconciliation of KPIs and non IFRS measures

In accordance with the Guidelines on APMs issued by the European Securities and Markets Authority (ESMA), additional information is provided on the APMs used by the Group below.

To assist with the understanding of earnings trends, the Group has included within its financial statements APMs adjusted operating profit and other adjusted profit measures. The APMs used are not defined terms under IFRS and therefore may not be comparable to similar measures used by other companies. They are not intended to be a substitute for, or superior to, GAAP measures.

Management uses adjusted measures to assess the operating performance of the Group, having adjusted for specific items as detailed in note 7. They form the basis of internal management accounts and are used for decision making, including capital allocation, with a subset also forming the basis of internal incentive arrangements. By using adjusted measures in segmental reporting, this enables readers of the financial statements to recognise how incentive performance is targeted. Adjusted measures are also presented in this announcement because the Directors believe they provide additional useful information to shareholders on comparable trends over time. Finally, this presentation allows for separate disclosure and specific narrative to be included concerning the adjusting items; this helps to ensure performance in any one year can be more clearly understood by the user of the financial statements.

Income statement measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted operating profit	Operating profit	Adjusting items as disclosed in note 7	Adjusted operating profit has been defined as operating profit from continuing operations excluding the impacts of significant restructuring programmes, significant one-off items including property disposals, impairment charges significant in nature and/or value, business acquisition, integration, and divestment related activity; and the amortisation of intangible assets recognised on acquisition. Acquisition and disposal 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. To provide a measure of the operating profits excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Adjusted operating margin	Operating profit margin	Adjusting items as disclosed in note 7	Adjusted operating profit as a percentage of revenue. To provide a measure of the operating profits excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Adjusted earnings per share	Earnings per share	See note 10 for the reconciliation and calculation of adjusted earnings per share	The profit for the year attributable to the owners of the Group adjusted to exclude the items not included within adjusted operating profit divided by the weighted average number of shares in issue during the year. To provide a measure of Earnings per Share excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.

Income statement measures continued:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted diluted earnings per share	Diluted earnings per share	See note 10 for the reconciliation and calculation of adjusted diluted earnings per share	The profit for the year attributable to the owners of the Group adjusted to exclude the items not included within adjusted operating profit divided by the weighted average number of shares in issue during the year, adjusted for the effects of any potentially dilutive options. To provide a measure of Earnings per Share excluding the impacts of significant items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Organic revenue	Revenue	See note APM 1	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, acquisitions and disposals. This measures the underlying growth or decline of the business. To provide a comparable view of the revenue growth of the business from period to period excluding acquisition and foreign exchange impacts.
Adjusted effective tax charge	Effective tax charge	See note APM 2	Tax charge adjusted to exclude tax on items not included within adjusted operating profit divided by adjusted profit before tax, which is also adjusted to exclude the items not included within adjusted operating profit. To provide a tax rate which excludes the impact of adjusting items such as restructuring or acquisition related activity and other items such as amortisation of intangibles which may not be present in peer companies which have grown organically.
Return on invested capital	None	See note APM 3	Adjusted 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 and is calculated at average rates taking twelve monthly balances. This measures how efficiently assets are utilised to generate returns with the target of exceeding the cost to hold the assets.

Statement of financial position measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Net debt	Cash and cash equivalents less borrowings and lease liabilities	Reconciliation of net cash flow to movement in net debt (note 11)	Net debt comprises cash and cash equivalents and borrowings including lease liabilities. This is additional information provided which may be helpful to the user in understanding the liquidity and financial structure of the business.
Leverage (bank covenant)	Cash and cash equivalents less borrowings	N/A	Leverage is the net debt defined as per the banking covenants (net debt (excluding lease liabilities) adjusted for certain terms as per the bank covenants) divided by EBITDA excluding items removed from adjusted profit and further adjusted for certain terms as per the bank covenants. Provides additional information over the Group's financial covenants to assist with assessing solvency and liquidity.
Net capital and development expenditure (net capex)	None	See note APM 4	Purchase of property, plant and equipment net of government grants (excluding property disposals), purchase of intangibles (excluding acquisition intangibles) and capitalised development. A measure of the Group's investments in capex and development to support longer term growth.
Dividend per share	Dividend per share	Not applicable	Amounts payable by dividend in terms of pence per share. Provides the dividend return per share to shareholders.

Statement of cash flows measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition and purpose
Adjusted operating cash flow	Operating cash flow	See note APM 5	Adjusted operating profit, excluding depreciation of property, plant and equipment (depreciation of right-of-use assets is not excluded) and amortisation of intangible assets (amortisation of acquisition intangibles is not excluded) less working capital and other non-cash movements. An additional measure to help understand the Group's operating cash generation.
Adjusted operating cash flow post capex	Operating cash flow	See note APM 6	Adjusted operating cash flow less net capital and development expenditure. An additional measure to help understand the Group's operating cash generation after the deduction of capex.
Working capital cashflow	Cashflow - inventories payables, provisions and receivables	See note APM 7	Working capital comprises of three statutory cashflow figures: (increase)/decrease in inventories, increase/(decrease) in payables and provisions, and (increase)/decrease in receivables. To provide users a measure of how effectively the group is managing its working capital and the resultant impact on liquidity.
Free cash flow	Net increase/ decrease in cash and cash equivalents	See note APM 8	Free cash flow represents cash generated from trading after all costs including restructuring, pension contributions, tax and interest payments. Cashflows to settle share based payment schemes are excluded. Free cash flow provides a measure of how successful the company is in creating cash during the period which is then able to be used by the Group at its discretion.
Cash conversion	None	See note APM 9	Adjusted operating cash flow post capex (less any property disposals which were part of restructuring programmes) divided by adjusted operating profit. Cash conversion measures how effectively we convert profit into cash and tracks the management of our working capital and capital expenditure.
R&D cash spend as a percentage of revenue	None	See note APM 10	R&D cash spend and R&D investment as a percentage of revenue excludes Global Manufacturing Solutions which is a manufacturing services business and therefore has no R&D. To provide a measure of the company's expenditure on R&D relative to its overall size which may be helpful in considering the Group's longer term investment in future product pipeline.

Non-financial measures:

Alternative Performance Measure	Closest equivalent statutory measure	Note reference to reconciliation to statutory measure	Definition
Employee engagement	Not applicable	Not applicable	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). A company is awarded between zero and three stars based on the employee feedback. Provides a measure of employee sentiment and engagement.
Safety performance	Not applicable	Not applicable	Safety performance is defined 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 our facilities worldwide, reflecting our commitment to raising standards globally. Provides users additional information about the Group's commitment and achievements in the area of health and safety.

APM 1 - Organic revenue:

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total
2022 revenue	154.2	323.0	139.8	617.0
Acquisitions	7.9	-	-	7.9
2022 revenue (excluding acquisitions)	146.3	323.0	139.8	609.1
2021 revenue	140.2	220.1	115.9	476.2
Foreign exchange impact	(6.8)	(87.5)	(15.0)	(109.3)
2021 revenue at 2022 exchange rates	147.4	235.5	124.8	507.7
Organic revenue increase (%)	(1%)	37%	12%	20%

£million	Power and Connectivity	Global Manufacturing Solutions	Sensors and Specialist Components	Total
2021 revenue	140.2	220.1	115.9	476.2
Acquisitions	15.2	-	-	15.2
2021 revenue (excluding acquisitions)	125.0	220.1	115.9	461.0
2020 revenue	125.1	197.5	109.2	431.8
Foreign exchange impact	(3.4)	(4.1)	(5.2)	(12.7)
2020 revenue at 2021 exchange rates	121.7	193.4	104.0	419.1
Organic revenue increase (%)	3%	14%	11%	10%

APM 2 – Effective tax charge:

£million	2022	2021
Adjusted operating profit	47.1	34.8
Net interest	(6.7)	(3.3)
Adjusted profit before tax	40.4	31.5
Adjusted tax	(8.4)	(6.2)
Adjusted effective tax rate	20.8%	19.6%

APM 3 – Return on invested capital:

£million	2022	2021
Adjusted operating profit	47.1	34.8
Average invested capital	448.6	382.4
Return on invested capital	10.5%	9.1%

APM 4 - Net capital and development expenditure (net capex):

£million	2022	2021
Purchase of property, plant and equipment	(11.4)	(14.6)
Proceeds from sale of investment property, plant and equipment and capital grants received	0.3	9.3
Capitalised development expenditure	(2.3)	(1.9)
Purchase of other intangibles	(0.6)	(0.5)
Net capital and development expenditure	(14.0)	(7.7)

APM 5 - Adjusted operating cash flow:

£million	2022	2021
Adjusted operating profit	47.1	34.8
Adjustments for:	-	-
Depreciation	13.9	13.6
Amortisation of intangible assets	2.2	2.5
Impairment of property, plant and equipment and intangible assets	-	-
Share based payment expense	4.8	3.8
Other items	0.5	1.1
Increase in inventories	(40.4)	(42.6)
Increase in receivables	(26.3)	(15.7)
Increase in payables and provisions	27.9	42.0
Adjusted operating cash flow	29.7	39.5
Special payments to pension funds	-	(5.5)
Restructuring and acquisition related costs	(11.1)	(15.0)
Net cash generated from operations	18.6	19.0
Net income taxes paid	(5.9)	(4.7)
Net cash flow from operating activities	12.7	14.3

APM 6 - Adjusted operating cash flow post capex:

£million	2022	2021
Adjusted operating cash flow	29.7	39.5
Purchase of property, plant and equipment	(11.4)	(14.6)
Proceeds from sale of property, plant and equipment and government grants received	0.3	9.3
Capitalised development expenditure	(2.3)	(1.9)
Purchase of other intangibles	(0.6)	(0.5)
Adjusted operating cash flow post capex	15.7	31.8

APM 7 – Working capital cashflow:

£million	2022	2021
Increase in inventories	(40.4)	(42.6)
Increase in receivables	(26.3)	(15.7)
Increase in payables and provisions	27.9	42.0
Items reported within other items in the statutory cashflow:		
Increase in provisions over trade receivables	-	1.6
Working capital cashflow	(38.8)	(14.7)

APM 8 – Free cash flow:

£million	2022	2021
Net cash flow from operating activities	12.7	14.3
Net cash flow from investing activities	(22.3)	(8.2)
Add back: Acquisition of business	8.3	0.5
Payment of lease liabilities	(4.3)	(3.9)
Interest paid	(7.5)	(4.0)
Free cash flow	(13.1)	(1.3)

APM 9 – Cash conversion:

£million	2022	2021
Adjusted operating profit	47.1	34.8
Adjusted operating cash flow post capex	15.7	31.8
Exclude: Property disposal proceeds as part of restructuring programmes	-	(9.1)
Adjusted operating cash flow post capex and excluding property disposals	15.7	22.7
Cash conversion	33%	65%

APM 10 - R&D cash spend as a percentage of revenue:

£million	2022	2021
Revenue (excluding GMS)	294.0	256.1
R&D cash spend	11.0	11.4
R&D cash spend as a percentage of revenue	3.7%	4.5%