Renishaw plc
Annual Report and Accounts 2017

RENISHAW
apply innovation™

Introduction

Renishaw is a world-leading metrology company.

With our highly experienced team we are confidently driving our future growth through innovative and patented products and processes, efficient high-quality manufacturing, and the ability to provide local support in a growing number of geographies and markets. 95% of our sales are outside the UK.

Our continuing investment in new product development, plant and equipment, and facilities (c.£100m in the last year) is the key to our confidence in the Group's long-term strategy and prospects. With 4,530 skilled and motivated people, we continue to be at the leading edge of technological innovation.

Strategic report

Governance

Financial statements

Shareholder information

For more information visit:

www.renishaw.com

All dates within this document refer to financial years unless stated otherwise.

At a glance

The Group has 77 locations in 35 countries from where we distribute and support products for our global customer base, with 95% of sales outside the UK.

Who we are

Renishaw is a world-leading metrology company operating in two key business areas, metrology and healthcare. We manufacture our products in the UK, Ireland, India, Germany, USA and France.

What we do

Metrology products:

Our technology solutions help manufacturers to maximise production output, to significantly reduce the time taken to produce and inspect components, and to keep their machines running reliably. In the fields of industrial automation and motion systems, our high-quality position measurement and calibration systems allow machine builders to manufacture highly accurate and reliable products.

Healthcare products:

Our technologies are helping within applications such as craniomaxillofacial surgery, dentistry, neurosurgery, chemical analysis and nanotechnology research. These include engineering solutions for stereotactic neurosurgery, analytical tools that identify and characterise the chemistry and structure of materials, supply of implants to hospitals and specialist design centres for craniomaxillofacial surgery, and products and services that allow dental laboratories to manufacture high-quality dental restorations.

2017 in numbers

£536.8m
Revenue

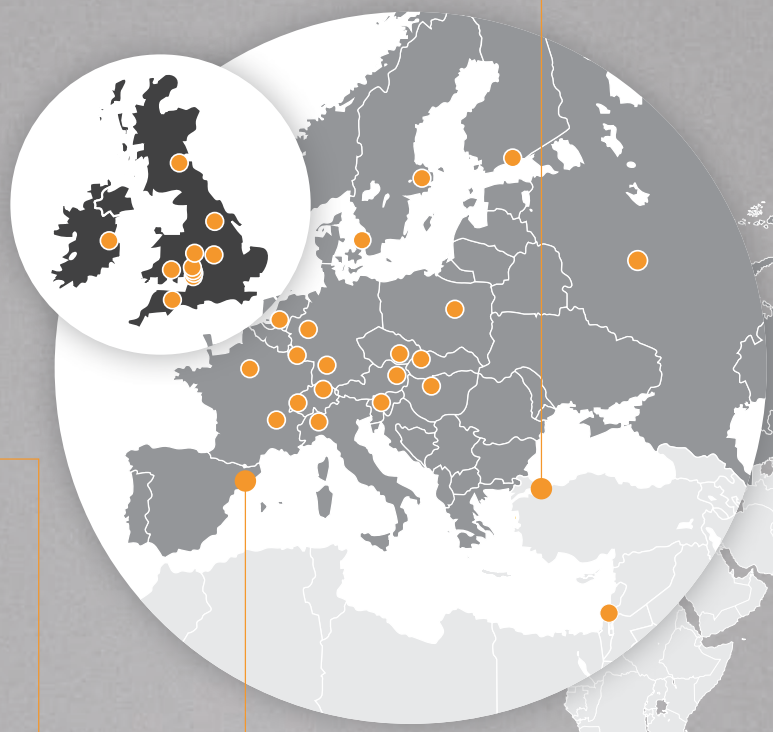
£109.1m
Adjusted profit before tax

£117.1m
Statutory profit before tax

52.0p
Total dividend for the year

4,530
Number of employees as at 30th June 2017

1,600+
Patents – continual innovation in new technologies



Turkey

new subsidiary company established.

Taiwan

new 11,800 sq ft office in Taiwan now formally opened.

Spain

relocated to a new facility three times the size of the former building.

Canada

new Additive Manufacturing Solutions Centre.

UK and Ireland

Locations
13

Metrology revenue (£m)
£23.2m

Healthcare revenue (£m)
£4.4m

84% 16%

Continental Europe

Locations
20

Metrology revenue (£m)
£121.5m

Healthcare revenue (£m)
£8.5m

93% 7%

Other regions

Locations
9

Metrology revenue (£m)
£13.9m

Healthcare revenue (£m)
£2.8m

83% 17%

Far East

Locations
24

Metrology revenue (£m)
£237.9m

Healthcare revenue (£m)
£11.0m

96% 4%

Chairman's statement

I am pleased to report our 2017 annual results with record revenue for the year ended 30th June 2017 of £536.8m compared to a restated £427.2m for last year. The Group's adjusted profit before tax for the year was £109.1m.

Sir David McMurtry
Chairman and Chief Executive

2017 performance

	2017	Restated 2016	Change
Revenue (£m)	**536.8**	427.2	+26%
Adjusted profit before tax (£m)	**109.1**	87.5	+25%
Adjusted earnings per share (pence)	**132.4**	100.4	+32%
Dividend per share (pence)	**52.0**	48.0	+8%
Statutory profit before tax (£m)	**117.1**	61.7	+90%
Statutory earnings per share (pence)	**141.3**	71.8	+97%

New XM-60 multi-axis calibrator.

Performance overview

I am pleased to report our 2017 annual results. We achieved a record turnover of £536.8m with an underlying revenue growth of 14% at constant exchange rates*. We report an adjusted profit before tax of £109.1m* and a statutory profit before tax of £117.1m, an increase of 25% on an adjusted basis. Our total shareholder return during the year was 67%, ranking Renishaw in the top 25 in both the FTSE 250 and FTSE 350.

Renishaw is a long-term business and we remain committed to strategic investments and R&D. In addition, over the past year, we have focused on underperforming business areas resulting in our discontinuing the activities of Renishaw Diagnostics Limited and the spatial measurement business. In spite of the potential headwinds brought about by the uncertainty of Brexit, we remain confident of future growth due to our innovative product base, extensive global sales and marketing presence, and relevance to high-value manufacturing.

Revenue

We achieved record turnover with revenue for the year ended 30th June 2017 of £536.8m, compared with a restated £427.2m for last year, an increase of 26%. There was underlying revenue growth of 14% with the balance arising from exchange rate movements compared to the prior year. The geographical analysis of revenue is as follows:

	2017 £m	Restated 2016 £m	Change %	Constant fx change %
Far East	**248.9**	193.3	+29%	+14%
Europe	**129.9**	110.3	+18%	+12%
Americas	**113.6**	88.0	+29%	+13%
UK	**27.6**	22.8	+21%	+21%
Other regions	**16.8**	12.8	+31%	+30%
Total group revenue	**536.8**	427.2	+26%	+14%

Profit and earnings per share

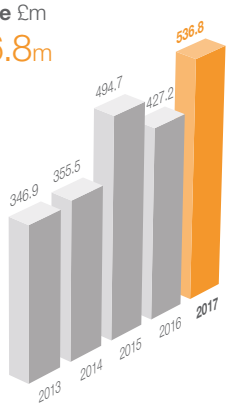
During the year, it was established that certain foreign currency forward contracts used as hedging instruments for future incoming currency cash flows did not qualify for hedge accounting. This has resulted in the prior year profit before tax being restated and as a consequence the Board has introduced an alternative performance measure, adjusted profit before tax, to report the profitability on the basis that all forward contracts are accounted for as effective hedges. This measure will be the basis by which the Board evaluates the Group's performance as it better represents the underlying trading of the Group. The consolidated net assets and cash balances were not impacted by the prior year adjustment and the future cash flows remain unchanged.

The Group's adjusted profit before tax for the year was £109.1m*, an increase of 25% compared to £87.5m last year. Adjusted earnings per share on continuing activities were 132.4p compared to 100.4p last year.

Financial highlights

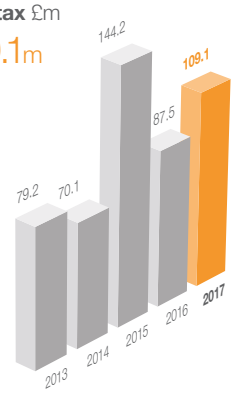
Revenue £m

£536.8m



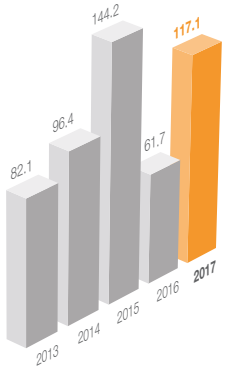
Adjusted profit[1] before tax £m

£109.1m



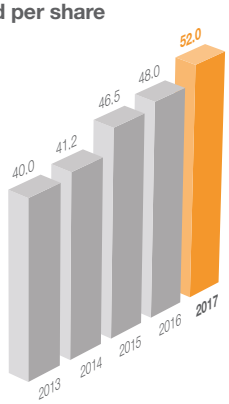
Statutory profit before tax £m

£117.1m



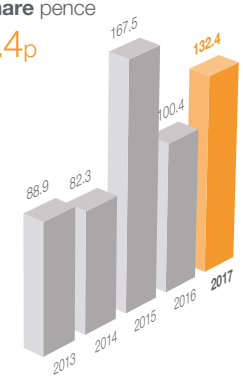
Dividend per share pence

52.0p



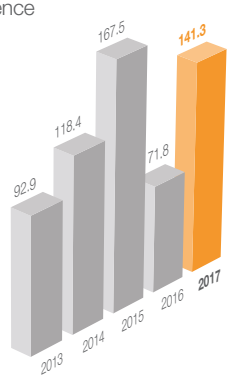
Adjusted earnings[1] per share pence

132.4p



Statutory earnings per share pence

141.3p



[1] note 24, Alternative performance measures, defines how adjusted profit before tax and adjusted earnings per share are calculated.

Chairman's statement continued

Statutory profit before tax for the year was £117.1m compared to a restated £61.7m last year. Statutory earnings per share on continuing activities were 141.3p compared to 71.8p last year.

This year's tax charge on continuing operations amounts to £14.3m (2016 restated: £10.0m) representing a tax rate of 12.2% (2016 restated: 16.2%). The tax rate has benefited from the continued phasing in of the patent box tax regime and a reduction in the UK tax rate applied when calculating certain deferred tax assets and liabilities.

Metrology

Revenue from our metrology business for the year was £503.4m compared with a restated £398.9m last year.

We have experienced revenue growth in all product lines and territories. The geographical analysis of revenue is set out below:

	2017 £m	Restated 2016 £m	Change %
Far East	**237.9**	185.6	+28%
Europe	**121.5**	101.3	+20%
Americas	**106.9**	83.3	+28%
UK	**23.2**	18.1	+29%
Other regions	**13.9**	10.6	+31%
Total group revenue	**503.4**	398.9	+26%

There was strong growth in our encoder, measurement and automation, calibration and coordinate measuring machine (CMM) product lines.

Adjusted operating profit for our metrology business was £115.9m (2016 restated: £90.0m).

We have continued to invest in research and development, with total engineering costs in this business segment of £68.8m (before net capitalised development costs and the R&D tax credit) compared to a restated 2016 of £60.9m, with a number of new product launches during the year.

In our CMM product line, we launched a new, improved surface finish measurement probe for use with our REVO® 5-axis measurement system. The laser calibration product line launched the XM-60 multi-axis calibrator. Designed for the machine tool market, it is a highly accurate laser system used to capture multiple machine errors in a single set-up. In our encoder product line, we launched the VIONiC™ series, a new range of ultra-high accuracy, super-compact all-in-one digital incremental encoders.

The machine tool product line introduced the new SPRINT™ system with SupaScan, bringing the benefits of scanning technology to the mass market. Our additive manufacturing (AM) product line introduced the RenAM 500M machine and opened an additional two AM solutions centres in Germany and the USA.

Healthcare

Revenue from our healthcare business for the year was £33.4m, an increase of 18% over the £28.4m last year. We experienced growth in all our product lines.

Healthcare also saw continued investment in research and development, with total engineering costs in this business segment of £9.2m (before net capitalised development costs and the R&D tax credit) compared to a restated 2016 of £7.9m.

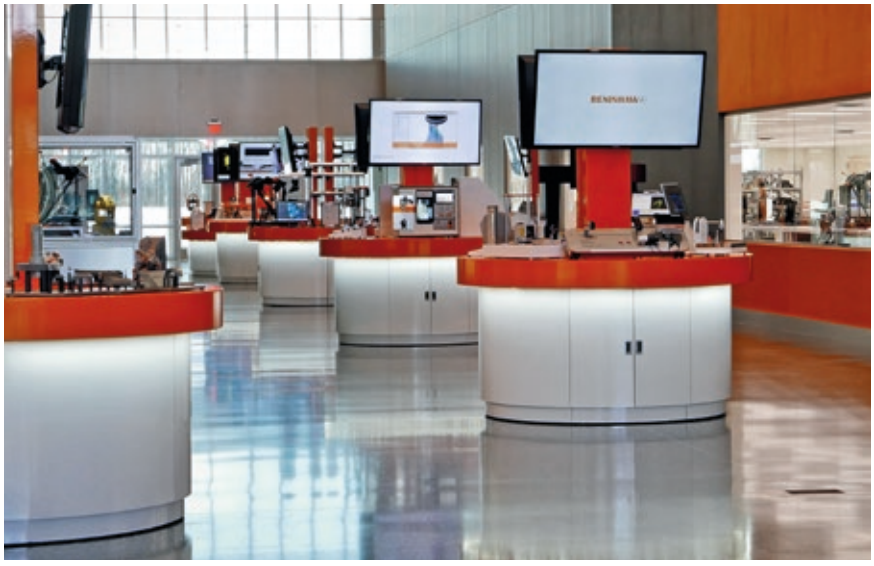
In our spectroscopy product line, we introduced the RA802 pharmaceutical analyser, designed exclusively for the pharmaceutical industry, enabling users to formulate tablets more efficiently by speeding up the analysis of tablet composition and structure.

The neurological product line continued to make sales of our stereotactic robot and associated neuroinspire planning software, with further sales in the UK, USA and Canada.

The medical dental product line has experienced good growth resulting from a continued focus on sales of additive manufacturing technologies into the healthcare market.

SFP2 surface measurement probe inspecting a crankshaft.

RA802 pharmaceutical analyser is a compact benchtop Raman imaging system, designed exclusively for the pharmaceutical industry.



Demonstration area at the new headquarters of Renishaw, Inc.

There was an adjusted operating loss of £7.2m, compared with a restated loss of £3.1m last year. We remain focused on moving this business sector into profit, where we have implemented a number of initiatives and are restructuring the neurological and medical dental businesses.

Discontinued activities

As reported in our October 2016 trading update, the Board decided to discontinue operations at Renishaw Diagnostics Limited (RDL), resulting in the closure of the business. Subsequently, certain assets of the business have been sold.

The RDL business has been accounted for as a discontinued activity, with comparative figures for the previous year being restated accordingly. The loss after tax of £3.3m accounted for as a discontinued activity comprises the running costs for RDL, including cessation costs and impairment write offs for assets and goodwill, less amounts received. The loss after tax for the prior year was £2.5m.

In June 2017, after an extensive review of the spatial measurement business, the Board decided to discontinue this line of business. Including a goodwill impairment charge of £6.7m and provisions for the cessation of the trade, there was a net loss in this business for the year of £10.6m (2016: £1.5m).

Continued investment for long-term growth

The Group continues its strategy to invest for the long term, expanding our global marketing and distribution infrastructure, along with increasing manufacturing capacity and research and development activities. This year saw the completion of our new USA headquarters near Chicago and the sale of the previous premises. New facilities have also been completed in Detroit (USA) with expansion and refurbishment in Spain, Sweden, Hungary, Germany and France. We also converted our representative office in Turkey into a trading subsidiary to facilitate solution selling in the territory.

Our workforce at the end of June 2017 was 4,530, an increase of 244 in the year, of which 91 were apprentices and graduates taken on as part of our on-going commitment to train and develop skilled resource for the Group in the future.

Capital expenditure on property, plant and equipment for the year was £42.6m, of which £24.2m was spent on property and £18.4m on plant and equipment.

Working capital

Group inventory decreased from £95.0m at the start of the year to £87.7m. We continue to focus on working capital management whilst remaining committed to our policy of holding sufficient finished inventory to ensure customer delivery performance, given our short order book of approximately five weeks. Trade debtors increased from £114.9m to £137.5m, with debtor days outstanding at the end of the current year at 73 days (2016: 70 days).

Net cash balances at 30th June 2017 were £51.9m, compared with £21.3m at 30th June 2016. Additionally, there is an escrow account of £12.9m (2016: £15.3m) relating to the provision of security to the UK defined benefit pension scheme.

Directors and employees

Now that Will Lee has settled into his role as Group Sales and Marketing Director since his appointment earlier in the year, he will take over responsibility from John Deer for chairing the International Sales & Marketing Board from the start of the new financial year.

The directors would like to express their thanks to all employees for their invaluable support and contribution during the year.

Investor communications

Our fourth investor day was held on 11th May 2017, for existing and potential new investors. This event involves presentations on group strategy, business segments and product lines as well as tours covering the Group's activities and an opportunity to meet the Board and senior management. There was also a Q&A session with the Board. The event was very well attended, and provided shareholders with another opportunity, in addition to the AGM, half-year and full-year webcasts, to learn more about Renishaw's business and strategy.

Carwyn Jones, First Minister of Wales, opened the Healthcare Centre of Excellence at Miskin.

VIONiC digital all-in-one incremental encoder.

Official opening of Renishaw (Taiwan) Inc.'s new office performed by senior Renishaw managers, government officials and representatives from Taiwanese industry.

Chairman's statement continued

Outlook

The Group is in a strong financial position and continues to invest in the development of new products and applications, along with targeted investment in production, and sales and marketing facilities around the world. We have experienced strong growth in 2017 and whilst noting ongoing uncertainty surrounding Brexit and currency exchange rate volatility, your directors remain confident in the long-term prospects for the Group and at this early stage in the year anticipate growth in both revenue and profits in the current financial year.

Dividend

A final dividend of 39.5p net per share will be paid on 25th October 2017, to shareholders on the register on 22nd September 2017, giving a total dividend of 52.0p for the year, an increase of 8.3% over last year's 48.0p.

Sir David McMurtry
Chairman and Chief Executive
27th July 2017

*Previous year figures have been restated for the following:

1. The results of Renishaw Diagnostics Limited and the spatial measurement business have been excluded, as these businesses have been reclassified as discontinued activities.
2. The R&D tax credit, previously accounted for within the income tax expense line, has been reclassified to cost of sales, thereby showing it as part of the profit before tax. This reclassification increased the profit before tax by £2.4m for the year ended 30th June 2016.
3. It has been established that certain foreign currency forward contracts used as hedging instruments for future incoming currency cash flows did not qualify for hedge accounting as they did not meet the hedge effectiveness criteria set out in the International Accounting Standard IAS 39 'Financial Instruments: Recognition and Measurement'. To ensure technical compliance with this standard it has been necessary to restate the 2016 financial statements resulting in a £25.8m reduction to the profit before tax for that year and a corresponding increase in other comprehensive income. The consolidated net assets and cash balances were not impacted by the prior year adjustment and the future cash flows remain unchanged.

Alternative performance measures

Alternative performance measures are – Revenue at constant exchange rates, Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit.

Revenue at constant exchange rates is defined as revenue recalculated using the same rates as were applicable to the previous year and excluding forward contract gains and losses.

Revenue at constant exchange rates

	2017 £m	2016 £m
Statutory revenue as reported	**536.8**	427.2
Adjustment for exchange rate movements and forward contract gains and losses	**(52.0)**	(2.6)
Revenue at constant exchange rates	**484.8**	424.6

Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit are after excluding gains and losses in fair value from forward currency contracts which did not qualify for hedge accounting. The amounts shown below as reported in revenue represent the amount by which revenue would change had all the derivatives qualified as eligible for hedge accounting.

Adjusted profit before tax

	2017 £m	2016 £m
Statutory profit before tax	**117.1**	61.7
Fair value gains and losses on financial instruments not effective for cash flow hedging:		
- reported within revenue	**(11.6)**	2.4
- reported as losses in the fair value of financial instruments	**3.6**	23.4
Adjusted profit before tax	**109.1**	87.5

Adjusted earnings per share and adjusted operating profit are calculated using the same adjustments. The Board have used these alternative performance measures as they consider them to be a more relevant and reliable assessment of the performance of the group (see note 24).

Our business model

We identify customer needs and then apply innovative engineering to deliver successful solutions.

Key performance indicators

ⓘ Our key performance indicators are shown on page 23.

Risks and uncertainties

ⓘ Information on the risks associated with our business and how we manage them is contained on pages 50 to 53.

Our markets

We develop innovative products that significantly advance our customers' operational performance – from improving manufacturing efficiencies and raising product quality, to maximising research capabilities and improving the efficacy of medical procedures.

Our products serve truly diverse markets across a wide range of industries, customer types and geographic regions. From the manufacture of jet engines and wind turbines, through to dentistry and brain surgery, our products, and our people who service them, are making a real difference to the capabilities of our manufacturing and healthcare clients. These benefits are extended to the end-consumer of our clients' products and services, whether using a smartphone, driving a car, riding a mountain bike, or having a new dental crown fitted, many of these products rely on Renishaw's technology and applications expertise.

As Sir David McMurtry has said, "We are confident that there are not many modern-day planes, trains or automobiles in the world that have not been touched in some way by Renishaw products."

Aerospace

New aircraft production to meet growing global demand for civil air transport.

New fuel-efficient engines with complex parts requiring faster measurement.

Improvements to fuel efficiency by minimising airframe weight.

See pages 14–15

Automotive

Continuing investment in manufacturing capacity to meet growing global demand.

Improved fuel efficiency requires tighter tolerances on powertrain components.

Cost efficiencies and automated processes required throughout the supply chain.

See pages 16–17

Consumer products

Ever shorter product life cycles require flexible manufacturing systems.

New generations of electronic devices demand precision manufacturing systems for form and function.

See pages 40–41

Power generation

Manufacture of components for civil nuclear, wind and solar energy.

Increasing focus on maximising output from machinery used in power generation.

Increasing research into energy storage.

See pages 64–65

On these two pages we have listed some of our principal markets and the specific key drivers of growth within those markets for our products. However, there are more generic market growth drivers that are positive for our business:

- Global skills shortages – increased investments in automation and user-friendly technology.
- Rising energy costs – increased demand for products that maximise output.
- Focus on reducing emissions and waste – increased demand for high performance products with ever tighter manufacturing tolerances and products that help minimise waste and rework.
- Population growth and rising incomes – increased consumption in our principal markets.
- Life expectancy rising globally – increased demand for healthcare products and continuing demand for consumer products.

We are also increasingly spreading risk through the diversification of our applications for product lines, our customer base and our routes to market.

Renishaw's business has transitioned over recent years from primarily being a supplier of products to capital equipment manufacturers, to becoming much more focused on delivering a full solution directly to end-users. Our experience in our core product lines, which has highlighted that our global customers need assistance in solving their problems, is being carried across into our newer offerings.

Today, many of our product lines including measurement and automation, additive manufacturing and healthcare lines are primarily sold direct to the end-user. This helps to build brand loyalty and open up new revenue opportunities including hardware and software upgrades, the cross-selling of complementary products and maintenance contracts.

Our business focus is to provide solutions for our customers across these highlighted markets and to be seen as a trusted technology partner meeting their needs.

Agriculture

Increasing global demand for food products from developing nations.

Increasing global demand for biofuels.

Greater investment in machinery for intensive farming capabilities and 'Smart Farming'

See pages 42–43

Construction

Major infrastructure projects driving heavy equipment sales.

Skills shortages requiring more automation in equipment manufacturers.

Healthcare

Neurological disorders require highly precise surgical therapies.

Growing demand for cosmetic dentistry with superior aesthetics.

Growing demand for patient-specific implants.

See pages 20–21

Resource exploration

Equipment manufactured to stringent safety requirements requires accurate, cost-effective and traceable processes.

Non-renewable resources require exploration in demanding terrains and appropriate surveying tools.

Global population growth and urbanisation drive long-term demand for fossil fuels.

Our business sectors – Metrology

Our metrology products help manufacturers to maximise production output, significantly reduce the time taken to produce and inspect components, and keep their machines running reliably. In the fields of industrial automation and motion systems, our position measurement and calibration systems allow machine builders to manufacture highly accurate and reliable products.

The product range includes the following:

Co-ordinate measuring machine (CMM) products

Sensors, software and control systems for three-dimensional CMMs, including touch-trigger and scanning probes, automated probe changers, motorised indexing probe heads and 5-axis measurement systems, which enable the highly accurate measurement of manufactured components and finished assemblies.

Machine tool probe systems

Sensors and software for computer numerically controlled (CNC) metal-cutting machine tools that allow the automation of setting and on-machine measurement operations, leading to more productivity from existing machines and reductions in scrap and rework. These include laser tool setters, contact tool setters, tool breakage detectors, touch probes, contact scanning systems and high-accuracy inspection probes.

Machine tool scanning probe system.

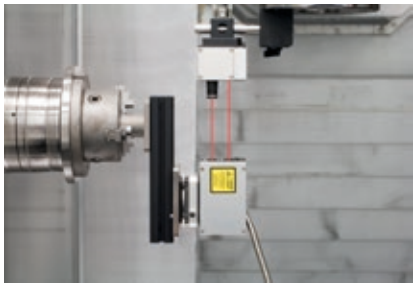
Styli for probe systems

Precision styli that attach to probe sensors for CMMs, machine tools and Equator™ gauging systems to ensure that accurate measurement data is acquired at the point of contact.

Five-axis measurement system for CMMs.

Performance testing products

Calibration and testing products to determine the positioning accuracy of a wide range of industrial and scientific machinery to international standards, including a laser interferometer, rotary axis calibrator, wireless telescoping ballbar and software for data capture and analysis.



Laser calibration system testing multi-axis machine tool.

Gauging

Equator™ enables process control by delivering highly repeatable, thermally insensitive, versatile and reprogrammable gauging to the shop floor, both as a standalone device and as part of an automated manufacturing cell. Combined with IPC (intelligent process control) software, Equator provides the functionality to fully automate tool offset updates in CNC manufacturing processes.

Fixtures

Modular and custom fixtures used to hold parts securely for dimensional inspection on CMM, vision and gauging systems.

Fixturing system for Equator gauge.

Metrology revenue +26%

£503.4m

Metrology adjusted operating profit +29%

£115.9m

Percentage of group revenue

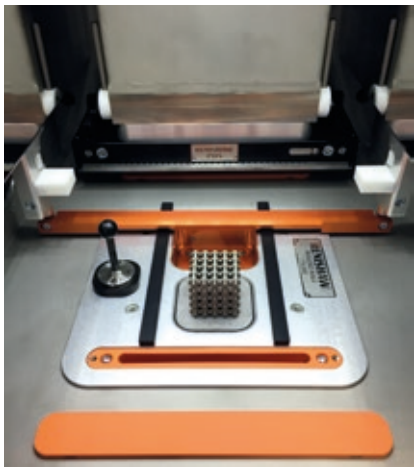
94%

Position encoders

Position encoders that ensure accurate linear and rotary motion control in a wide range of applications from electronics, flat panel displays, robotics and semiconductors to medical, precision machining and print production. These include magnetic encoders, incremental optical encoders, absolute optical encoders and laser interferometer encoders.

Additive manufacturing (AM)

Advanced metal AM systems for direct manufacturing of 3D-printed metallic components. A total solution is offered from systems, materials, ancillaries and software through to consultancy, training and support for a range of industries including industrial, healthcare and mould tooling.



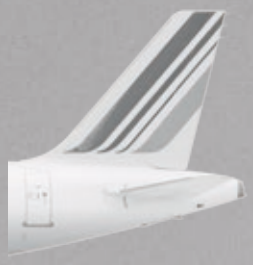
Reduced build volume accessory for additive manufacturing systems.

Vacuum casting

Vacuum casting machines from entry-level to high capacity, for rapid prototyping and production of polymer end-use parts.

Aerospace

The aerospace sector continues to be a key market. The need for 41,000 new commercial aircraft by 2036 is forecast to meet growing demands and the replacement of aircraft within the current commercial fleet. Renishaw products are used heavily in the aerospace sector and the drive to 'lightweight' components is generating strong interest in additive manufacturing.



Advanced manufacture of control surfaces

Adaptive machining relies on probing technology and advanced software to enable the economic production of aircraft control surfaces (e.g. flaps and rudders) with complex geometries.

Eurofighter Typhoon in flight.

Quiet and efficient aero engines

Scanning technology for machine tools and inspection equipment benefits the production and maintenance of a broad range of engine components, including the adaptive machining and precision inspection of blades.

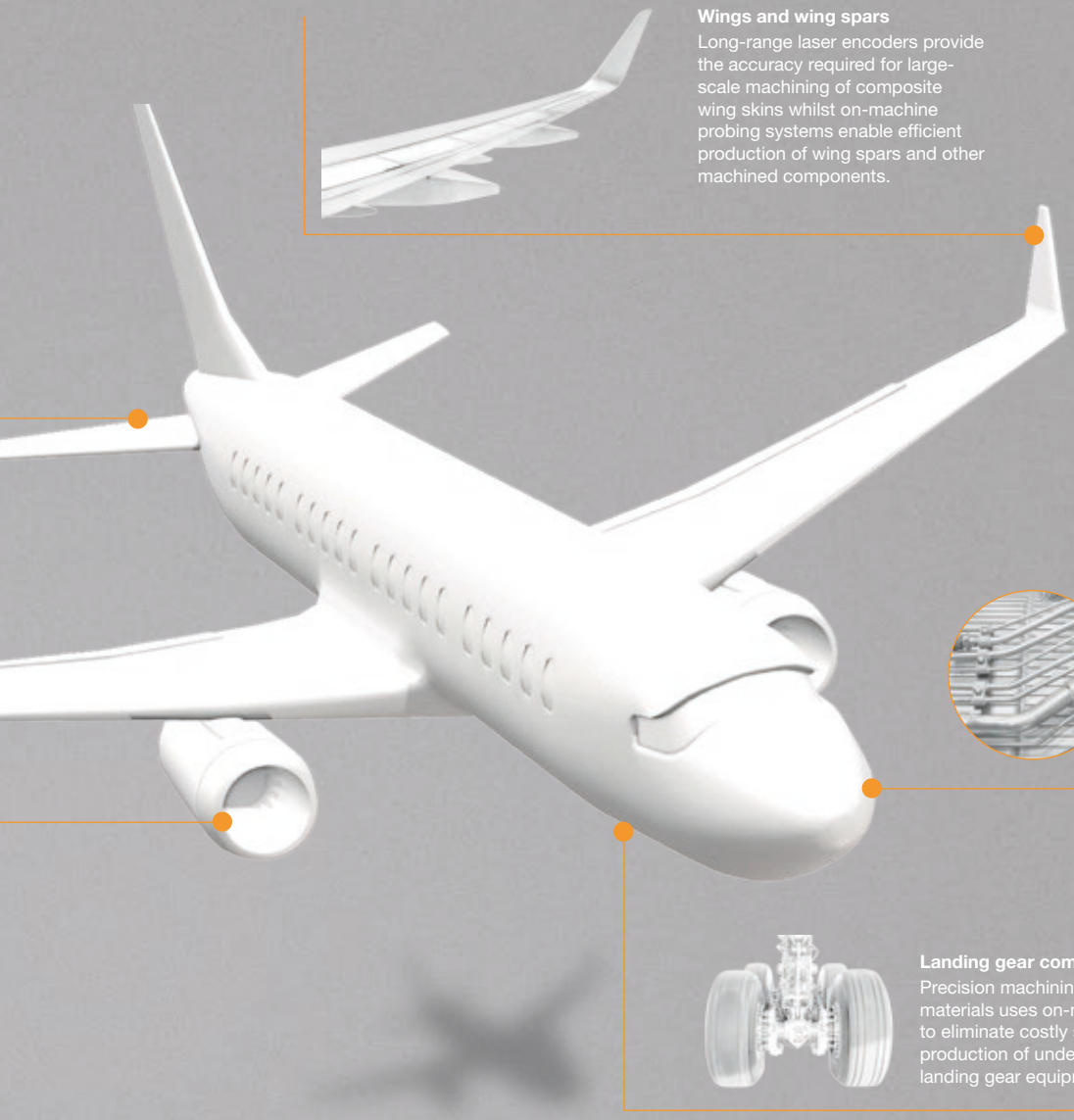
Aircraft are highly complex structures and key assemblies from engines and wings to control systems and landing gear, all rely on Renishaw products for process control and post-process inspection during their manufacture. This illustration of a typical passenger aircraft highlights a few key applications for our products.

Ballbar diagnostics aid airframe manufacture

The manufacture of airframe components for modern aircraft demands precision and consistency. BAE Systems, the global defence, aerospace and security company, produces vital airframe components for the Eurofighter Typhoon which is flown by various air forces around the world.

Without periodic checking and maintenance, CNC machine tools can lose positioning accuracy and introduce errors over time. BAE Systems machines complex high-value airframe components, and turned to a wireless ballbar system to provide the machine tool diagnostics data it needed to maximise quality and productivity.

Identifying a problem with a machine tool after components have been machined can be costly. In the case of BAE Systems's airframes, a high



Wings and wing spars
Long-range laser encoders provide the accuracy required for large-scale machining of composite wing skins whilst on-machine probing systems enable efficient production of wing spars and other machined components.

Control systems and actuators
Fluid power componentry, including control valves and actuators, benefit from metal additive manufacturing which enables part consolidation, functional improvements and significant weight reductions.

Landing gear components
Precision machining of high-value materials uses on-machine probing to eliminate costly scrap in the production of undercarriage and landing gear equipment.

percentage of components are machined from titanium. This high-strength, lightweight metal, which is resistant to high temperature and corrosion, is high in value and increasingly scarce, with stocks required to be reserved up to a year in advance.

Utilising Renishaw's QC20-W wireless ballbar, the company initiated a site-wide preventative maintenance programme to check 60 CNC machine tools on a defined weekly, monthly and annual basis.

Through detailed interpretation of the QC20-W's diagnostic data trends across all machine tools, BAE Systems established a dependable go/no-go error margin benchmark, against which all machines' performance could be quickly checked. Any circularity error in CNC machine positional accuracy greater than 30 microns would demand immediate investigation.

The efficiency with which ballbar-trained machine tool operators could run diagnostic checks using the QC20-W meant they could be completed between part production runs with little adverse effect on machine tool throughput.

Machine tool error diagnosis at BAE Systems has become virtually instant. Unacceptable machine tool down-times – the result of lengthy and expensive investigations and repairs – have been drastically reduced, and the machine builder is no longer depended upon as the sole source of technical insight and support.

With the help of Renishaw ballbar diagnostics BAE Systems has benefitted from significant improvements in workshop productivity and QA compliance.

BAE Systems employee, Jim Walsh, with Renishaw QC20-W ballbar.

The Renishaw QC20-W wireless ballbar for machine tool performance diagnosis.

Automotive

Worldwide demand for vehicles continues to grow and there is increasing focus on fuel efficiency and emissions control from both domestic and commercial transport. There is also an increasing need to produce extremely accurate and reliable manufacturing systems, with a trend towards automated manufacturing processes to reduce cycle times.

Perfect fit castings for Ricardo

Tridan Engineering, based in Clacton-on-Sea, UK, is using Renishaw RMP600 and OMP60 machine tool probes to align complex castings as part of a motorsport machining contract for Ricardo. For the first batch of parts, a project that would normally have taken around two months, was compressed into a 17-day turnaround time without any compromise in the quality standards demanded by the client.

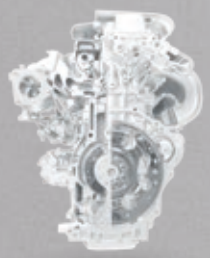
"Ricardo Performance Products were having problems in the testing of a rear axle for a rally car that we had manufactured on previous occasions," explained Paul Coupland, Machine

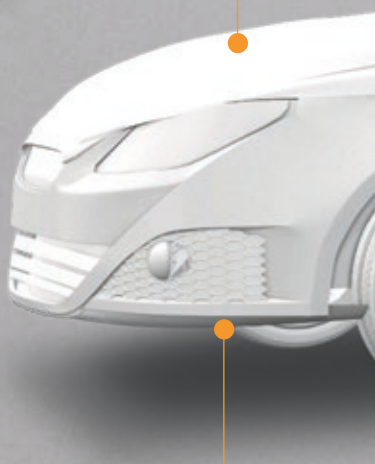
Renishaw OMP60 inspecting machined Ricardo casting at Tridan Engineering Ltd.

The majority of key components on domestic and commercial vehicles are subject to process control using Renishaw products. This illustration highlights just a few key applications for our products relating to a typical car.

Latest engine technology

From camshaft manufacture to quality control of valve seats, probing systems enable modern engines to deliver enhanced performance, higher reliability and reduced emissions.





Precision gears and reliable gearbox components

High-volume precision machining and rapid part inspection necessary to support automotive gearbox and drivetrain production are made possible with process control and gauging technologies.

Shop Manager at Tridan. “The issue was one of design/strength, so they needed a new ‘beefed-up’ axle to test. A project like this would normally take 8-10 weeks as we would arrange meetings with the customer, offer design-for-manufacture recommendations to help remove cost, prepare tooling and so on.

Accuracy is the main reason we use Renishaw technology. I don’t think we could do half of what we do without their probes. As a company they are very supportive, although to be honest we’ve never had to call on their service department – the products simply don’t go wrong.”

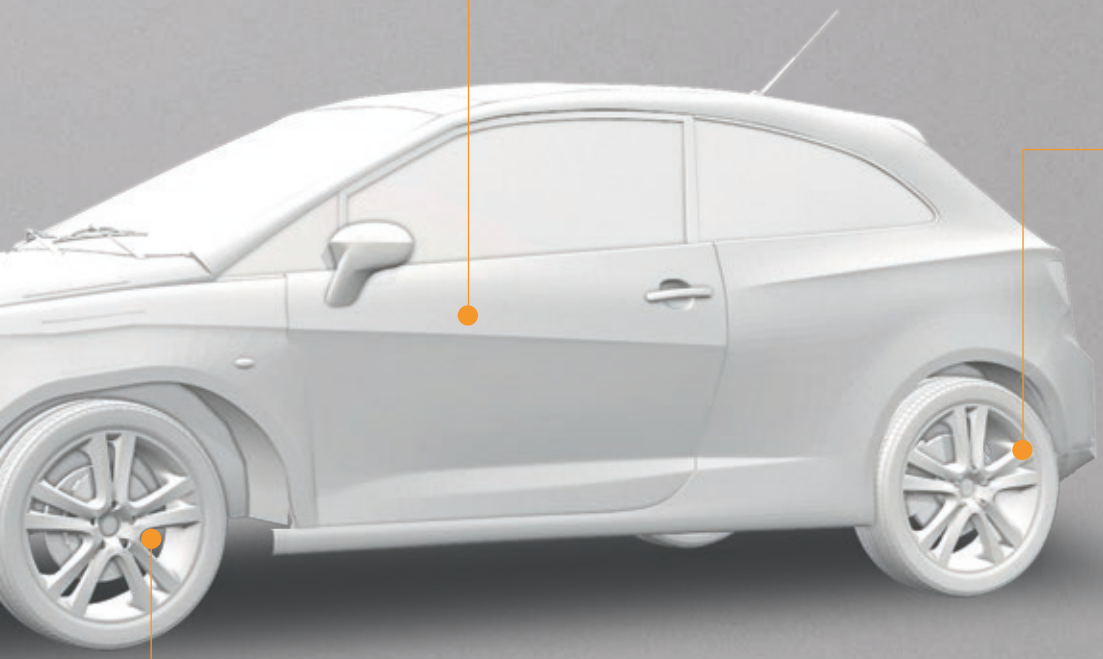
Tremec Mexico reduces shop floor gauging time of Daimler parts by 85% with Equator™ gauges

At the Tremec Queretaro plant, near Mexico City, transmission systems are produced for Daimler, Volvo, GM, John Deere and agriculture and construction equipment manufacturer CNH. Tremec decided that its manufacturing process could be improved considerably, since the process control of parts was taking far too long. With a new Daimler gear project, it decided to use Renishaw Equator gauges to take a different approach during grinding and green gear turning. These cells produce 550 to 600 gears daily and with the Equator system, inspection time per unit has reduced from around 20 minutes to just two and a half minutes.

Paul Coupland, Machine Shop Manager at Tridan, displaying the final part for Ricardo.

The Equator system has made it easy for Tremec to gauge every controlled feature of gears on the shop floor.

Body panels and components
Automated production lines rely on indexable and scanning probe systems for checking car bodies (known as Body in White) prior to painting and assembly.



Wheels
Alloy wheel manufacture requires highly productive precision machining that can adapt to the variation inherent in forging processes. On-machine probing systems ensure productivity through automated process control.

Suspension and braking components
Systems that enable automation and the quality control of parts on the shop floor are paramount for the economic production of high-quality components in the volumes required by the automotive industry.

Our business sectors – Healthcare

Our technologies are helping within applications such as craniomaxillofacial surgery, dentistry, neurosurgery, chemical analysis and nanotechnology research. These include engineering solutions for stereotactic neurosurgery, analytical tools that identify and characterise the chemistry and structure of materials, the supply of implants to hospitals and specialist design centres for craniomaxillofacial surgery, and products and services that allow dental laboratories to manufacture high-quality dental restorations.

Ms Sasha Burn, Consultant Paediatric Neurosurgeon at Alder Hey Children's Hospital, Liverpool, UK - user of Renishaw's neuroinspire™ planning software and neuromate® stereotactic robot in the hospital's Children's Epilepsy Surgery Service centre.

The product range includes the following:

Craniomaxillofacial custom-made implants

Additively manufactured from titanium, custom-made craniomaxillofacial implants are structural implants that are used in the reconstruction of a patient's head, face or jaw. These are most commonly required after oncology treatment or as a result of trauma.

Titanium craniomaxillofacial implants.

Neurosurgical robot

A stereotactic robot that provides a platform solution for a broad range of functional neurosurgical procedures including deep brain stimulation (DBS), stereoelectroencephalography (SEEG), neuroendoscopy and stereotactic biopsies, and is being used within the context of clinical trials for both neurosurgical disorders and brain oncology.

Neuromate stereotactic robot.

Dental scanners

3D contact scanners and non-contact optical scanners used for digitising of dental preparations and the measurement of implant locations for tooth-supported frameworks and custom abutments.

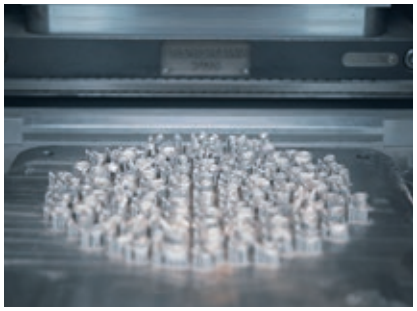
Blue light dental scanner and CAD software.

Dental computer-aided design (CAD) software

Dental CAD software that allows set-up of scanning routines and enables laboratory staff to design abutments and structures for crowns and bridges, including powerful anatomic design functions.

Dental structures manufacturing service

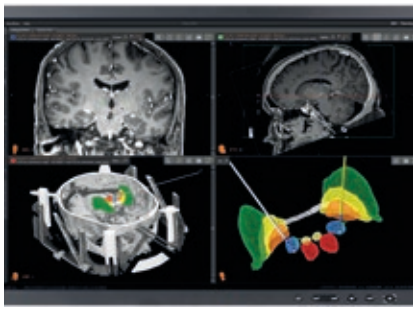
A central manufacturing service that can handle CAD files from a wide variety of dental CAD systems to produce structures for crowns and bridges in cobalt chrome, and abutments in cobalt chrome.



Additively manufactured dental structures.

Neurosurgical planning software

Software that allows advanced planning of targets and trajectories for stereotactic neurosurgery.



Neuroinspire neurosurgical planning software.

Neurosurgical implants

Implantable devices that allow surgeons to verify expected DBS electrode position relative to targeted anatomy using magnetic resonance imaging (MRI) for the treatment of Parkinson's disease, other movement disorders and neuropathic pain.

Neurosurgical accessories

Specialist electrodes and instruments for use in epilepsy neurosurgery, manufactured by DIXI Medical.

Healthcare revenue (+18%)

£33.4m

Healthcare adjusted operating loss

£7.2m

Percentage of group revenue

6%

Raman microscopes

Research-grade inVia Raman microscope for the non-destructive chemical analysis and imaging of materials used by scientists and engineers worldwide. Its high-speed, high-quality results and upgradeability are valued in fields as diverse as nanotechnology, biology and pharmaceuticals.

inVia Qontor confocal Raman microscope.

Hybrid Raman systems

Hybrid systems that unite the chemical analysis power of Raman spectroscopy with the high spatial resolution of other techniques, such as atomic force microscopy and scanning electron microscopy. These new instruments are vital tools for investigating materials and devices for nanotechnology applications.

Turn-key Raman analysis

RA800 benchtop platform, which provides companies with a high-performance chemical imaging and analysis system that can be tailored for the needs of their customers. RA800 gives research-grade Raman microscopy performance in a Class 1 laser-safe, simple-to-use form.

Pharmaceutical analysis

RA802 pharmaceutical analyser, a compact benchtop Raman imaging system designed exclusively for the pharmaceutical industry. It enables users to formulate tablets more efficiently by speeding up the analysis of tablet composition and structure.

Healthcare

Life expectancy is increasing in both developed and developing markets, meaning that key drivers include the requirement for faster procedures to reduce waiting times, more economical treatments, more patient-specific treatments (e.g. implants and personalised medicines), and safer procedures with reduced human errors. All our healthcare product lines are well placed to deliver on these requirements.

Surgical team at Birmingham Children's Hospital using the neuromate stereotactic robot.

Renishaw neuromate® robot and neuroinspire™ software installed at King's College Hospital, London and Birmingham Children's Hospital

A neuromate stereotactic robot system and neuroinspire surgical planning software have been installed at one of London's largest and busiest teaching hospitals, King's College Hospital, and at Birmingham Children's Hospital. Both hospitals are using the system for SEEG cases for epilepsy.

Mr Richard Selway, consultant neurosurgeon at King's College Hospital said, "We are delighted to be able to offer robot-assisted brain surgery to our patients at King's. The increased precision and efficiency of the machine allows fantastic accuracy when targeting the most sensitive areas of the brain. It is likely to revolutionise certain aspects of surgery, particularly for children with severe epilepsy or in the surgery of brain tumours."

Mr Richard Walsh, consultant neurosurgeon at Birmingham Children's Hospital said, "All the electrodes are in excellent positions. No post-operative problems on the scan. Using the robot certainly made the procedure easier, faster and more straightforward for me."

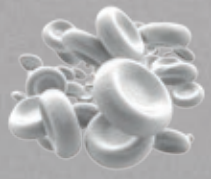
Our technologies are being applied to an ever increasing number of applications within healthcare, including brain surgery, reconstructive surgery and dentistry. This illustration highlights areas in which Renishaw products are making a real difference to patient outcomes.

Dental implants and restorations

Precision machining combined with 3D printing results in shorter manufacturing lead times and improved fit of dental frameworks, meaning patients need to spend less time in the dentist's chair.

Blood storage

Raman spectroscopy is being used to investigate the chemical changes that occur in red blood cells during storage in bags, which could eventually be used as a quality check prior to transfusion.



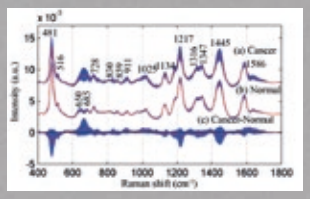
Guangdong Medical University is developing a method for non-invasive prostate cancer screening

New research at the Guangdong Medical University suggests a laser-based approach could be the latest breakthrough in prostate cancer detection. The proposed non-invasive blood test uses a combination of two techniques: surface-enhanced Raman scattering and a new mathematical analysis technique called support vector machine – together, these techniques can produce an accuracy up to 98.1%. Professor Shaoxin Li, the study leader at the University commented, "Compared to traditional screening methods, this method has the advantage of being non-invasive, highly sensitive and very simple for prostate cancer screening. It is important to improve the survival of patients by early diagnosis and treatment.

Currently, there are many diagnostic methods available—including B-mode ultrasound, CT scan, biopsy and histopathology assessment—but these techniques have various limitations.

"We selected the inVia as a potential methodology to be used in prostate cancer screening, when coupled with our support vector machine, because it offers continuous scanning from 50 to 4000 wavenumbers and its high sensitivity makes it suitable for biological tissue measurement."

Mr Richard Walsh, consultant neurosurgeon at Birmingham Children's Hospital, has now carried out two SEEG cases for epilepsy, since the installation of the neuroinspire planning software and the neuromate stereotactic robot.



Surface-enhanced Raman scattering (SERS) spectra of serum sample for prostate cancer detection.

Maxillofacial implants and surgical guides
Customised implants and cutting guides for use during surgery are designed using specially developed software and built with additive manufacturing systems, optimised for healthcare applications.

Drug delivery systems for oncology and other treatments
Metal 3D printing techniques are used to build compact multi-channel ports and the neuromate surgical robot with neuroinspire planning software enables precise placement of implantables.

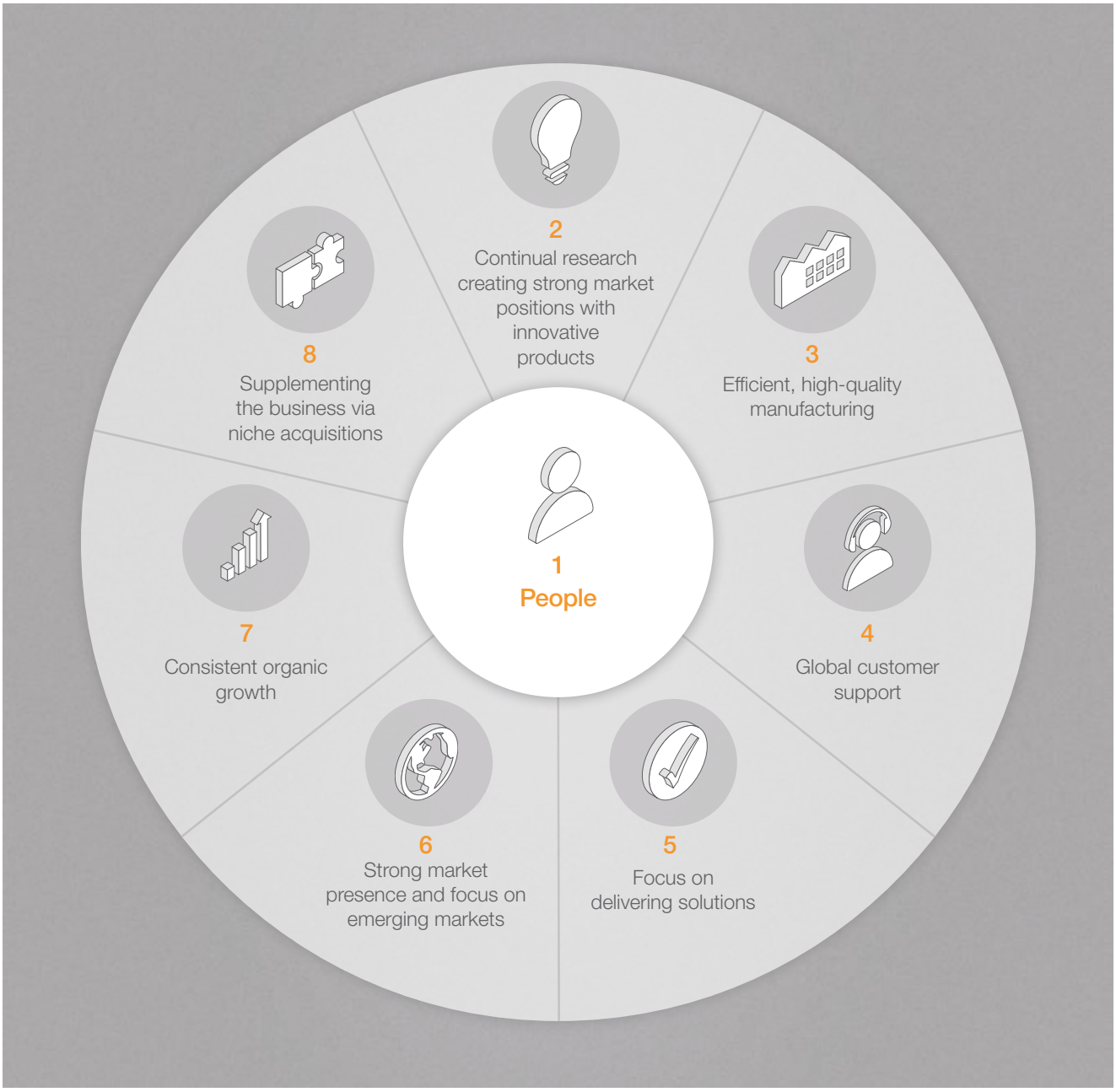
Orthopaedic implants
Metal 3D printing machines enable the production of patient-specific custom implants in bio-compatible materials, and with surfaces that aid osseointegration.

Our strategy

What drives our success

> Renishaw fundamentally believes that success comes from patented and innovative products and processes, high-quality manufacturing, and the ability to provide local customer support in all its markets around the globe.

Sir David McMurtry
Chairman and Chief Executive

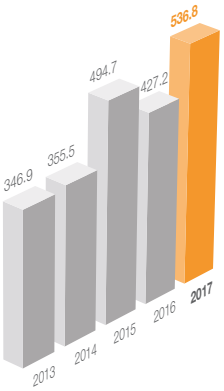


Key performance indicators

The main performance measures monitored by the Board are:

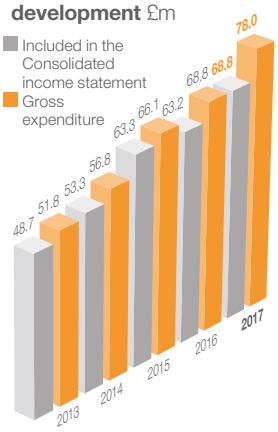
Financial KPIs

Revenue £m



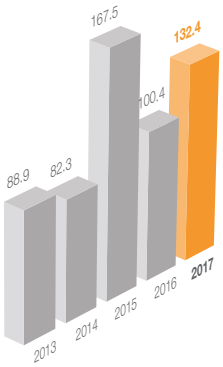
We are focused on growth in revenue, through increasing our market and geographic penetration and continually introducing new products. We have also made a number of acquisitions over the last five years which expand our product range and will support revenue growth by using the Group's worldwide marketing and distribution infrastructure to expand these businesses.

Total engineering costs including research and development £m



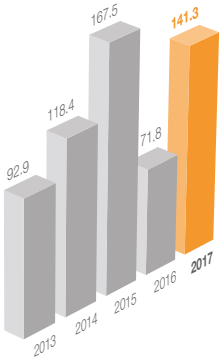
The growth of the business is fundamentally dependent on the continuing investment in engineering costs for the development of new products and processes. The Group continues to make significant investment in future products, with engineering costs equal to approximately 15% of Group revenue, and has also been accelerating new product development in certain areas.

Adjusted earnings per share pence

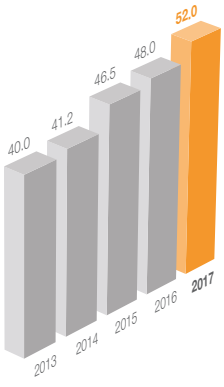


In order to provide an increasing return to shareholders, along with retaining adequate funds for reinvestment in the business, we aim to achieve year-on-year growth in adjusted earnings per share. Note 24, Alternative performance measures, defines how adjusted earnings per share is calculated and why the Board has adopted this measure.

Statutory earnings per share pence



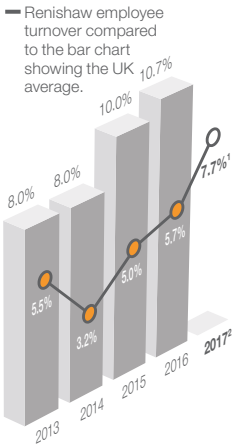
Dividend per share pence



We aim to achieve significant long-term returns to shareholders by maintaining a progressive dividend policy, whilst maintaining a solid capital base with sufficient working capital to support the forecast growth.

Non-financial KPIs

Employee turnover %

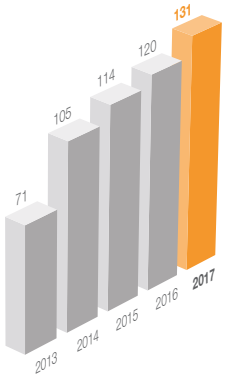


[1] Excludes discontinued operations.

[2] Data not available at time of publishing.

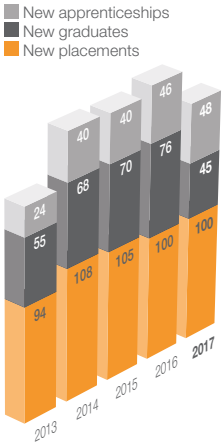
We continue to train, develop and reward our employees so that we retain skilled and effective teams. Our aim is to maintain our UK employee turnover rate below the UK average for the manufacturing and production sector.

Number of apprentices in training



We believe we need to provide many options for career entry for young people. We are proud of our apprenticeship scheme and the success it has achieved, both for the apprentices that have trained with us and for Renishaw in terms of addressing skills gaps. In a period of growth, we intend to increase the number of apprentices taken into training each year.

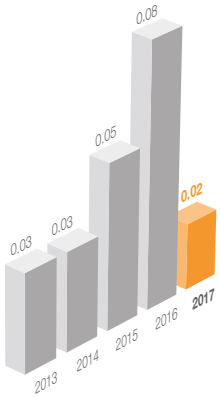
Training



Number of new placements and members of the graduate and apprenticeship schemes (on a calendar year basis).

Our strategy is to grow organically, developing students and taking on apprentices and graduates forms a key element of this strategy. Depending on economic conditions, we propose to increase year-on-year the number of new apprenticeships, graduates and student placements we take on.

Health and safety



Total lost working time injuries per 100,000 hours worked.

In a manufacturing environment, it is crucial that we maintain high standards of health and safety. Our aim is to have zero fatalities and zero lost working time injuries.

Our strategy in action

People

Our people are central to the success of our business. Our innovative, hard-working and loyal employees make Renishaw the business that it is. A significant number of our people have worked in the Group for two or three decades, creating a large collaborative team with a wealth of specialised engineering expertise. Renishaw has actively focused on the ongoing recruitment and training of many bright and enthusiastic young graduates, apprentices and experienced professionals to further develop talent. We continue to protect the future skillset of the organisation through training and promoting people from within, where possible.

For further information see pages 56–58

Continual research creating strong market positions with innovative products

Renishaw is well known for its sector-leading investment in R&D and engineering. “Apply innovation” is a way of life for Renishaw employees, not just a strap-line. We have continued to protect our core businesses with exciting new patented technology and process developments, whilst also diversifying into new product and market areas.

For further information see pages 34–35

Efficient high-quality manufacturing

Renishaw is a highly vertically integrated organisation with significant in-house manufacturing capabilities.

With high-quality manufacturing plants located in the UK, Ireland, India, Germany, USA and France, we are able to deliver robust and reliable products tested to our exacting standards. Our efficiencies, through in-house automation and the use of our own latest product developments, enable us to be competitive with the highest volume processes.

For further information see pages 32–33

Strong market presence and focus on emerging markets

Renishaw has always been a global group with a strong local presence. By ensuring we target emerging markets, we are able to develop strong working partnerships with newly developing businesses. These loyal relationships build quickly as our customers realise that all our customers are important to us.

For further information see pages 30–31

Focus on delivering solutions

Renishaw's business has transitioned over recent years from primarily being a supplier of products to capital equipment manufacturers, to becoming much more focused on delivering a full solution directly to the end-user. Our experience in our core product lines, which has highlighted that our global customers need assistance in solving their problems, is being carried across into our newer offerings.

For further information see pages 28–29

Global customer support

Renishaw is founded on the belief that excellent customer support delivers success. Our customers are often global, with an order being placed in one country, the product shipped to another and the eventual end-user often located on a different continent. By having "local" global support through our wholly-owned subsidiary network, we are able to assure customers that whatever their needs, we are able to support and assist them, resulting in a positive return on their investment.

Progress

Our worldwide service offering is growing so we can support our customers throughout the product life-cycle. With the growth of our training facilities, technical support personnel, test and solution centres we can offer personal local support to the customer.

Consistent organic growth

Whilst Renishaw does invest for the long-term, it also closely manages costs at all levels and ensures that it does not undertake undue risks. It is through this approach that Renishaw has been able to deliver such a long-term track record of profitable growth.

Progress

Renishaw has further invested in the Group's long-term business growth which this year focused on our continued recruitment and training of skilled people, our global marketing and distribution infrastructure, enhancing our ability to demonstrate our products and their applications, the infrastructure to support our additive manufacturing business, and our manufacturing capabilities. Our Spanish subsidiary and two of our American subsidiaries have relocated to larger premises and a further office has been established in California. This has allowed for the recruitment of extra sales and technical support staff. In November 2016 our first North American Additive Manufacturing Solutions Centre (AMSC) in Canada was formally opened. Ongoing investments in manufacturing capacity and processes have given us an agile capability and increasing awareness of the benefits to be gained by adopting Industry 4.0 and Smart Factory philosophies to meet the demands of a record order book and quickly respond to short lead times.

Supplementing the business via niche acquisitions

We actively undertake acquisitions as a means to expand our product portfolio, quicken geographic market penetration and gain access to new patents, technologies and customers.

Progress

We continue to integrate acquired businesses and evaluate acquisition opportunities. We work closely with HiETA Technologies Limited, a UK company in which we have an investment that specialises in the design and delivery of additive manufacturing products such as heat exchangers for a range of applications – a complementary business for our additive manufacturing products line. We are also strengthening our acquisitions process and have considered various potential opportunities during the year.

Our strategy in action – Industrial metrology

Intelligent process control for Industry 4.0

Intelligent machining processes are a critical element in future manufacturing technology. With the widely publicised ‘Industry 4.0’ and ‘Made in China 2025’ initiatives combined with the ‘Industrial internet of things’, manufacturers are faced with an unparalleled opportunity.

“Manufacturers driven by the goals of Industry 4.0 are increasingly recognising the importance of applying Renishaw technology throughout advanced manufacturing. The breadth of technologies and experience Renishaw provides during the entire manufacturing process is unique.”

Geoff McFarland
Group Engineering Director

Industry 4.0 is the current trend of automation and data exchange in manufacturing technologies to create what are known as ‘smart factories’.

The ability to monitor key process inputs, analyse data and continuously improve manufacturing processes will facilitate increased productivity and higher accuracy, whilst reducing the dependency on skilled engineers. This, in turn, enables highly effective automated manufacturing systems to be implemented successfully.

Renishaw not only provides technologies and applications that deliver some of the benefits of Industry 4.0, data generated by Renishaw devices can also be used in conjunction with other process information from machines, cutting tools and other probes within predictive analytics systems for intelligent process optimisation and control.

Productive manufacturing processes

Simply measuring the final output of a manufacturing process using ‘tailgate’ inspection is not enough and, more often, too late to control all the variability in a manufacturing process. It is critical that checks and measurements are also made before, during and immediately after machining to control both common-cause and special-cause variation.

The process control framework developed by Renishaw within our own factories has allowed us to minimise manufacturing costs and significantly reduce the skill levels required to support production. This has been achieved through a combination of integrated process control using our own products and application of factory automation. This approach is applicable to many industries using CNC machine tools. Moreover, the benefits we have experienced at Renishaw align closely with the goals of Industry 4.0.

Manufacturers driven by a focus on Industry 4.0 are increasingly recognising the importance of applying Renishaw technology throughout advanced manufacturing. The breadth of technologies and experience Renishaw provides during the entire manufacturing process is unique.

In the future, measurements provided by Renishaw devices will be used in conjunction with other data sources within a manufacturing process to allow real-time feedback for process optimisation, proactive adjustment and increased intelligence.

Data availability

Manufacturers can only make the most of their collected data if they have the means of using it when required. Today, most machine tools are equipped with a networking capability and have more accessible software architectures, making it simpler to facilitate communication between systems. As integrating sensors (including probes) and programming automated intelligent systems becomes easier, more manufacturers will be able to exploit the benefits of Industry 4.0.

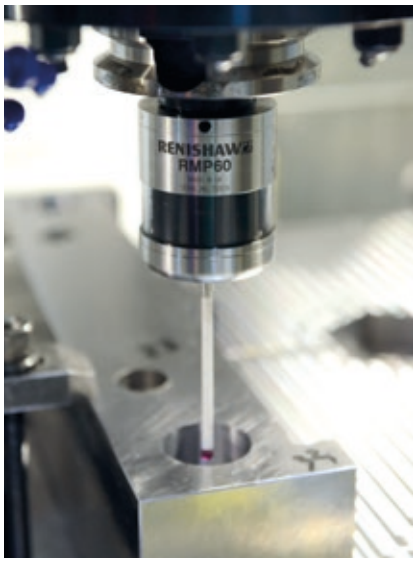
The data collected through in-process measurement throughout the manufacturing process can also be used for continuous improvement. It allows manufacturers to understand what causes adverse effects during manufacturing and consider the key variables when designing and developing new processes.

From consumer electronics to aerospace components, products have shorter life cycles than ever before. Manufacturers must develop new products and processes more quickly to remain competitive. Intelligent processes allow high productivity and high-quality output despite the reduced process development window.

Additive manufacturing

The advent of metal additive manufacturing (AM) for serialised production, as opposed to prototyping, will bring further benefits for intelligent manufacturing. From medical implants to critical aerospace applications, customers are increasingly demanding more specialised parts to save weight or space, dramatically improve product performance and simplify assembly operations.

AM is allowing manufacturers more design freedom and the ability to produce prototype products more rapidly from which performance data can be quickly acquired to inform final design and manufacturing parameters. We will increasingly see a combination of both additive and subtractive technologies to gain the benefits of both processes, all led by data driven intelligence at every stage of the manufacturing process.

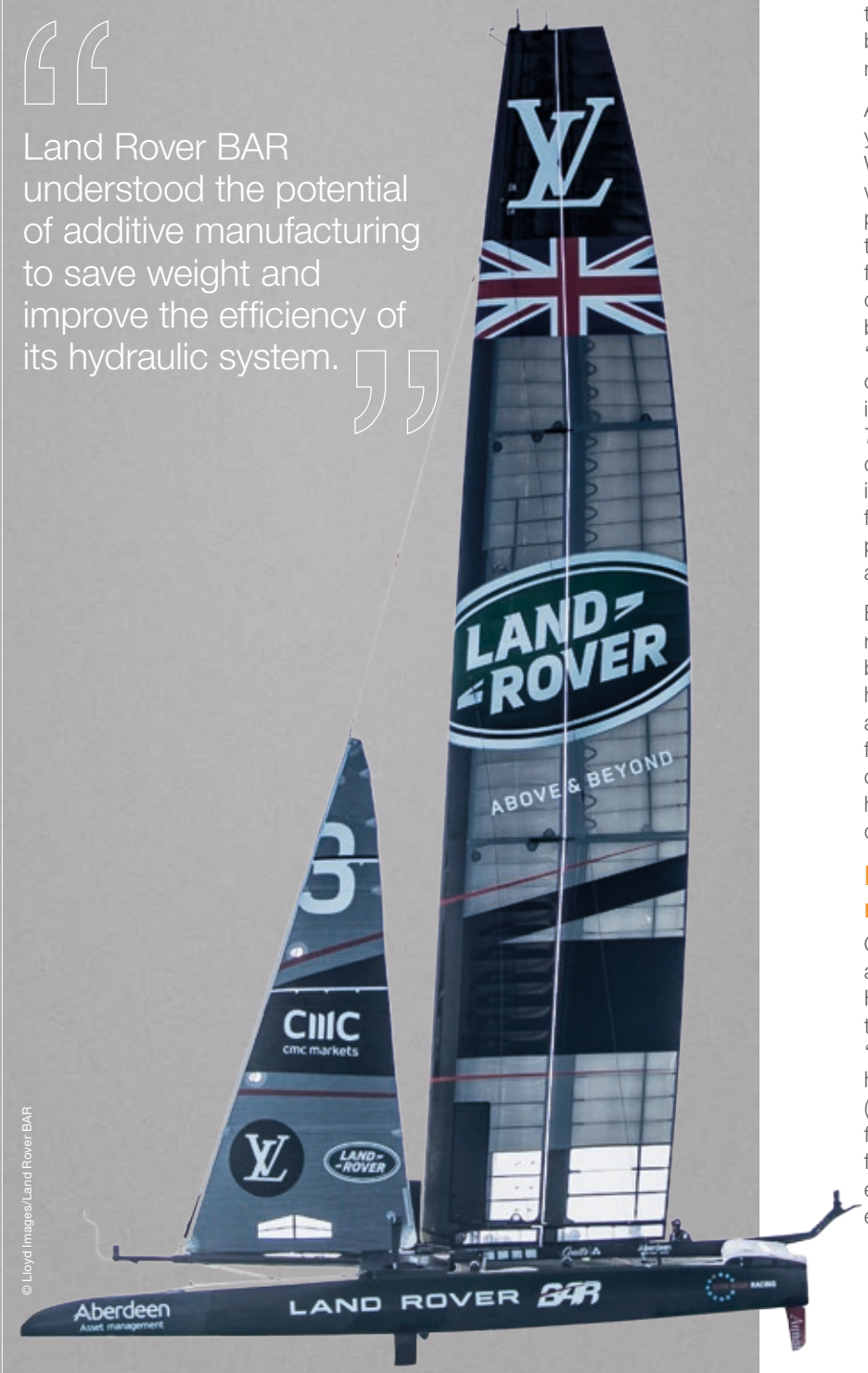


Data collection with in-process measurement.

Automated intelligent processes allow high productivity and high-quality output.

Our strategy in action – Focus on delivering solutions

> Land Rover BAR understood the potential of additive manufacturing to save weight and improve the efficiency of its hydraulic system.



© Lloyd Images/Land Rover BAR

Race to innovate: How Renishaw helped Land Rover BAR in its attempt to win the America's Cup

Renishaw is part of Land Rover BAR's Technical Innovation Group which aims to bring together the best of British engineering to help win the America's Cup. The oldest international trophy in world sport dating from 1851, it is the world's premier sailing challenge (described as being like 'Formula 1 on water') and has never been won by Britain.

Land Rover BAR made it to the semi-finals of the 35th edition of the America's Cup, held this summer in Bermuda, with Renishaw's AM and position encoder technology helping the first-time challenger to produce a boat that competed well against much more established teams.

America's Cup Class (ACC) racing yachts use an innovative rigid wingsail. With the aerodynamics of an aeroplane wing, instead of lift, this vertical wing provides thrust and is efficient enough to propel the vessel up to four times faster than the speed of the wind driving it forward. The wingsail used by the Land Rover BAR race-yacht 'Rita' (code-name: R1) has an area of 103 m^2 and is 23.5 m high, which is comparable to a wing of a Boeing 737 aeroplane. Clearly, there are many difficult engineering challenges involved in designing and building a huge functional wing with numerous moving parts, whilst ensuring sufficient strength and minimal weight.

Each hull on R1 features a T-shaped rudder and retractable board that bends beyond 90 degrees to create a hydrofoil. Once the boat speed reaches around 16 knots (18 mph) it starts foiling. The flow over the hydrofoils creates sufficient lift to 'fly' and both hulls rise clear of the water, reducing drag and increasing speed.

Race to innovate: metal AM manifolds improve power flow

On the R1, the control surfaces are all driven by hydraulic actuators. Hydraulic pressure is provided by the sweat and toil of the crew's four 'grinders', who turn specialised hand-cranks. There are no batteries (except to provide electrical power for computers and sensors), the four grinders act as a human engine to generate all the hydraulic energy required.

Land Rover BAR understood the potential of additive manufacturing to save weight and improve the efficiency of its hydraulic system and worked with Renishaw engineers, who contributed by highlighting the manifold components which would most benefit from being manufactured using metal AM technology, by collaborating and advising on iterations, then producing the necessary parts.

The structure of these manifolds, which have multiple passageways, helps improve the flow of hydraulic fluid from one part of the boat to another, and are lighter than conventional manifolds. This streamlining helps the grinders conserve energy whilst still allowing the boat to perform at the optimal level.

Traditionally, hydraulic block manifolds are manufactured from an aluminium alloy or stainless steel billet which has been cut and machined to size. This is followed by drilling at 90-degree angles to create the flow pathways. Specialised tooling is often needed due to the complex drilling that is required. Passages require blanking plugs to properly direct flow through the system.

The nature of the traditional manufacturing process results in abrupt angled junctions which slow down the flow of hydraulic fluid, often leading to a loss of power. By using additive manufacturing technology, you can design in and build smooth rounded corners which promote the flow of fluid and improve efficiency. Another benefit is the significant weight saving against a traditional block manifold where material must be cut away, leaving surplus non-essential weight and an over-specification wall thickness.

Additive manufacturing builds up parts layer by layer, applying material only where it is required, leading to a much lighter part. The wall thickness of the manifold can be adjusted so that it is fit for function and all manifolds used on the boat are customised and built in titanium to be both lightweight and strong.

Whilst the actual parts produced by Renishaw for R1 remain highly confidential, the manifolds designed in CAD software by Land Rover BAR were sent to Renishaw, where they were prepared for production using its QuantAM software. The build file was then sent to a Renishaw AM system, which produced the complex parts by melting successive layers of metal powder using a high-powered laser.

R1 is an incredibly advanced racing catamaran that pushes the boundaries of what technology can provide and it truly was a ‘race to innovate’ to turn around the optimum parts, in time for the America’s Cup. The challenge was immense with many design changes, demanding timescales and rapid production of parts running up to a fixed race day, but the ability of additive manufacturing to produce many iterations rapidly was a major benefit to the collaborative process.

Race to innovate: digital position feedback

As mentioned earlier, the control surfaces on R1 are all driven by hydraulic actuators. During development, Land Rover BAR realised that precision knowledge of their sail wing settings could be compromised by the tenuous link between the hydraulic actuators and the control surfaces or flaps. These linkages are ropes with a high degree of compliance, so the position of each actuator is often only an approximate measure of the actual flap angle. They again asked Renishaw to collaborate in designing a robust solution.

A team of Renishaw’s encoder products specialists rose to the challenge and designed a bespoke magnetic encoder solution, based around technology from Renishaw’s associate company RLS. The LinACE™ product is an extremely robust absolute linear cylindrical encoder system designed for integration into hydraulic, pneumatic and electromechanical actuators as a feedback element for position or velocity closed-loop applications.

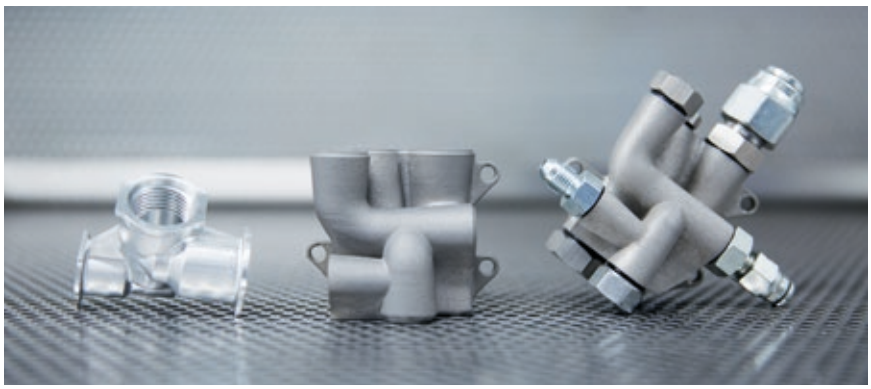
Due to the extreme conditions faced at sea, with high-speed winds and salt spray, magnetic encoders were deemed to be the only viable option, as open optical encoders would face real challenges due to the requirement to maintain a clear optical path between readhead and scale. Magnetic encoders can be fully sealed to give much greater contamination resistance and due to space limitations surrounding the highly loaded wing ribs, the use of LinACE modules meant that the Renishaw team could design a new encoder that minimised the size of hole needed within the wing rib.

The new design of position encoders were installed on the control surfaces of both the wing flaps and the port and starboard rudders, with numerous changes made to ruggedise the LinACE encoder and make it durable enough for life at sea.

Position feedback from the encoders is used in real-time on the boat by the wing trimmer, allowing the boat to race with more precision, whilst enabling the capture of high-quality performance data that can be analysed to improve general efficiencies and accuracies.

With both additive manufacturing and encoders, Renishaw worked within the short timescales and high specifications requested by Land Rover BAR, to deliver world-class solutions.

LinACE™ encoder from RLS repackaged into a waterproof enclosure.



Metal 3D-printed hydraulic system parts made by Renishaw for Land Rover BAR.

Our strategy in action – Strong market presence

Will Lee, Group Sales and Marketing Director, was asked to talk about Renishaw's approach to developing its global network of service and support operations – here is a summary of his thoughts:

> Our products have often been unique and disruptive, offering new ways of solving our customers' problems, so it has been important to work closely with them to educate and train their engineers.

Will Lee
Group Sales and Marketing Director

Q. Why does Renishaw have such a strong global presence?

A. We exported our products from very early on in the Company's history, so exporting is very natural to us. Our co-founder John Deer was very clear from the start that we needed to give excellent support to our customers and if we did that, then sales would follow as we would become a trusted supplier. We have always been prepared to invest in our support capabilities and initially our overseas operations in markets such as the USA, Japan and Germany, were only set up for service and support – it was only later that they started to focus on sales and marketing activities. It is also true that throughout our history we have been prepared to invest early where there is the potential for long-term growth.

Q. Why is a local presence so important for Renishaw?

A. Our products have often been unique and disruptive, offering new ways of solving our customers' problems, so it has been important to work closely with them to train their engineers. Although machinery and the application of our products may be common across the globe, business practices, local customs, levels of technical expertise and of course language, are very different, so employing local people is a necessity to be taken seriously. There are also the simple practicalities of having Renishaw people easily accessible to provide fast engineering support and answer queries.

Our model is therefore to use the strength of our UK operations for product development, but to decentralise decision-making to our subsidiary network, allow our local offices to make fast decisions and also to tailor sales and marketing messages, and customer solutions, to their specific needs.

Q. What is the process for opening new offices?

A. We start by determining which new markets offer the best growth potential and then what type of infrastructure we require to achieve our medium-term aims. Our current focus is to build capabilities within larger regional offices which can then support smaller offices within their geographic region, so demonstration and training facilities may not be initially required.

Where we do decide to invest in a new country office we prefer to be optimistic about the long-term potential and 'over invest', as from years of experience we have learnt how difficult it can be to have to move/expand offices too soon after first opening.

Q. What is your current focus in relation to Renishaw's subsidiary network?

A. Given our more solutions-based focus and increasing market requirements to work on projects with much greater levels of product integration, the requirements to service our customers is changing. This is driving the need for more skilled applications engineers and a greater investment to upskill our employees.

To meet these demands we are developing more of a regional approach to customer service and the wider sharing of resources across individual markets.

Q. Are there plans to open any new offices?

A. Our main focus currently is upgrading existing country offices so that they are better equipped to service our customer base and to best promote our industrial metrology offering and new products, especially additive manufacturing. For example, we have recently improved, or moved to new facilities, in Italy, Spain, France and Taiwan, whilst we have also opened a new local office in California, and opened a series of Additive Manufacturing Solutions Centres in India, Canada and Germany. However, we do continue to monitor opportunities to enter new markets with growth potential.

Q. Despite having offices in 35 countries Renishaw still use distributors in those countries – why is that?

A. When we first enter a market, our existing distributors in that market are very important to help educate our staff and make introductions to key customers. The changing nature of those relationships over time will depend on many local factors, including the strength of each distributor, but typically we may focus on key accounts and the distributors will service end-users and smaller accounts. We may also use specialist distributors to handle certain products outside the core metrology products, for example, Raman spectrometers and position encoders.

Generally, we like the flexibility that distributors give us, especially given that we simply do not have the resources to tackle all business opportunities ourselves. What is also true is that having a local office and local relationships with distributors is key to ensuring that those distributors remain motivated to act in the best interests of Renishaw.

Q. How do you manage your travel schedule?

A. Travel is critical to understanding developing business opportunities, new products we need to develop to meet varying customer challenges, and also importantly to meet and motivate our own employees.

Open Day at Renishaw Hungary's new facility.

Tata Motors visited the Additive Manufacturing Solutions Centre at Renishaw's facility in Pune, India.

Our strategy in action – Efficient high-quality manufacturing

John Deer
Deputy Chairman

Gareth Hankins, Director, Group Manufacturing Services Division and Director, Renishaw (Ireland) DAC, with responsibility for UK manufacturing operations and manufacturing at itp GmbH.

Mark Moloney, Director and General Manager, Renishaw (Ireland) DAC and Director, Group Manufacturing Services Division, with additional responsibility for manufacturing in India and Lyon, France.

Manufacturing overview

During the last year, the manufacturing operations have continued to support significant activity levels for all product lines, the development of in-house processes to support new product development and growth for the future of the additive manufacturing businesses. Investment has continued in the improvement of key manufacturing processes associated with increased volumes and developing capability for specific product lines such as AM.

Strategy

At a strategic level, Renishaw's manufacturing operations are highly vertically integrated. This is as a result of our commitment to delivering exceptional service levels in terms of delivery, service and product quality to our customers. This approach also ensures that we are in control of our costs, quality and many of the supply chains that are critical to the success of our business. This approach has continued during the year with substantial investments in processes and capital to support organic growth and efficiency improvements for core product lines, and the development of the AM business.

Over many years, we have strived to ensure our products are designed to optimise manufacturing capability, whether in relation to our machining and assembly processes, or that of third-party suppliers. This is best illustrated by our approach to metal cutting, where a high degree of standardisation has been applied to the hardware used to perform machining operations, since we have an excellent understanding of process capability for each platform. A secondary benefit to this strategy is that it provides the ability to upscale production through duplication, as required, without the need to invent alternative techniques, and this has been key to delivering the growth in our turnover in recent years.

Renishaw's machine shop at the Miskin facility in South Wales.

The same standardisation philosophies are applied to design for assembly and test during product and process development, and during the last year, a number of new products have transferred from pre-production to the assembly sites in the UK, Ireland and India.

The Group has manufacturing facilities in the UK (Woodchester 165,000 sq ft, Stonehouse 100,000 sq ft, Miskin 460,000 sq ft and smaller operations at New Mills, Old Town, Stone and York), Ireland (Swords 90,000 sq ft), India (Pune 50,000 sq ft), Germany (Völklingen 19,000 sq ft), France (Lyon 5,500 sq ft) and the USA (Grand Haven 14,000 sq ft).

Long-term investment

Renishaw continues to be committed to significant investment in its manufacturing capability for both the medium and long-term. The Renishaw Automated Mill Turn Inspection Centre (RAMTIC) system developed in the early 1990s uses a standard machine tool platform that has been modified to provide a highly efficient manufacturing solution, involving a high degree of automation and closed-loop control that is facilitated by Renishaw probing technology for tool setting, in-process monitoring and component validation. Whilst the base machine platform has evolved with improvements in machine tool technology, the fundamental process remains the same and is the mainstay of Renishaw's standard machining platforms for prismatic parts, with 62 RAMTIC systems now in operation.

The same approach has also been taken with respect to our investments in assembly-based technologies. Renishaw has a very broad product range that is largely produced in low to medium volumes, but through our strategies of standardisation and design for manufacture we have created the circumstances to develop and invest in highly efficient and capable assembly systems that deliver exceptional process control and efficiencies. The electronics production facilities utilise the very latest technology capable of placing 40,000 components per hour, process control by using in-line component validation, automated optical inspection and innovative technology to validate the performance of assembled printed circuit boards (PCBs). Another example is the in-house development of automation systems for assembly of certain products in the UK and Ireland facilities, where automation and closed-loop controls have delivered significant reductions in process variation, hence providing enhanced product quality, as well as reducing our costs.

There has been continual and substantial investment in the latest manufacturing technologies in order to optimise the cost and capability of our manufacturing systems, where investment in new equipment in the UK over the period 2010 to 2017 has been £37m.

The PCB assembly facility at Miskin includes technology capable of placing 40,000 components per hour.

Supply chain management

As a manufacturer operating in a high-mix/low-volume situation, with a strategy of delivering exceptional customer service, our approach has been to maintain as much control as possible of our supply chains. This has been achieved through a combination of in-house manufacturing (including the creation of in-house capability for critical processes as they become financially viable), duplication of critical processes, dual sourcing and strategic long-term partnerships with our third-party suppliers. We also have supply chain management teams based in China, India and Ireland.

Risk management

We have duplicated key processes in order to reduce the risks associated with certain critical in-house supply chains such as machining, anodising of aluminium components and the assembly and test of electronic PCBs. For third-party supply chains, regular monitoring and review takes place with a view to determining supply risk, including implementing dual sourcing strategies and reviewing our contractual terms with suppliers to ensure continuity of supply. Processes have also been implemented and enhanced within our supply chains to ensure compliance with our Group Business Code, and the UK anti-bribery and modern slavery legislation.

People

Consistent with the strategy in other parts of the business, the manufacturing operations take a long-term view with regard to development of people. In many cases employees transfer from manufacturing into other parts of the business to assist other roles such as new product development or applications engineering, making best use of the experience gained within the manufacturing arena.

The investment in apprentices and graduates is very much in evidence at each manufacturing site. All manufacturing graduates and apprentices follow a well-defined programme that provides exposure to a wide range of functions and technologies such that we develop well-rounded individuals with a broad grounding in a variety of manufacturing-related disciplines. Many of our apprentices and graduates succeed in developing career paths into more senior engineering and operational roles within the organisation (for example, see pages 56–58).

Progress at a glance

During the last year, investment in manufacturing facilities and equipment has continued to ensure that future requirements can be satisfied in a highly efficient and cost-effective manner.

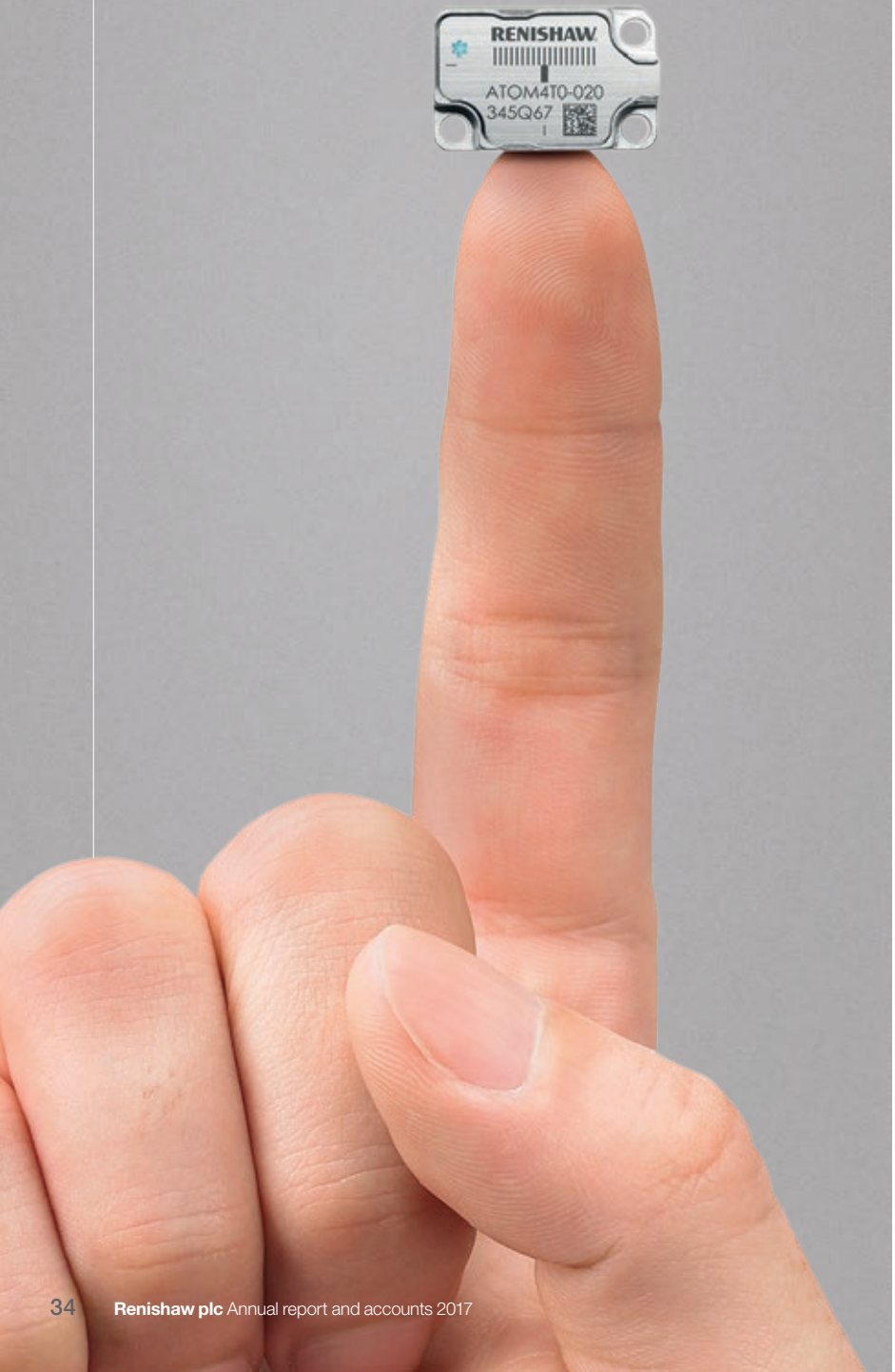
The factory floor space at the Miskin facility, refurbished during 2016, provides substantial capacity for future growth of the business. In addition, outline planning permission exists for further development and capacity to be provided at that facility.

Substantial capital investments and process development activities have continued to provide both in-house piece part manufacturing capabilities and new assembly processes to support current and new products within the AM business.

Production of various products have transferred to alternative assembly locations in the UK, Ireland and India as a result of capacity forecasts or the completion of new product development activities.

A team dedicated to packaging design has been established with the remit of optimising the materials, labour and logistics costs associated with our products, which is increasingly important given the global distribution network of the Group.

Our strategy in action – Continual research creating strong market positions with innovative products



ATOM™ – miniaturising innovation in the encoder business

Modern high-volume production processes, such as semiconductor manufacturing, demand production-line machines with ever smaller footprints to maximise productivity while also continually improving accuracy and throughput. This results in growing demand for smaller and lighter position sensors. These position sensors, often referred to as encoders, comprise a readhead (an optical movement sensor) paired with a scale (an accurately marked ruler). The readhead measures position by directly sensing the regularly-spaced scale markings. A smaller readhead allows installation in tight spaces and a lower mass also reduces inertia to enable higher accelerations of the moving parts of the machine.

The ATOM miniature optical encoder was launched in 2014 and is Renishaw's smallest incremental encoder product. It remains one of the most compact optical encoder solutions on the market. ATOM is the only miniature encoder to use Renishaw's unique optics engine with patented filtering technology, which imparts several advantages when compared with other types of miniature encoder, including better dirt immunity, lower cyclic error (improved accuracy) and higher resolution.

One of the greatest technical challenges in the design of ATOM was shrinking the optics of pre-existing compact encoders, such as the TONiC™ series. ATOM readheads occupy less than half the volume of the TONiC equivalent.

Advanced manufacturing

ATOM readheads are too small to easily build by hand and so ATOM is the first Renishaw readhead to be assembled with an automated process, which also decreases process variability, leading to lower production costs and more consistent product quality. An automated assembly process provides significant flexibility of capacity that allows the rate of production to be readily increased from low to high. Multiple readheads can pass through the assembly process simultaneously.

The ATOM readhead is designed such that fine alignment and assembly operations are performed from one side of the product only and robot arms

are used for component/subassembly transfer between each process stage. This is a largely unmanned assembly system with no human observers so continuous process checking is essential.

All parts must first be correctly orientated by means of bowl-feeders and shaped feed-chutes. Automatic part identification is achieved by various means such as RFID (Radio-Frequency Identification) tags and advanced image processing techniques. Furthermore, a Renishaw TP20 touch-trigger probe is used to calibrate the scale and readhead body datum positions during the assembly process. Correct alignment of the optical components within the readhead is achieved by a combination of optical checking and output feedback from the encoder sensor itself.

ATOM and the REVO-2

One of the first commercial applications of ATOM was in a new metrology product developed at Renishaw. The REVO system is one of Renishaw's flagship products and enables CMM users to perform 5-axis measurement on a 3-axis CMM. It measures thousands of points per second and operates at speeds up to 500 mm/s. As the head is much lighter and more dynamic than the CMM, it can quickly follow changes in the part geometry without introducing harmful dynamic errors.

REVO-2 is an improved version that builds upon the successful REVO system with enhanced power and communications capability to carry the latest REVO probes such as the RVP vision measurement probe.

The original REVO product featured a custom-designed encoder with a fine pitch 12 micron phase scale developed before highly accurate miniature encoders had been brought to market. REVO-2 incorporates Renishaw's latest ATOM incremental rotary encoder with RCDM rotary (angle) glass scales on both of its axes (yaw and pitch). It is the first product to have the ATOM encoder designed-in at the concept stage. Each 20 micron-pitch RCDM glass disc (Ø68 mm diameter) is face-read by a dual-readhead setup which helps to optimise REVO-2 performance by eliminating rotational eccentricity error.

The readheads are connected, via an analogue filter and analogue-to-digital converter (ADC), to REVO-2's electronics. ATOM, with its highly automated manufacturing that minimises process variability to assure the best quality and the shortest lead times, was chosen by REVO-2's design team as the most cost-effective solution.

In this application, ATOM offers leading-edge accuracy and speed that enable excellent servo-loop gain levels for outstanding position holding and accurate surface scanning of parts/components. The ATOM system was also chosen for several design features including:

- its mechanical simplicity and optical disc alignment method using a microscope camera system for improved installed accuracy;
- ease of setup in conjunction with REVO-2's electronics, allowing both incremental signal calibration and auto-phasing of reference marks without oscilloscopes or external equipment; and
- availability of chrome-on-glass rotary scale, with highly accurate scale markings enables REVO-2 to achieve a resolution of 0.002 arc seconds, delivering high precision over the full operating temperature range.

Richard Toller, Technical Manager for Renishaw's CMM Products Division, explains: "The ATOM encoder provides a level of plug-and-play convenience that simply didn't exist before. The ease of installation and alignment coupled with excellent technical support allowed the REVO-2 design team to fully meet the design specification whilst reducing overall production cycle time."

To summarise, ATOM helps to streamline the REVO-2 manufacturing process, while still providing exceptional metrology performance. ATOM is designed to support manufacturing and servicing operations with streamlined installation and robust calibration procedures, in addition to Renishaw's unrivalled technical support. The effects on the REVO-2 production process are reduced process cycle times, higher unit yields, greater efficiency and lower production costs. REVO and ATOM are leading metrology products that are now combined in the powerful REVO-2.

Renishaw's new REVO-2 measuring head incorporates ATOM incremental rotary encoders.

Some of the ATOM design team next to the product's automated assembly cell.

Performance – Overview

It was a very good year for Renishaw with record revenue for the Group and strong growth in both revenue and profit compared to the previous year. Investment for long-term business growth continued, including the recruitment and training of skilled people, new product development, manufacturing capacity and global marketing and distribution infrastructure.

Renishaw products, such as the SPRINT scanning system, are meeting market needs for ever-tighter production tolerances.

Review of 2017

This was a record year for revenue and whilst there was a boost from currency due to the Sterling weakening following the UK vote to leave the EU, there was still underlying growth at constant exchange rates of 14%. All product lines experienced growth, including strong growth for the position encoder line, which benefited from strong investments in the electronics sector in the Far East. This provided us with the confidence to continue our ongoing investments for the long-term sustainability of the Group, including global marketing and distribution infrastructure, the recruitment and training of skilled employees and new product development and manufacturing capacity.

The year saw continuing high levels of capital investment in the development and refurbishment of property. The new 133,000 sq ft headquarters facility for Renishaw, Inc. was completed and is occupied, allowing us to consolidate operations from two existing sites, including the 37,500 sq ft former headquarters building which was sold for US$3.2m. The new building at West Dundee, Illinois, is much better aligned to our 'solutions provider' strategy with excellent customer demonstration and training facilities. In the USA we also completed a new 20,000 sq ft building in Detroit, Michigan, for Renishaw Advanced Consulting and Engineering, Inc., a business that we acquired in 2014 to help support sales of CMM products and Equator gauging systems in the USA. A small office has also been established in California to support customers within the electronics sector.

Renishaw Additive Manufacturing Solutions Centres provide a secure development environment.

During the year, refurbishment of existing premises in Italy, France (Paris) and Sweden was completed, whilst in Spain, our subsidiary for the Spanish and Portuguese markets relocated to a new facility close to Barcelona, which has given them three times the space of their former building. As well as a new showroom which follows the highly successful template of the Renishaw Innovation Centre, the new Spanish office includes an additive manufacturing lab which includes material development facilities and post-processing equipment for 3D-printed metal parts. The ongoing investment in infrastructure to support our additive manufacturing business also saw the formal opening of our first North American Additive Manufacturing Solutions Centre (AMSC) in November 2016. Based in Kitchener, Canada and close to our existing office, it is one of a global network that is being established to increase the adoption of AM technology by providing a secure development environment in which our customers can expand their AM knowledge and confidence to enable it to be deployed in their own facilities for volume production.

Demonstration area at new facility near Barcelona, Spain.

In Mexico, work is nearing completion of a new building that will provide expansion space for sales and marketing operations. In October 2016, a new 11,800 sq ft office in Taiwan was formally opened, allowing enhanced commercial and technical support to customers through product showrooms, training and demonstration facilities.

In the UK, we continued to expand our manufacturing facilities, with further expenditure on plant and equipment to enable the Group to meet the demands of a record order book. Following refurbishment, the Old Town site in Wotton-under-Edge is now being used as an R&D facility for metrology product development, whilst at the Miskin site in South Wales, the Healthcare Centre of Excellence was formally opened by the First Minister of Wales in September 2016.

We continued to invest in our global IT infrastructure to support all the new and refurbished facilities, including ongoing investments in regional data centres to improve performance across our subsidiary network.

The skills agenda continues to be a major topic of conversation amongst engineering and science-based businesses, with strong competition for the best talent that will ensure the future success of the business. We continue to work hard regionally and nationally to promote engineering as a desirable career and Renishaw as a desirable employer (see CSR report pages 54–63 on Education and Community). With such a competitive environment for skilled people, we were very pleased to again be recognised for our graduate recruitment by The JobCrowd (a UK graduate job review website). We received a Highly Commended Award for the benefits package offered to graduates, rated second behind winner Volkswagen UK. We have a planned intake of 45 graduates and 48 apprentices this summer, whilst our in-house academy delivered 3,050 training days (2016: 6,500), with the reduction primarily due to changes to our graduate induction and apprenticeship programmes, which meant that less time was spent with the academy in favour of more 'on-the job' training.

During the year there were various awards for Renishaw including the prestigious Company of the Year award presented at the 2016 NMI awards (NMI is the UK trade association representing the electronic systems, microelectronics and semiconductor communities). There were also awards for products, including the XM-60 multi-axis calibrator winning the German MM Award for Innovation in the Measuring Systems category and a TASIA (The Analytical Scientist Innovation Award) 2016 award for our LiveTrack™ focus-tracking technology for Raman imaging.

Market conditions

As reported last year, we were already seeing a favourable environment for our position encoders line due to new investments in LED manufacture and the semiconductor sector. These investments have continued this year and have been boosted by a major investment cycle in flat panel display (FPD) manufacture in the Far East, where a combination of the right products, backed up by our excellent reputation for customer service, including delivery and engineering support, has enabled us to win significant business in this sector. With ever-shorter lead times demanded by this market, our ongoing investments in manufacturing capacity have given us an agile capability that allows us to quickly respond to such demands.

As well as strong trade in the Far East electronics sector, on a global basis we are continuing to see ongoing investment in production systems and processes, including automation, aided by an increasing awareness of the benefits to be gained by adopting Industry 4.0 and Smart Factory philosophies (see pages 26–27). Key sectors such as aerospace, automotive and energy require Renishaw systems to meet their need for ever tighter production tolerances and cost controls.

Strategy

To meet our key strategic aims, we continued to make investments, which this year included focusing on enhancing our ability to demonstrate our products and their applications, the infrastructure to support our additive manufacturing business, our manufacturing capabilities to meet the strong growth in business, and our continuing drive to develop a strong market presence in both established and emerging markets.

We continued to invest heavily in R&D to create strong market positions through technology leadership, with £78.0m (before net capitalised development costs and the R&D tax credit) expenditure on R&D and engineering during the year. We filed 27 new patent applications and there were 74 previously filed applications granted this year.

Another important aspect of our strategy is to utilise our existing technologies across different product lines; for example, the Z-axis on our new RenAM 500M additive manufacturing system, and the new REVO-2 measuring head (see page 35) all incorporate our optical encoders. Our MODUS™ metrology software platform, initially created for CMM applications, is also increasingly being applied across our metrology lines, and during the year, a new group was created to focus on its future development.

During the year we established a new subsidiary in Turkey to expand our marketing, sales, service and distribution infrastructure in this growing economy.

Performance – Metrology

The new Trigger Logic™ app simplifies the process of configuring a Renishaw machine tool probe.

Performance

As already reported, there was strong growth for our position encoder line, but all other metrology lines also grew, with strong growth also achieved in our measurement and automation, calibration and co-ordinate measuring machine product lines. The calibration line includes fibre-optic laser encoders, which are the finest resolution and highest accuracy position feedback systems offered by Renishaw. With a sub-nanometre (less than one billionth of a metre) resolution capability at velocities of up to two metres per second for an axis length of up to four metres, these encoders have this year benefited from growth in applications within the semiconductor industry.

The measurement automation products line, currently focused on the Equator™ gauging system, continues to see high levels of global success in the automotive, electronics and aerospace sectors, with integration within automation cells continuing to be a notable trend. To meet the growing demand for the latter, new IPC (intelligent process control) software was launched during the year which allows Equator systems to be fully integrated into manufacturing processes, either connected to one or multiple machine tools, or within fully automated manufacturing cells. The software allows tool offsets to be automatically updated after parts have been machined and inspected, ensuring that the process is kept within control limits.

The position encoders line and our associate company RLS, continue to derive particular benefit from the ongoing global drive towards industrial automation which aims to increase capacity and flexibility, whilst reducing manufacturing lead times and costs. This sector, like LED and flat panel manufacture, requires rapid, reliable and accurate measurement of position between moving parts. The market for industrial robots is also growing, with the introduction of smart factory concepts seeing the expansion of new robotic applications into light industries, such as 3C product assembly (computing, communication and consumer) and other automatic production lines, where robots with high precision and high flexibility are required. The use of collaborative robots ('cobots') is increasing, working closely with people to help finish production tasks through simple, fast programming or even self-learning processes. Denmark-based Universal Robots is a market leader in this field and their multi-axis collaborative robots use RLS AksIM magnetic absolute rotary encoders for position feedback.

Investment continues in the AM products line, which includes the LBC business in Germany (specialising in AM parts manufacture, including conformally cooled mould tools and tool inserts for injection moulding and die-casting applications) and the previously mentioned Additive Manufacturing Solutions Centres.

During the year there were some notable AM collaborative projects announced, particularly in the aerospace sector. In the UK, Renishaw is contributing its expertise to a project called WINDY (Wing Design Methodology Validation), being led by Airbus in the UK, to develop an innovative way of designing and manufacturing aircraft wings. Airbus is creating an AM facility at its Filton, UK site, which includes a new Renishaw RenAM 500M system, whilst in Spain the same system has also been installed at the Centre for Advanced Aerospace Technologies (CATEC) in Seville, which focuses its activity on the promotion of R&D activities within the aerospace sector in Andalusia, actively developing new technologies and the transfer of best practices. Renishaw is working with CATEC and other organisations in a Spanish Government funded project called Futuralve. Led by ITP, the aero engines and turbines manufacturer, the project's objective is to create advanced material and manufacturing technologies for a new generation of high-speed turbines for the aerospace sector. With increasing interest from the aerospace industry, Renishaw attended the Paris Air Show for the first time.

Outside Europe, Rapid Advanced Manufacturing (RAM3D) has opened a new facility in New Zealand, the biggest Australasian centre for metal 3D printing, where it is collaborating with Renishaw and using several of our AM250 additive manufacturing systems to help companies from a range of sectors, including aerospace, defence and consumer products, to explore the benefits of AM. In China, an agreement was signed with FalconTech Co, Ltd. to become an additive manufacturing solutions centre partner and distributor for our AM technology. Under the partnership, FalconTech, which is focused on the rapid manufacturing of high-performance components for sectors including aerospace, biomedical and marine, will set up an AM centre in Wuxi and purchase 10 RenAM 500M systems by October 2018.

Market conditions

The drivers for our metrology business are similar across the world. Many of our lines are benefiting from global skills shortages in the engineering sector, requiring increased investments in automation to offset the need for highly-skilled machine operators and demanding user-interfaces and software that are easier to operate. Manufacturers are also faced with a relentless drive to reduce costs,

shorten lead times, meet the need for increased complexity and closer tolerances in product design, and supply into markets where shorter product life-cycles are compressing times for process development. Renishaw technologies provide them with proven solutions to keep machines running reliably, maximise output from those machines, assist fast changeover between different products, and significantly reduce the time taken to inspect finished components.

A key sector for Renishaw continues to be the civil aviation market. The 2017 Boeing Global Market Forecast sees the need for 41,000 new aircraft by 2036 to meet growing demands and the replacement of aircraft within the current commercial fleet. Growth is seen as being due to the rise in middle-income travellers in developing markets such as China and India, and Boeing believes that over this period, Asia will need more than 16,000 new aircraft (39% of global demand). Renishaw products are used heavily in the aerospace sector and the drive to "lightweight" components is generating strong interest in additive manufacturing.

Strategy for growth

A key focus is on developing technologies that provide patented products and methods which support our product strategies, with £68.8m (before net capitalised development costs and the R&D tax credit) expenditure on R&D and engineering during the year. The current technology focus is on products that help our customers to increase measurement capability, improve measurement performance, increase speed of operation and are more user-friendly. These include simplified software, including apps, for machine tool and CMM probing, calibration and gauging; multi-probe capability for CMMs; miniaturised high-resolution position feedback systems that support the manufacture of high-precision electronics; the development of AM systems with faster processing capability and improved process control for large-scale manufacturing; and integrated process control solutions for automated manufacturing processes.

We continue to position Renishaw as a 'solutions provider' and reduce the risks of over-reliance on large customers who integrate our products. Our measurement automation, calibration, additive manufacturing, and accessory ranges, such as styli and fixtures, can be supplied direct to the end-user, whilst we continue to strengthen our portfolio of hardware and software for users of CMMs, including the upgrades of measuring machines already installed. For example, our new SFP2 surface finish probe offers a solution for the surface measurement of parts on the same machine used for dimensional measurement, reducing inspection times, part handling and floor space requirements.

Our wide portfolio of products gives us key advantages when competing for high-value orders, and both AM sales and automation projects are often with existing customers who understand Renishaw's holistic approach to manufacturing and the complementary products that can assist their part production. For example, as well as AM technology, the Futuralve project mentioned earlier is also benefiting from our REVO five-axis measurement system and SPRINT on-machine contact scanning technology for machine tools.

Key developments

In addition to new products already mentioned we introduced other metrology products, most notably the XM-60 multi-axis laser calibrator which allows the measurement of a machine tool's six degrees of freedom along a linear axis in a single set-up. It is significantly simpler and faster to use than other laser measurement techniques. Within our encoder products line we launched the VIONiC family of highly compact, ultra-high accuracy 'all-in-one' position encoders which combine interpolation and digital signal processing inside the readhead, therefore eliminating the requirement for additional external interfaces. For users of manual CMMs we introduced a MODUS 2 upgrade kit which combines a Renishaw controller, software and position encoder technologies to give users a more sophisticated measurement capability. We will launch a large number of new products at the EMO Hannover exhibition in September 2017.

We have introduced at trade exhibitions a new machining cell concept with integrated process control which demonstrates how complementary technologies from Renishaw, including gauging and machine tool probing, can contribute to high levels of productivity and manufacturing capability.

Outlook

The continuing drive to automate manufacturing processes in many sectors, both to minimise labour costs and reduce the need for skilled labour, will benefit our position encoder, measurement and automation, and machine tool product lines, whilst we remain confident that there will be increased adoption of AM technologies by many of our existing customer groups.

Growth in the world's middle-classes, with increasing disposable income, is also forecast to drive demand in areas such as civil aviation, consumer products, agriculture, construction and power generation (including renewables). These trends should all result in increased demand for our metrology products to help drive efficiencies, reduce waste, increase automation and aid product measurement traceability.

The Equator™ gauge is now offered with IPC software, providing the functionality to fully automate tool offset updates in CNC manufacturing processes.

Consumer products

Consumer products and electronics continue to change at a rapid pace, with ever shorter life cycles driven as much by fashion as functional requirements. Advances in technology, including more sophisticated hardware and sleeker physical design, call for rapid improvements in manufacturing capabilities.

Titanium watch cases manufactured for Holthinrichs Watches using Renishaw additive manufacturing systems.

The fast-paced nature of the consumer products market demands flexible manufacturing systems that can adapt to shorter lifecycles, yet still meet the requirements for high-quality, high-volume components. This illustration of a typical household shows a few examples of how Renishaw products are allowing manufacturers to satisfy these demanding requirements.

Making time for luxury watches

Michiel Holthinrichs, the founder of Holthinrichs Watches, is working with a Renishaw Additive Manufacturing Solutions Centre (AMSC) to build up his knowledge about the potential of metal AM and to speed up the overall manufacturing time for his high-end, limited-edition watches. His first design 'Ornament 1' combines traditional watchmaking elements, including a Swiss movement with manual winding and a design inspired by classic watches of the 1950s, with metal 3D printing used to produce the case, crown and buckle.

Michiel first worked with a reputable 3D printing bureau in Belgium to 3D print prototypes and the first stainless steel 'Ornament 1' watch on its Renishaw AM250 system. He noted, however, that customers seemed to be less concerned by the method of manufacture, but rather more by the details in the design which could not be achieved by traditional manufacturing and highlights the capability of Renishaw's high-performance AM systems to produce highly precise and fine detail features.

Now that Michiel has proved 'Ornament 1' can be produced, he is working with an AMSC to investigate how reproducible it is, to streamline the labour-intensive finishing process and to offer an alternative material. His plan is to develop a core range of classic style watches that are high-end and have a strong element of personality, but which could be completely customised like bespoke jewellery.

Digital display manufacture
Large-scale manufacturing of flat panel displays requires accurate encoders for position and motion control of high-speed systems. Absolute encoders improve reliability and productivity.

Plastic moulded casings
Additive manufacturing and precision machining technology are used to produce injection mould tooling with optimised conformal cooling for leading consumer brands, enhancing product quality and production efficiency.

From marble slabs to machine tools

Focusing initially on designing and building machinery to process natural stone, the Italian company Breton S.p.A soon moved to producing complete systems for the manufacture of composite stone. This proved to be the backbone of its growing business for many years. The 1980s saw Breton begin building CNC machinery for processing marble, granite and composite stone slabs, this also included the arrival of the company's first five-axis systems.

A decade down the line and Breton began to diversify its expertise into the production of high-speed CNC machining centres for the metal-cutting industry.

Switching from processing stone materials to metals demands a significant increase in precision, and using Renishaw's laser interferometers, rotary axis calibrators and ballbars all Breton's machines undergo calibration routines which guarantee their optimum operation. As a result, Breton's CNC machining centres are now seen as being among the world's most advanced in the sector.

Breton employee using XL-80 laser interferometer to calibrate a CNC machine.

Luxury watch from Holthinrichs Watches featuring a 3D-printed metal case, crown and buckle.

High-quality look and feel
Precision manufacturing using multiple process control techniques is used to produce the high standard of fit and finish required on casings and components for phones and tablets.

Metal housings for computers
High-volume production machining needs probing technology to automate part setting and control cutting tools to minimise scrap and maximise production capacity from each machine tool.

Watches/jewellery
Additive manufacturing is allowing the cost-effective customisation of complex luxury watches and jewellery, including the ability to add personalised designs/messages during the manufacturing process.

Agriculture

The sector is being driven by increasing global demand for food products from developing nations, as well as increasing global demand for biofuels. This is requiring greater investment in machinery for intensive farming capabilities and new technology to bring greater efficiencies to deliver 'precision agriculture' – making use of satellites to monitor crop condition and direct machinery for optimal performance, including the distribution of seed, fertilisers and pesticides.

Lamborghini tractors are known globally for their bold style, performance and design.

The majority of key components on high-end agricultural equipment are subject to process control using Renishaw products. This illustration of a typical tractor highlights a few key applications for our products.

Lamborghini is a brand that symbolises Italian passion in the world of supercars, but it also has a strong following in the agricultural world, due to a range of high-performance tractors produced by SAME DEUTZ-FAHR.

At its headquarters and main factory in Treviglio, near Milan, Italy, the company improved manufacturing efficiency by retrofitting Renishaw TRS2 tool recognition systems on four Mazak flexible manufacturing system (FMS) cells, which produce transmission and gearbox components. All these parts require a large number of threaded holes and some 70% of machining time is therefore devoted to drilling and tapping, with tools varying in size from M5 to M18 which break frequently; undetected this would lead to scrap and wasted machining time.

As machining cycles are fully automated, a tool monitoring system had previously been introduced in order to minimise scrap; however, it was taking an unacceptable 21 seconds to check each tool. With 34 tool checks required per finished component, this was resulting in significant non-productive time.

Agricultural analysis

Raman spectroscopy is increasingly being used for research within various fields of agriculture such as fruit and vegetables, crops, meat and dairy products.

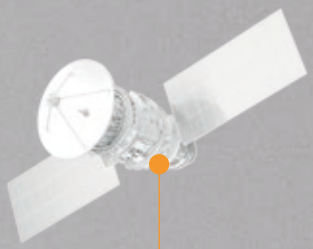
This led to the decision by SAME DEUTZ-FAHR to retrofit the Renishaw TRS2 tool recognition units which offered fast and reliable tool inspection, reducing the time to check each tool to just 7 seconds, a 67% reduction on the previous method and an average reduction of component cycle time of 7.5 minutes – some 6% of cycle time.

If a tool breakage is detected by the Renishaw system an alarm sounds and the machining program is stopped. Any logic could be employed at this stage, for example, another identical 'sister tool' could be used instead and machining could continue, but the engineers at SAME DEUTZ-FAHR prefer to stop the process for an operator to check the part and make sure that no more damage occurs.

The company's manufacturing engineering specialist involved with the project reports that the decision to invest in the TRS2 tool recognition systems and the subsequent cycle time savings has been extremely successful. "After a detailed analysis, based on the cost to run machines, we know this equates to a saving of more than €150k in the first year. This is because most of the non-productive machine time taken to check tools has now been released to machine components. We have paid back the initial investment in the TRS2s in a matter of just 5 months."

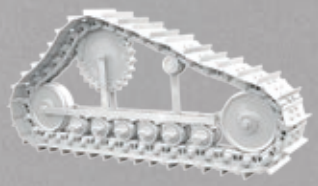
The TRS2 tool recognition system is used to check all tools prone to breakage, with at least 34 checks per machined component.

Renishaw technology is aiding the manufacturing efficiency of SAME DEUTZ-FAHR tractors.

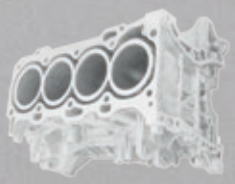


Smart farming
Modern agriculture is making use of satellites, equipped with position encoders, to monitor crop condition, forecast crop yields and direct machinery for optimal performance, including the distribution of seed, fertilisers and pesticides.

Manufacture of large high-value components
Wireless probing technology is used to control and automate the machining of chassis and other components for agricultural plant where scrap is too costly to accept.



Precision parts for powerplants
High-precision manufacturing uses advanced scanning probe systems to control quality, enabling powerplants to deliver enhanced performance, higher reliability and reduced emissions.



Precision gears and reliable gearbox components
High-volume precision machining and rapid part inspection necessary to support automotive gearbox and drivetrain production are made possible with process control and gauging technologies.

Performance – Healthcare

Complex reconstructive facial surgery is using Renishaw additive manufacturing systems to produce replacement jaw sections and teeth.

Performance

There was growth from all our healthcare product lines (spectroscopy, neurological and medical dental). In spectroscopy the market has responded very well to our award-winning InVia Qontor system helping the product line to achieve growth.

During the year the neurological products line achieved key strategic sales of the neuromate® stereotactic robotic system and neuroinspire™ surgical planning software. Alder Hey Children's Hospital and Birmingham Children's Hospital (BCH), are two of the UK's four national Children's Epilepsy Surgery Service (CESS) centres and both reported successful uses of the systems for stereoelectroencephalography (SEEG) cases for epilepsy, where intracerebral electrodes are implanted to measure electrical signals and identify which region of the brain is acting as a source for the epileptic seizures. Mr Richard Walsh, consultant neurosurgeon at BCH, reported after the first procedure that "using the robot certainly made the procedure easier, faster and more straightforward for me." One of London's largest and busiest teaching hospitals, King's College Hospital, also reported its first successful SEEG case (see page 20). Outside the UK, a neuromate robot was installed in Canada for the first time at the London Health Sciences Centre (LHSC) in Ontario, with the first assisted neurosurgical procedure also a SEEG case. The team at LHSC is led by neurosurgeon Dr David Steven who said, "It (the robot) is already noticeably faster and more accurate than the previous system. In addition, it allows us to plan trajectories previously impossible with a standard frame, making surgery safer and more accurate."

The medical dental products line experienced good growth from focusing on the sale of Renishaw AM machines configured for medical and dental applications. It ensures that it is able to demonstrate its knowledge of the technical challenges faced by those applications by manufacturing medical and dental parts at Renishaw facilities.

The medical dental products line has seen good progress in the supply of additively manufactured LaserImplants™, which are craniomaxillofacial patient-specific implants (PSIs) and associated cutting guides that support reconstructive surgery, typically resulting from head or neck trauma, birth defects or cancer treatment.

During the year a collaboration was announced with PDR, the International Centre for Design and Research, based in Cardiff, Wales, which seeks to pioneer new design methods that will bring engineering levels of precision to complex surgical procedures. Renishaw's expertise in technologies such as metal additive manufacturing will be harnessed through PDR's experience in research and design of medical devices. Renishaw and PDR have already collaborated on other projects, including the Innovate UK and EPSRC funded Additive-manufacture for Design-led Efficient Patient Treatment (ADEPT) project, which won a Collaborate to Innovate award and has resulted in the release of Renishaw's new ADEPT software (see below).

In Canada, Renishaw is contributing to a new medical centre called ADEISS (Additive DEsign In Surgical Solutions) based at the Western University campus in London, Ontario. The result of a partnership between the university, the London Medical Network and Renishaw, the centre will focus on the research, development and commercialisation of additively manufactured medical devices and surgical instruments. The Renishaw contribution is CAD3 million of in-kind support.

There was also a good year of sales for additively manufactured metal dental structures created from cobalt chrome powder using Renishaw AM machines. This came from a mix of LaserPFM™ frameworks (crowns and bridges), LaserRPD™ partial dentures and LinkAbutments™. The majority of manufacture of medical dental AM products takes place in the Healthcare Centre of Excellence, based at Miskin, which operates under an ISO13485 quality management system.

Our Raman instrumentation meets the high-performance requirements of a wide range of research applications, including life sciences, mineral research, graphene and other 2D materials, pharmaceuticals and advanced materials for the green energy market. However, there is an increasing use of our technology within medical research, for example in Canada, the University of British Columbia in Vancouver is leading the way in the use of Raman spectroscopy as a tool for monitoring biochemical changes and inter-donor variability in stored red blood cell units. In China, the Guangdong Medical University is developing a method for non-invasive prostate cancer screening (see page 21).

Hybrid systems, combining Raman chemical analysis with the high spatial resolution of either scanning electron microscopy or atomic force microscopy, continue to be in strong demand. Likewise, the growing life science market is showing renewed

interest in Raman, including hybrid combinations with laser scanning confocal microscopy.

Market conditions

Life expectancy is increasing in both developed and developing markets, meaning that key drivers include the requirement for faster procedures to reduce waiting times, more economical treatments, more patient-specific treatments (e.g. implants and personalised medicines), and safer procedures with reduced human errors. All our healthcare product lines are well placed to deliver on these requirements.

Global economic conditions continue to limit the availability of academic research funding in certain markets, while remaining strong in others. Key research areas, including 2D and 3D materials, green energy, pharmaceutics and biomedical research, continue to attract funding and our spectroscopy products are well placed to service these sectors.

Strategy for growth

We aim to develop innovative healthcare products that will significantly advance our customers' operational performance by maximising research capabilities, reducing process times and improving the efficacy of medical procedures. We are also increasingly addressing the requirement for personalised healthcare treatments.

As a key Renishaw focus is to develop technologies that provide patented products and methods, we invested £9.2m (before net capitalised development costs and the R&D tax credit) of expenditure on R&D and engineering during the year.

The regulatory requirements for healthcare products demand significant investment, but make barriers to entry high for competitive products.

Our metrology and healthcare businesses are interconnected and we employ core metrology technologies and manufacturing expertise to minimise technology risks. This is illustrated very clearly in our medical dental products line where we use our own AM machines in the manufacture of dental structures and medical implants to demonstrate the suitability of AM for this purpose, whilst also taking advantage of our knowledge of subtractive machining in the hybrid manufacture of LinkAbutments.

We actively seek out partnerships that will assist research and our routes to market, and we consider acquiring businesses and/or technologies that we feel are complementary to our existing healthcare products.

Key developments

During the year, a €6m Horizon 2020 grant was announced to support Phase 1-2 clinical trials for Renishaw's novel drug delivery system, to be used in combination with Herantis Pharma plc's drug candidate CDNF, for the treatment of Parkinson's disease. CDNF aims to relieve the symptoms of Parkinson's disease by protecting and regenerating dopamine producing neurons. The study has been approved by the Medicines Agency of Sweden and Finland and a total of 18 patients with Parkinson's disease are being recruited. Other applications for the Renishaw drug delivery system are also being progressed including its use for treating children with brain tumours by delivering therapies directly into the area affected by the tumour.

The neurosurgical line launched neurolocate™, a frameless patient registration module designed for use with the neuromate stereotactic robot and mounted on the robot arm during intraoperative X-Ray/CT scans.

The spectroscopy line launched the RA802 pharmaceutical analyser, which is a compact benchtop Raman imaging system designed specifically for the pharmaceutical industry. Using Renishaw's award-winning LiveTrack™ focus tracking technology, tablet samples with uneven, curved or rough surfaces can be quickly analysed for composition and structure without sample preparation, meaning that tablets can be formulated more efficiently. The RA802 won the best measurement laboratory equipment award at Eurolab 2017 show in Poland. The new Centrus CCD detector was also introduced for high-speed Raman analysis; giving outstanding performance, even at speeds of over 1,800 spectra per second, it dramatically reduces measurement times and is available on inVia microscopes and the RA802 pharmaceutical analyser.

During the year the medical dental products line introduced two new software products – QuantAM Dental increases automation in the production of dental products, especially using additive manufacturing, whilst ADEPT is a software package that streamlines the design and manufacture of craniomaxillofacial patient-specific implants.

Outlook

Increased life expectancy on a global basis means greater incidences of degenerative neurological diseases, which will require surgical therapies. With appropriate regulatory approvals and increasing numbers of reference sites we are well-placed to supply neurosurgeons with the products and techniques to support such procedures.

In developing markets, levels of wealth are increasing at a national and individual level, which is driving demand for higher-quality medical treatments, often requiring more technologically advanced products.

The market for Raman spectroscopy continues to grow in fields such as nanotechnology, advanced materials, pharmaceutical, life sciences and medical research.

David Steven and his team at London Health Sciences Centre, Ontario, with their newly installed neuromate stereotactic robot.

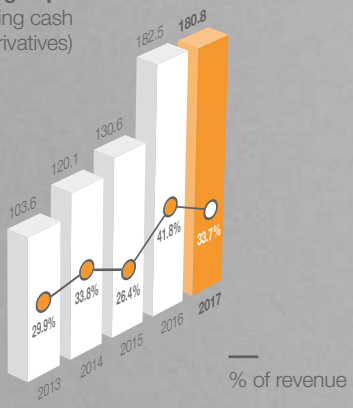
Performance – Financial review

This year we have achieved record revenue amounting to £536.8m and a 25% increase in adjusted profit before tax to £109.1m. Statutory profit before tax was £117.1m. We have a strong balance sheet with total equity growing by £59.9m to £444.4m, with net cash balances of £51.9m (2016: £21.3m). The Board is proposing an 8.3% increase in dividends for the year.

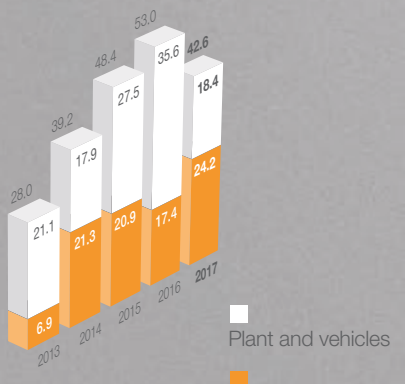
Allen Roberts
Group Finance Director

Financial highlights

Working capital £m
(excluding cash and derivatives)



Capital expenditure £m



Revenue

We achieved a record turnover with revenue for the year of £536.8m, compared with a restated £427.2m last year, a growth of 26%. We experienced an underlying revenue growth for the year of 14% at constant exchange rates.

Revenue by region

The table below shows the analysis of group revenue by geographical market.

In our metrology business segment, revenue was £503.4m, compared with a restated £398.9m last year. Revenue in our healthcare business segment increased from £28.4m last year to £33.4m.

A geographical analysis of our metrology and healthcare businesses is shown in the Strategic report.

Profit and tax

The adjusted profit before tax amounted to £109.1m, an increase of 25% compared to a restated £87.5m in 2016. Statutory profit before tax was £117.1m compared to a restated £61.7m in the previous year. In our metrology business, adjusted operating profit was £115.9m, compared with a restated £90.0m last year and in our healthcare business we recorded an operating loss of £7.2m, compared with a restated loss of £3.1m last year.

The overall effective rate of tax on continuing operations was 12.2% (2016 restated: 16.2%). The Group operates in many countries around the world and the overall effective tax rate is a result of the combination of the varying tax rates applicable throughout these countries. In the UK, the tax charge for the current year benefited from a lower UK current corporation tax rate of 19.75% (2016: 20%), a UK patent box benefit amounting to £4.0m, a reduction in the deferred tax rate to 17% from 2020 and a prior year credit of £3.0m.

Earnings per share and dividend

Adjusted earnings per share from continuing operations is 132.4p, an increase of 32% compared with 100.4p last year.

Statutory earnings per share from continuing operations is 141.3p, compared with 71.8p last year.

In line with the Group's progressive dividend policy, a final dividend of 39.5p net per share (2016: 35.5p) results in a total dividend for the year of 52.0p, an increase of 8.3% over the 48.0p in 2016. Dividend cover is 2.5 times (2016: 2.1 times) on an adjusted basis.

Research and development

Gross expenditure on engineering costs, including research and development on new products, was £78.0m (2016 restated: £68.8m). The capitalisation of development costs (net of amortisation charges) amounted to £2.7m (2016: £3.1m). The R&D tax credit in 2017 amounted to £6.5m compared to £2.4m in 2016. The net charge in the Consolidated income statement amounted to £68.8m compared to a restated £63.3m in 2016. The gross charge amounts to 15% of group revenue (2016:16%).

Between the business segments gross expenditure on engineering costs was £68.8m (2016 restated: £60.9m) in the metrology segment and £9.2m (2016 restated: £7.9m) in our healthcare segment.

New product research and development expenditure amounted to £53.5m, which compares with £44.4m spent last year. There have been a number of new product releases in both our metrology and healthcare business segments, and a number of new product introductions are anticipated during the 2018 financial year.

Group headcount

Group headcount has increased from 4,286 at 30th June 2016 to 4,530 at 30th June 2017, with the average for the year of 4,395, compared with 4,192 last year. The increase during the year of 244 comprised additional employees of 98 in the UK and 146 overseas. The increase in the UK included 46 apprentices and 45 graduates, and, in addition, we are funding the further education of 103 employees in engineering, software and commercial/business disciplines.

Labour costs, the most significant cost for the Group, increased by 15% to £211.6m (2016: £183.8m) reflecting an annual pay increase, exchange rate movement, the incremental cost of the employees recruited in both 2016 and 2017 and an increase in the employee bonus provision. Also, there was a directors' bonus this year of £1.7m (2016: £nil).

Revenue analysis by region

	2017 revenue at actual exchange rates £'000	Change from 2016 %	Restated 2016 revenue at actual exchange rates £'000	Underlying growth at constant exchange rates %
Far East, including Australasia	**248,905**	+29%	193,274	+14%
Continental Europe	**129,941**	+18%	110,315	+12%
North, South and Central America	**113,577**	+29%	88,029	+13%
UK and Ireland	**27,595**	+21%	22,752	+21%
Other regions	**16,789**	+31%	12,854	+30%
Total group revenue	**536,807**	+26%	427,224	+14%

Performance – Financial review continued

Consolidated balance sheet

The Group's shareholders' funds at the end of the year were £443.8m, compared with £381.4m at 30th June 2016. Reserves benefited from our trading results, with a retained profit after tax of £88.8m and were reduced by dividends paid of £34.9m.

Additions to property, plant and equipment totalled £42.6m, of which £24.2m was spent on property and £18.4m on plant and machinery and IT equipment and infrastructure.

The main property additions were:

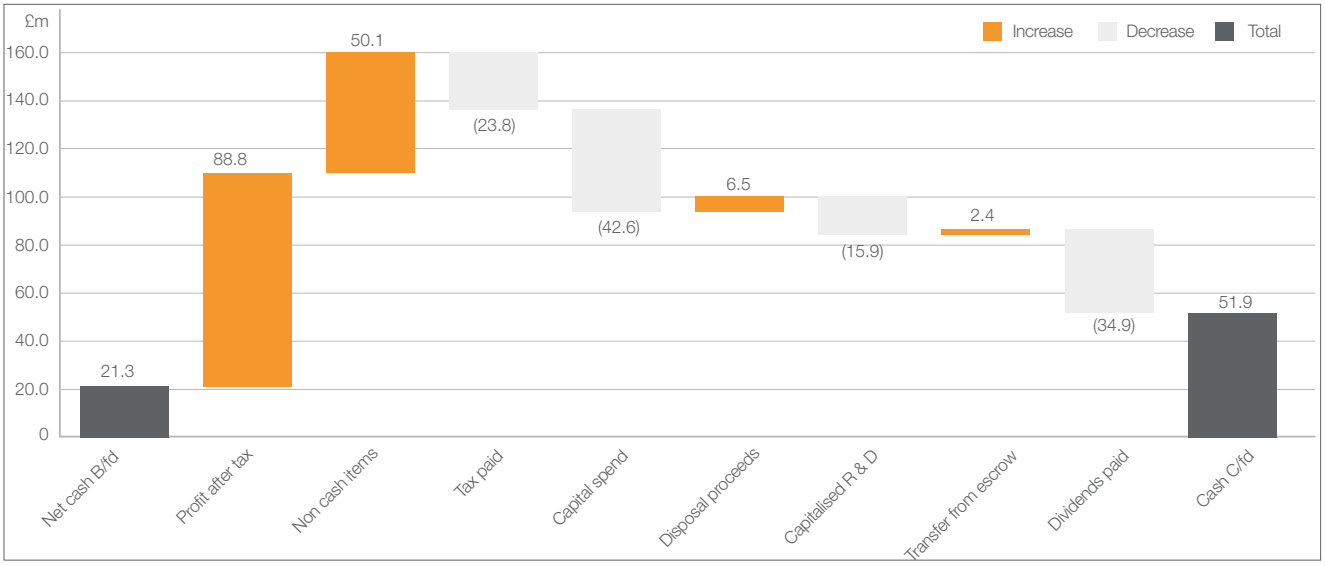
- in the USA, completion of our new headquarters, near Chicago and a new building in Detroit;
- in Spain, fit out of premises purchased last year;
- in Sweden, refurbishment of our existing premises;
- in Germany, refurbishment of our existing premises; and
- in France, refurbishment of our existing premises.

Within working capital, inventories decreased to £87.7m from £95.0m at the beginning of the year reflecting our continued focus on working capital management whilst remaining committed to our policy of holding sufficient finished inventory to ensure customer delivery performance, given our short order book of approximately five weeks.

Trade debtors increased from £114.9m to £137.5m. This increased amount reflects a stronger final quarter's revenue compared with the previous year, which has also contributed to the increase in debtor days to 73 at the end of the year, compared with 70 at the end of last year.

Net cash balances have grown over the year with balances at 30th June 2017 of £51.9m (2016: £21.3m). The cash flow bridge below shows the significant items that reconcile opening to closing cash balances. There is also the pension scheme escrow account of £12.9m (2016: £15.3m).

Cash flow bridge



At the end of the year, the Group's defined benefit pension schemes, now closed for future accrual, showed a deficit of £66.8m, compared with a deficit of £67.8m at 30th June 2016. Defined benefit pension scheme assets at 30th June 2017 increased to £170.7m from £149.2m at 30th June 2016, representing investment performance during the year. Pension fund liabilities increased from £217.0m to £237.5m, reflecting changes in the underlying assumptions applied, in particular the reduction in the discount rate used for the UK pension scheme. Under the 2015 recovery plan the liabilities are calculated on the basis of funding to self-sufficiency. The recovery plan provides for charges over certain UK properties to the value of £66.6m and the escrow account. For the UK defined benefit pension scheme, a guide to the sensitivity of the value of the respective liabilities is as follows:

Valuation sensitivity	Variation	Approximate effect on liabilities
UK – discount rate	Increase/decrease by 0.5%	-£21.3m/+£24.8m
UK – future inflation	Increase/decrease by 0.5%	+£17.7m/-£18.3m
UK – mortality	Increased life by one year	+£7.4m
UK – early retirement	One year earlier than assumed	+£6.4m

Restatements and alternative performance measures

Restatements to the 2016 results have arisen from the following items:

- the R&D tax credit previously reported in the tax charge has been reclassified and is now reported in cost of sales and credited against the group's R&D expenditure in line with international accounting standards;
- the allocation of profits between continuing and discontinued operations; and
- the impact of certain foreign currency forward contracts used as hedging instruments for future incoming currency cash flows that did not meet the criteria for hedge accounting under IAS 39 which has resulted in the prior year profit before tax being reduced by £25.8m, with a corresponding credit in the other comprehensive income. This year an £8m gain has been recorded in statutory profit before tax as a result of this accounting treatment. There was no impact on the group net assets, cash balances or future cash flows.

The Board has introduced alternative performance measures (adjusted profit before tax, adjusted operating profit and adjusted earnings per share) to report the results on the basis that all forward contracts are accounted for as effective hedges. These measures will be the basis by which the Board evaluates the Group's performance as they better represent the underlying trading of the Group. The tables below show the effects of the restatements on the previous year's results and the details of the adjustments between statutory profit before tax and adjusted profit before tax. See note 24 for further details.

	2016 £m
2016 reported profit	80.1
R&D tax credit	2.4
Discontinued operations	5.0
Adjusted restated 2016 profit before tax	87.5

	2017 £m	2016 restated £m
Adjusted profit before tax	**109.1**	87.5
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**11.6**	(2.4)
- reported in losses from the fair value of financial instruments	**(3.6)**	(23.4)
Statutory profit before tax	**117.1**	61.7

Treasury policies

The Group's treasury policies are designed to manage financial risks to the Group that arise from operating in a number of foreign currencies and to maximise interest income on cash deposits. As an international group, the main exposure is in respect of foreign currency risk on the trading transactions undertaken by group companies and on the translation of the net assets of overseas subsidiaries.

The following information includes disclosures which are required by IFRS and are an integral part of the financial statements. Weekly groupwide cash management reporting and forecasting is in place to facilitate management of this currency risk. The operations of group treasury, which is situated at head office, are governed by Board-approved policies.

All Sterling and foreign currency balances not immediately required for group operations are placed on short-term deposit with leading international highly-rated financial institutions.

The Group uses a number of financial instruments to manage foreign currency risk, such as foreign currency borrowings to hedge the exposure on the net assets of the overseas subsidiaries and forward exchange contracts to hedge a significant proportion of anticipated foreign currency cash inflows. There are forward contracts in place to hedge against the Group's Euro, US Dollar and Japanese Yen cash inflows. The Group does not speculate with derivative financial instruments.

See note 20 for an analysis of cash balances and currency borrowings at the year end.

Investment for the future

We will continually look to the long-term growth of the Group and to invest in the research and development of new products, improving manufacturing and production processes to provide capacity for the future, and expanding our marketing and support presence around the world.

Allen Roberts
Group Finance Director
27th July 2017

Risk and risk management

Effective risk management is critical to the achievement of our strategic objectives. Risk management controls are integrated into all levels of our business and across all our operations. We continually assess our exposure to risk and seek to ensure that risks are appropriately mitigated.

Overview of risk management

The Board is responsible for the overall stewardship of our system of risk management and internal control. It has established the level of risk that is appropriate for our business and acceptable in the pursuit of our strategic objectives and has therefore set appropriate policies. It has also set delegated authority levels to provide the framework for assessing risks and ensuring that they are escalated to the appropriate levels of management, including up to the Board where appropriate, for consideration and approval.

The roles and responsibilities of the Board, key committees and all levels of management from a risk management perspective are summarised in the infographic below. This process ensures that risks are not just the product of a bottom-up approach but are also examined from a top-down perspective via an integrated senior management process, which is closely aligned with the Group's strategy in order to enhance the Group's approach to risk generally.

Risk management framework – information and feedback flow

Activities during the year

A new executive risk committee was formed in 2016 creating greater linkage across our review and assessment of risk. The committee met four times in the period and conducted a thorough review of our principal risks as well as the relevant mitigation plans for each.

The overall effectiveness of the Group's risk management and mitigation processes is reviewed regularly by the Executive Board and the Audit Committee.

During the year a new Group Audit Manager was recruited. The internal audit team operates independently, reporting to the Audit Committee. Scheduled visits to Group companies were held and documented, with an executive summary provided to the Audit Committee and any shortcomings acted upon promptly. Process enhancements are worked upon by this team. All operating companies are required annually to complete self-certification questionnaires regarding compliance with Group policies, procedures and requirements.

Cyber threats

In relation to the continuing threat from cyber security, we have provided employees with online training and further strengthened our IT systems' resilience as well as the monitoring of threats.

Other key developments

New enhanced due diligence procedures have been implemented for routinely screening new and existing agents and distributors, utilising the services of a market-leading screening service. We have rolled out refresher e-learning training on our Group Business Code (which sets out the ethical standards expected of employees and our business partners) and also on anti-bribery.

A groupwide whistleblowing policy was implemented this year which involved the appointment of an independent third party provider to operate a confidential reporting line, enabling people to raise concerns in confidence if they feel the standard internal processes are not appropriate.

Going concern
for more information see page 75

Viability statement
for more information see pages 75–76

For further explanation of our approach to risk management and internal control see page 76

Key focus areas for the 2017 financial year

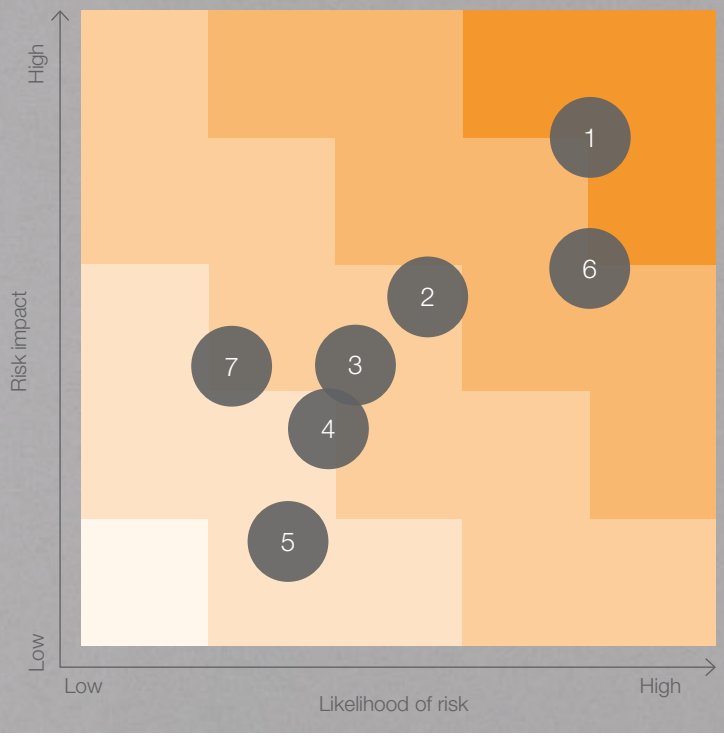
- A robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.
- Implementation of measures in response to the Modern Slavery Act.
- Implementation of an executive risk committee, four meetings held in the period.
- Implementation of a groupwide whistleblowing policy.
- Recruitment of a new Group Audit Manager.
- Consideration of the risks related to Brexit.
- Evaluation of and protection against cyber security threats.
- Anti-bribery due diligence enhancements.

Risk likelihood and impact before mitigation

The diagram to the right shows the Board's analysis of the principal risks affecting the Group, before mitigation.

1. Current trading levels and order book
2. Research and development
3. Supply chain management
4. Regulatory legislation for healthcare products
5. Defined benefit pension schemes
6. Exchange rate fluctuations
7. Cyber security threats

Further descriptions and associated mitigations are shown on pages 52–53.



Principal risks and uncertainties

Our performance is subject to a number of risks, the principal risks and factors impacting on them are set out in the table below.

↑ Increased ↓ Decreased ↔ No change

The Board has conducted a robust assessment of the principal risks facing the business. The full business implications of Brexit remain uncertain, which will be the case for some time. The Board is closely monitoring the situation as it develops. Further commentary on Brexit is provided on page 67. Currency fluctuations, trading arrangements, employment issues and other risks that become apparent over time, will be monitored by the Board and mitigation put in place where possible.

The cyber security threat risk has been included for the first time this year, to demonstrate how the Group is addressing this increasing and challenging threat.

1 Current trading levels and order book

Revenue growth is unpredictable and orders from customers generally involve short lead-times with the outstanding order book at any time being around one month's worth of revenue value.

Related strategic priorities:

2 4 5 6 8

* No change.

Potential impact

Global market conditions continue to highlight risks to growth and demand that can lead to fluctuating levels of revenue.

Whilst global investment in production systems and processes is expected to expand, future growth is difficult to predict, especially with such a short-term order book. This limited forward order visibility leaves the annual revenue forecasts uncertain.

Mitigation

- The Group is expanding and diversifying its product range in order to maintain a world-leading position in its sales of metrology products. Targeted investment in sales and marketing resources continues in order to support the breadth of the product offerings.
- The Group is applying its measurement expertise to grow its healthcare and additive manufacturing business activities.
- The Group retains a strong balance sheet and has the ability to flex manufacturing resource levels and shift patterns.

Year-on-year change

↔

2 Research and development

The development of new products and processes involves risk, such as development timescales, meeting the required technical specification and the impact of alternative technology developments.

Related strategic priorities:

2 5 7

* No change.

Potential impact

Being at the leading edge of new technology in metrology and healthcare, there are uncertainties whether new developments will provide an economic return.

Mitigation

- Patent and intellectual property generation is core to new product developments.
- R&D programmes are regularly reviewed against milestones and, when necessary, projects are cancelled.
- Medium to long-term R&D strategies are monitored regularly by both the Board and Executive Board, including reviews of the allocation of R&D resource to key projects.
- Product development processes around the Group are reviewed and aligned where possible to provide consistency and efficiency.
- New products involve beta testing at customers to ensure they will meet the needs of the market.
- Market developments are closely monitored.

Year-on-year change

↔

3 Supply chain management

Customer deliveries may be threatened by a failure in the supply chain.

Related strategic priorities:

3

* No change.

Potential impact

Inability to meet customer deliveries could result in loss of revenue and profit.

Mitigation

- Production facilities are maintained with fire and flood risk in mind.
- Critical production processes are replicated at different locations where practical.
- The Group is highly vertically integrated providing increased control over many aspects of the supply chain.
- The Group has the ability to flex manufacturing resource levels and shift patterns.
- Regular vendor reviews are performed for critical part suppliers.
- Stock policies are reviewed by the Board on a regular basis.
- Product quality is closely monitored.

Year-on-year change

↔

4 Regulatory legislation for healthcare products

The expansion of the Group's business into the healthcare markets involves a significantly increased requirement to obtain regulatory approval prior to the sale of these products.

Related strategic priorities:

2 5 6

* No change.

Potential impact

Regulatory approval can be very expensive and time-consuming. This area is also very complex and there is a risk that the correct approvals are not obtained.

Mitigation

- Specialist legal and regulatory employees are in place to support the healthcare business.
- The Group has experience of healthcare regulatory matters at Board level.
- Healthcare operations in UK and France have ISO13485 certification for their quality management systems, with Ireland and other subsidiary healthcare operations falling under the UK quality management system.

Year-on-year change

5 Defined benefit pension schemes

Investment returns and actuarial valuations of the defined benefit pension fund liabilities are subject to economic and social factors that are outside of the control of the Group.

Related strategic priorities:

1

* Strong performance of fund assets during the year in addition to contributions made in line with the recovery plan.

Potential impact

Volatility in investment returns and actuarial assumptions can significantly affect the defined benefit pension scheme deficit, impacting on future funding requirements.

Mitigation

- The investment strategy is managed by the pension scheme trustees who operate in line with a statement of investment principles.
- A new recovery plan was agreed in June 2016 for the 2015 actuarial valuation based on funding to self-sufficiency.

Year-on-year change

6 Exchange rate fluctuations

Fluctuating foreign exchange rates may affect the results of the Group.

Related strategic priorities:

6 7

* No change.

Potential impact

With 95% of revenue generated outside of the UK, there is an exposure to major currency fluctuations, mainly in respect of the US Dollar, Euro and Japanese Yen. Such fluctuations could adversely impact both the Group's income statement and balance sheet.

Mitigation

- The Group enters into forward contracts in order to hedge varying proportions of forecast US Dollar, Euro and Japanese Yen revenue. Forward contracts which are ineffective for accounting purposes provide the protection against rate changes that management intended when entering the contracts.
- The Group uses currency borrowings to hedge the foreign currency denominated assets held in the Group's balance sheet.
- There is a monthly board review of currency rates and hedging position.

Year-on-year change

7 Cyber security threats

For the Group to operate effectively it requires continuous access to timely and reliable information at all times. We seek to ensure continuous availability, security and operation of information systems. Cyber threats continue to increase.

Related strategic priorities:

2 3 4 7

* Increased vigilance against evolving threats.

Potential impact

Reduced service to customers due to lack of reliable management information putting the Group at a competitive disadvantage.

Delay or impact on decision making through lack of availability of sound data or disruption in/denial of service.

Loss of commercially sensitive and/or personal information leading to implications including reputational damage, claims or fines.

Theft of commercial or sensitive information/data or fraud causing loss and disruption.

Mitigation

- There is substantial resilience and back-up built into group systems.
- An IT security committee exists, comprising IT and business leadership.
- Cyber risk and security is a regular topic for board discussion.
- External penetration testing is utilised on an appropriate basis.
- The Group operates central IT policies in all aspects of information security.
- Regular monitoring of all group systems takes place with regular reporting and analysis.
- Operating systems are continuously updated and refreshed in line with current threats.
- The Group employs a number of physical, logical and control measures to protect its information and systems.
- E-learning courses covering certain cyber threats were rolled out to all employees group wide during the year as well as management training.

Year-on-year change

* Explanation of change in risk.

Our business model – for more information see page 9

Our strategy – for more information see page 22 onwards

Corporate social responsibility

At Renishaw, CSR means focusing on material impacts that affect us and relevant stakeholders, so that we concentrate on subjects we are best placed to influence or control. This enables us to support the sustainable growth of our business, whilst maintaining its longevity and prosperity, in an ethical and socially conscious manner.

Allen Roberts
Group Finance Director

Strategy update

At Renishaw, we seek excellence in every aspect of our business and are committed to managing our business in a responsible manner. We have a duty of care to our people, and the communities in which we operate, and we seek to address the fact that our operations, products and sourcing have both direct and indirect environmental impacts. We believe that by minimising these impacts, and operating in an ethical and sustainable manner, we can reduce risks in our supply chain and have a positive impact on society. Our sustainability efforts are focused on areas where we believe we are best placed to make improvements. These areas are resource and energy, education, community and innovation. We are proactively addressing issues such as rising energy costs, constraints on emissions, finite resources, increasing

2017 CSR targets and progress

Target:

Waste management:

5% reduction of waste to landfill from global operations

For more information see page 63

Progress:

- Just over 2,330 tonnes of waste from our global operations was diverted from landfill.

10%
reduction of waste to landfill from our global operations.

95%
of all waste diverted from landfill.

Target:

Energy consumption:

Decrease reliance on fossil fuel derived energy

For more information see pages 61–62

Progress:

- We generated 2.98% of our global demand of electricity within this period.
- We have added more low energy lighting systems, reducing our demand by a further 1.2m kWh.

1,187,118 kWh
of electricity generated this year.

2,126,237 kWh
of electricity generated to date.

water scarcity, the need for greater transparency and skills shortages. We have assessed our CSR impacts and have identified those most material to our business; these include waste management, energy consumption, GHG emissions and people.

Human rights and slavery

A review of the Group Business Code (the Business Code) was performed to ensure it still upholds the standards we and our stakeholders expect. During this review, some parts of the Business Code were updated to reflect our new approach to mitigating modern slavery within our supply chains. To ensure all our people are aware of the high standards we expect of them, the updated Business Code has been sent out to all 4,530 employees worldwide.

Implementation of our modern slavery and human trafficking strategy is proceeding as planned. We have begun a process of engaging with our tier 1 suppliers to ascertain the extent of their efforts to mitigate modern slavery. This process is underway in our main UK purchasing group and our local purchasing teams in India and China. Further details are contained within our modern slavery statement found at www.renishaw.com.

A strict non-discrimination policy is embedded in the Business Code, which states the minimum standards expected within the Group and from our representatives. The Business Code requires that our employees have the right to non-discriminatory treatment and equal opportunities, to work in a safe and secure working environment, and to receive a fair wage.

During the year, we have also developed a new bullying and harassment training course which has been rolled out across the Group. It explains how to identify bullying and harassment in the workplace, and how to manage any situations that may arise. This course is the latest in a series of modules aimed at developing our employees and empowering them to operate in accordance with the Business Code.

To avoid any form of discrimination during the recruitment process, we have strict guidelines to ensure proper consideration is given to applications from all genders, ethnic backgrounds and those with disabilities. We work closely with employees who become disabled to ensure they have every opportunity to continue in their employment with Renishaw.

We continue to use the Business Code and other policies to set expectations with potential suppliers. The full Business Code can be found at www.renishaw.com.

LED lighting has reduced energy demand for lighting in the UK by around 80% (image of assembly area at Miskin).

Target:

GHG emissions:

3% reduction in GHG tCO_2e per million pounds turnover compared to 2016.

For more information see page 62

Progress:

- 11% reduction of GHG emissions from owned transport.
- 12% increase in Scope 3 GHG emissions.

16%

decrease in GHG tCO_2e emissions per £m turnover compared to 2016.

7%

increase in absolute GHG emissions.

Target:

People:

5% of our employees as apprentices, graduates or sponsored students on structured programmes.

For more information see pages 56–58

Progress:

- 4,530 people employed, an increase of 5.7% since last year.
- Over 230 people across the Group on structured apprenticeship and graduate programmes.
- Just under £1.9m invested in training this year.

5%

of our employees are apprentices, graduates or sponsored students on structured programmes.

Our strategy in action – People

Tom Silvey, like many of our apprentices, has gone on to study a part-time engineering degree alongside his work as a CNC Applications Engineer at Renishaw. Tom completed his degree in 2016 with first-class honours and has since received the Frederic Barnes Waldron Award from the UK Institution of Mechanical Engineers.

People

Diversity

As a global company, Renishaw enjoys the advantages of a diverse workforce. We benefit from the range of experience and cultural understanding that comes from diversity in the workplace. With over 20 different nationalities represented within our senior management group, we benefit from the variety of expertise they bring to the business. On 30th June 2017, we employed 4,530 people across the Group, an increase of 5% since last year. Of these, 3,496 (77%) are male and 1,034 (23%) are female. There are nine directors on the Board, consisting of seven males and two females. The senior management group is made up of 58 people, of which 56 (97%) are male and two (3%) are female. Renishaw regards its senior management group to be the Executive Board, the heads of each product line, sales territory, and manufacturing organisation that report directly into the Executive Board, and the directors of Renishaw's subsidiary undertakings.

Communication and participation

Operating out of 77 locations around the world has necessitated a culture of clear and open communication between sites, functions and management teams across the business. To facilitate this, we operate a flat structure that allows our people to openly voice their ideas and concerns.

We are committed to conducting our business with honesty and integrity and promoting a culture of openness and accountability. To help with this a groupwide whistleblowing policy was introduced this year for our people to raise concerns about suspected wrongdoing. The policy covers all Renishaw employees, officers, consultants, contractors, casual workers, agency workers, suppliers, customers and third parties who provide services for or on behalf of Renishaw. People are reassured their concerns will be taken seriously and investigated as appropriate, and that their confidentiality will be respected without fear of reprisals. We hope that in many cases an employee will be able to raise any concerns internally. However, it is recognised there will be times when it is not appropriate, or a person will not be comfortable, raising a concern internally. An independent third-party provider, Safecall, has been appointed to operate a confidential reporting line enabling people to raise concerns in confidence and, if they wish, anonymously.

We continue to use our suggestion scheme, which we have recently relaunched on a new online platform, to encourage our people to share ideas that can improve business processes and their employment experience. The suitability of these ideas is assessed by a committee of employees, and then transferred to the appropriate area of the business for detailed consideration. Ideas that are implemented and provide benefits to the business can earn a financial reward for the originator. We also hold regular communication meetings, where a member of the Board presents updates on each area of the business with an open-floor Q&A session. The Board presents our annual and half-yearly financial results to all employees in person at our larger locations in the UK and via video-conference to smaller sites.

Training and development

We recognise that our highly skilled people are the key to success within our organisation; ensuring that they are fully trained in their fields is critical to achieving that success. As such, we place a large emphasis on ensuring that our training programmes work effectively for our people and business needs. This year, we invested a further £1.9m in training. We firmly believe that work experience, as well as studying, is essential to the success of our employees. To ensure this is possible, we offer the opportunity for our graduates and apprentices to take part in funded studies at HNC, HND and degree levels alongside their regular working lives. Tom Silvey, an award-winning apprentice and BEng graduate, said the following about his experience "When Renishaw presented me with the opportunity to work alongside my studies, I knew this was the best fit for me. The Company not only funded my degree, but also gave me all the time I needed to complete university projects."

4,530
people employed across the Group

£1.9m
invested in training programmes

100
students joined Renishaw for paid placements

Our continued investment in training is currently funding the development of 131 apprentices, 57 graduates on our graduate training programme and further career development for employees right across the business. We are also currently funding the further education of 103 of our people across the Company in engineering, software and commercial/business disciplines.

Our online training platform, MySkills, was launched in May 2015 and continues to be successful. Our people from around the world participate in the programmes it offers, which are organised to give them control of their own development plans with the support of their line manager. It offers a broad range of courses (in various languages) focused on equal opportunities and diversity, technical skills, leadership/management development, induction, soft skills, career development, health and safety, anti-bribery and corporate social responsibility.

The Academy was launched in 2010 with the aim to develop future application engineers to meet the growing demand of Renishaw's increasingly diverse range of products. Technical training is vital to maintain our ability to provide excellent technical support, and since the inception of the Academy, it has provided a wide range of training programmes from "Face-to-Face Communication" and "Fundamentals of Manufacturing" to using and programming the machines and products we make. Access to the Academy continues to be rolled out to more of our locations across the globe, with our highly skilled trainers being able to offer face-to-face and online training. We also offer the experience gained from our internal training to customers in several key markets, with courses held at customer sites or our own locations.

Graduates from the 2016 intake undergoing practical training.

A key focus is ensuring that our employees have the necessary skills to offer a high level of training and support to customers.

Corporate social responsibility continued

Renishaw sponsors the TransFIORmers Moto2™ GP team.

Wales international Samson Lee (right) visits Miskin.

To give potential future employees the ability to receive practical training and experience alongside their academic studies, we offer paid placements each year for a broad range of students. This year we have given 100 (2016: 100) students the opportunity to work at Renishaw, 40 of whom stay for a full year-long placement. There are 131 manufacturing, technical and software apprentices currently in training (2016: 120), with four (2016: 4) in our German subsidiary, and the rest at various UK locations. We have a further 48 new apprentices joining us in September 2017 (2016: 46) and 45 new graduates starting this summer (2016: 76).

Health and safety

We continue to develop our health and safety management system and we are bringing more sites online with our health and safety strategy. Our management system has been designed to be in line with best practice and the requirements of the ISO18001 standard. We recognise the importance of dealing with all injuries, as many have the potential to have been more serious. All injuries are recorded, enabling us to manage treatment and investigate all incidents effectively with the aim of implementing appropriate control measures to prevent reoccurrence.

The total number of accidents for the period was 234 (2016: 296) against a year-end headcount of 4,530 (2016: 4,286). This equates to an accident frequency rate of 30.79 per million hours worked (2016: 40.99).

Our online incident reporting system continues to be used effectively, encouraging employees to report all incidents regardless of severity, and enables us to record trends more effectively. We currently do not see any overall trends with the data we capture, except that most of our incidents are minor cuts.

There were two reportable accidents under the UK RIDDOR reporting requirements: one severe cut to a finger and one head injury leading to concussion. These resulted in a total lost time of 244 hours, or 42.5 days. This equates to a frequency rate of 0.25 per million hours worked compared with a UK manufacturing average for RIDDOR reportable accidents of 1.94.

No work-related ill health or disease was reported, but health monitoring in the form of lung function testing, hearing testing and eye testing, where appropriate for a job role, has been established for many years and is ongoing. Health support for employees is offered in the form of subsidised health monitoring (blood pressure, diabetes, cholesterol and BMI).
To support the physical and mental welfare of our people we have regular on-site visits from two occupational physicians who are available for our employees as required. These doctors also act as senior advisors to our Group Health and Safety and HR functions to ensure that best practice in occupational health is observed.

A total of 122 (2016: 113) near-misses were recorded for the period. No significant repeating common causes have been established.

Community

With an increasing global footprint, we recognise the positive contribution that can be made to our local communities through varied interactions with local residents, businesses, schools and not-for-profit organisations. This is especially true in the west of England and South Wales, where we are a significant employer.

In many of our markets, we communicate a positive story about the role played by science, engineering and manufacturing to enhance the lives of the general populace and the attractive nature of a career within these sectors. We see this as vital to overcome perceptions about career options in these areas and to ensure a strong pipeline of future talent, not just for our own needs, but also for our wider supply chain and customer base.

Across the Group we continue to host tour groups and have given talks to a range of organisations including primary and secondary schools, universities and colleges, business clubs and societies.
We actively support the business community regionally, nationally and internationally, through membership of trade and lobbying associations such as the Additive Manufacturing Users Group (USA), the European Society for Precision Engineering & Nanotechnology, SAE International, the Confederation of British Industry (CBI), the Dental Laboratories Association (UK), the Association of British Healthcare Industries, Verein Deutscher Werkzeugmaschinenfabriken e.V. (Germany), UCIMU-SISTEMI PER PRODURRE (Italy) and the UK's Manufacturing Technologies Association (MTA) where two senior managers are Board members. Rhydian Pountney, a member of the International Sales and Marketing Board (see page 71) is also co-chair

of the Advanced Engineering Working Group of the annual India-UK Joint Economic and Trade Committee (JETCO).

We are also a member of various industry research centres across the globe, some of these include Canada Makes (Canada), PräziGen (Germany), Light Alliance (Germany), BazMod (Germany), The Manufacturing Technology Centre (UK) and the Advanced Manufacturing Research Centre (UK).

We continue to sponsor and help judge a range of regional and national business award programmes that help encourage and recognise business and individual excellence. Rainer Lotz, Managing Director of Renishaw GmbH is a Board Member of Germany's MX Awards, whilst Head of Communications, Chris Pockett, helps judge the main apprenticeship, education and business awards programmes in Bristol and Gloucestershire.

To further our aim of establishing awareness of Renishaw as a significant regional employer, we continue to sponsor a wide range of festivals, sports clubs and organisations in the west of England and South Wales. During the year this included sponsorship of new music at the Colston Hall's Lantern venue in Bristol, Stroud Young Photographer of the Year and Gloucester Tall Ships Festival.

The sport of rugby has an especially high profile in South Wales and the west of England, and we currently sponsor Samson Lee (Scarlets and Wales) and Ben Morgan (Gloucester), and for season 2017-2018, we have agreed sponsorship with Cardiff Blues, including on-ground signage and sponsorship of Tomos Williams, a promising young scrum-half who was named in the Wales squad in June 2017. We sponsor Swansea City footballer Ki Sung-Yeung, who plays internationally for South Korea, plus Gloucestershire County Cricket's Tom Smith.

We are a technical sponsor to numerous student racing teams, where we utilise our additive manufacturing expertise to supply key components. In Italy, the Unibo Motorsport team, based at Università di Bologna, competes in the Formula Student single-seater car competition, whilst at Politecnico di Torino we sponsor the 2 Wheels Polito team, which has built a motorcycle that competes in the MotoStudent competition. In Germany, we have also supplied additively manufactured wheel carriers for the Formula Student GreenTeam.

Our sponsorship of the French Moto2™ GP motorcycle team TransFIORmers also includes the supply of unique additively manufactured titanium wishbone and steering column components.

Charity

In the UK, the Renishaw Charities Committee (RCC) was formed in the 1980s to distribute funds to charitable and voluntary organisations and support the individual fundraising efforts of all UK employees. The RCC is made up of representatives from Renishaw's main Gloucestershire sites and has a particular focus on assisting organisations that help enrich the lives of children and adults, from toddler groups and sports clubs, through to organisations that support the disabled and the bereaved. Donations are also made to organisations located close to other UK sites. A separate fund is administered by the RCC, which donates monies to aid the victims of global disasters.

During the year, the RCC received fewer funding requests but still made donations to 230 diverse organisations totalling £98,000 (2016: £102,000). Beneficiaries included medical research groups, junior sports clubs, cubs and brownies groups, sea cadets, hospice care organisations, disability sports and support groups, primary, secondary and special needs schools, counselling and carers support groups, animal sanctuaries and senior citizen groups. The RCC also fully matches funds raised by employees for UK national fundraising events such as Children in Need and Red Nose Day and also supports individual employee fundraising activities.

During the year, significant donations of £2,000 or more were made by the RCC to support seven organisations in Gloucestershire, including a new memorial garden for St Mary's Church in Kingswood, a community library in Berkeley, further development of the Wotton-under-Edge community swimming pool, a new launch vehicle for the Severn Area Rescue Association's lifeboat, and a new centre at the Milestone special school in Gloucester that, when opened, will offer state-of-the-art facilities including a large hydrotherapy pool with therapy and sensory equipment, plus an all ability play and sports area.

Globally, Renishaw is highly supportive of its local communities. In the USA we have started a partnership with VetPowered LLC, an organisation offering machining, fabrication and maintenance and repair services to industry through a highly-trained veteran and wounded warrior work force. It provides profits and resources to Workshop for Warriors, a non-profit school that prepares veterans and wounded warriors for advanced manufacturing careers through training, certification and job placement.

Renishaw, Inc. has donated machine tool calibration equipment to VetPowered and runs free-of-charge training to enable them to increase their machine maintenance and repair portfolio. Following successful completion, the aim is to then train the veterans in machine tool retrofits to enable them to earn further revenue to support their very important cause.

During the year, our subsidiary in India supported Gurukulam, a school of 350 disadvantaged students in Pune. The children are often from travelling families who do not have the stability or financial means to send them to mainstream schools and the school provides education integrated with vocational training, as well as shelter and three meals per day, which is free of charge to the children and their families. Gurukulam faces many financial challenges, one of which is the cost of fuel (wood and LPG) used for cooking. Renishaw therefore gave a significant donation for the installation of a concentrated solar thermal technology based steam cooking system, which harnesses the power of the sun to generate steam and hot water, providing an efficient and environmentally friendly system with no fuel costs.

A charitable donation was given to the Severn Area Rescue Association.

Mr Girish Prabhune (2nd from right), founder of Gurukulam School, with Renishaw staff.

Corporate social responsibility continued

Southville Primary School, winner of the Super Science competition.

Renishaw, Inc. staff at a 'girls into automotive engineering' event.

Education

Renishaw's UK-based education outreach team continues to work with primary and secondary schools, and higher educational establishments, to encourage young people of all genders, ethnicity and backgrounds to learn about engineering, discover what engineers do every day and to encourage them to choose engineering as a career. The team has designed more workshops to be delivered either at schools, or at Renishaw's sites in Gloucestershire and South Wales, that are curriculum-linked to add value and context to learning in maths, physics, computer science, and design and technology.

Renishaw believes that making things, and understanding how products are designed and made, is important in influencing young people to consider a career in engineering. We have therefore developed (with support from the Welsh Government) a Fabrication Development Centre (FDC) on our manufacturing site at Miskin in South Wales, which we believe is unique in the UK.

Our aim is to become a key educational resource for hands-on learning of design, fabrication, manufacturing and engineering skills, through which we will raise the profile of engineering and encourage more students, especially girls, to choose science, technology, engineering and maths (STEM) subjects. This will encourage more young people to take up apprenticeships, jobs or further education career pathways in high-value engineering.

Since it opened last May, we have welcomed over 600 pupils and students to the FDC where they have participated in design and build projects, and Renishaw workshops in a state-of-the-art facility that inspires them to think about an engineering career.

We continue to build relationships and raise our profile in the regions where we have the highest recruitment needs. In Bristol, we again partnered with the Bristol Post newspaper to run a 'Super Science' competition that offers one Bristol region school the chance to win £10,000 towards anything in the name of science education. The 2016 winning school was Southville Primary, which intended to buy key science equipment such as magnets, circuits, microscopes and thermometers, and hold workshops with local scientists.

To allow us to support education outreach activities across our key regions, we offer STEM ambassador training to all our new graduates and second-year apprentices. We now have over 130 ambassadors in the Company and each must carry out one STEM activity per year, which helps to sustain and grow our multiple initiatives with schools and universities, including talks and lectures, career fairs, after school clubs and STEM projects. One of our STEM ambassadors recently received a letter from a parent whose daughter had attended a talk on working as an engineer at Renishaw. "My daughter had never been committed to school, but after the Renishaw engineer's talk she amazed us! She suddenly knew that she wanted to be developing new technology with Renishaw, and the last parent's evening was a delight to experience." Such feedback validates our continuing commitment to schools engagement.

We are continuing to develop relationships with key universities that have been identified as having relevant courses for our business needs. This includes the sponsorship of engineering societies and Formula Student teams. We have ongoing research projects, PhD and undergraduate projects with several universities, and often give lectures, employability talks and attend career fairs to raise our profile.

The task of developing more engineers is not something that we can do alone and therefore we continue to work with leading industry organisations and engineering peers to advise government on national policy that will benefit the sector. For example, we are members of the Royal Academy of Engineering's Diversity and Inclusion Leadership Group that has been set up to help remove barriers and encourage more women and other under-represented groups into engineering.

We are also a key contributor, both in time and money, to Festomane (Festival of Manufacturing and Engineering), which is held each year in Stroud district, where our Gloucestershire sites are located. The festival has grown in popularity and Renishaw hosted an 'Engineer your Future' event this year where both students and parents attended workshops and talks to find out the opportunities for young people in engineering and manufacturing. Influencers such as teachers and parents are key groups that we focus on to change perceptions.

We also have strong partnerships with other STEM-focused organisations including the Greenpower Education Trust, Aerospace Bristol, Bristol Music Trust and the SS Great Britain Trust. The new Aerospace Bristol museum, which features a hangar for the Concorde aircraft to be built, opens in Autumn 2017 and a key aim is to advance learning, skills and training particularly in science, technology, engineering and design. A Renishaw Equator gauging system will form part of the museum's exhibits focused on current aerospace technology, and we will use the dedicated education facilities to deliver some of our outreach programmes.

Our Spanish subsidiary continues to support the SpainSkills entry in the global WorldSkills competition through sponsorship, the loan of equipment and supplying engineers to assist the entrants in the successful completion of the engineering sections of this challenge.

In the USA, we are also developing a new programme that creates partnerships with educational establishments such as technical colleges and universities. These partnerships create regional Renishaw bases to support our customers whilst helping to develop training and curriculum for the next generation of engineers and manufacturing staff. A pilot partnership with Greenville Technical College Center for Manufacturing Innovation, South Carolina, is up and running covering a variety of our product lines with two Renishaw staff based at the facility to support the partnership.

As part of this pilot, staff from Renishaw, Inc. attended an event at the college to encourage girls into automotive engineering, organised by the Southern Automotive Women's Forum. Around 150 middle-school and high-school girls attended from the Greenville area who took part in hands-on STEM-based activities, toured the facilities and heard Renishaw UK STEM ambassador, Lucy Ackland, talk about her career journey and the many opportunities within the engineering sector.

Environment

We recognise that improving the operational efficiencies of our locations across the world contributes to the sustainable growth of our business. We continue to work hard to ensure that the impact of our business activities is as low as practical. By analysing our GHG emissions we can see that our greatest impact is from the purchase of electricity and its associated Scope 3 emissions, which is responsible for just over 50% of our global GHG emissions. This is followed by our product distribution and business travel, at around 25% and 17% respectively.

To combat this, we have in previous years invested in solar arrays. During this year, we have generated 2.98% (2016: 3.45%) of our global energy needs, and are looking for more ways to invest effectively in reducing our future energy demands. As well as our investment in solar arrays, we have invested just under £1m this year in energy-saving technologies to increase the efficiency and lower the energy demand of our building stock. These projects have included the installation of triple glazing, LED light fixtures and insulation in several of our buildings.

We have installed new LED lighting in the UK which has reduced our energy demand for lighting by around 80%, and aim to continue to apply these technologies at new locations where appropriate. In the USA, we have recently constructed a new building for Renishaw, Inc. where carpets with a 43% pre-consumer recycled content were used. We also reduced the amount of parking enabling us to increase the amount of green space on the site to around 3,200 m^2, thus removing the need to transport and lay around 1,600 m^3 of tarmac and 1,500 tonnes of stone. The roof was also upgraded to white thermoplastic polyolefin (TPO) offering two advantages. Firstly, it is a lighter roofing system which allows for the building structure to utilise less steel, and secondly, a white TPO roof provides a reduction to the roof heat island effect, as recognised by the LEED® energy and environmental design standard. LED lighting has been installed throughout the building which reduces our annual energy demand around 100,000 kWh compared to traditional ballast tube lighting.

In Germany and the UK we are looking at ways we can reduce the impact of our pool car fleets, and are looking at fuel types and car sizes to increase the fuel efficiencies and overall impact of the vehicles. At our new building in the USA we have installed two electric vehicle charging points.

We have also investigated energy in production and developed a project to analyse downtime on our machine tools, which significantly contributes to our energy demands. Machine tools are designed to always be left in standby mode, which uses only slightly less energy. This project has enabled us to reduce the power required when the machines are not in use, and from the work we have carried out to date, we have reduced our energy demand from these machines by just over 806,000 kWh per annum.

We continue to look at ways to reduce our reliance on business travel and to install state-of-the art video-conferencing facilities at our locations. Our people are encouraged to use these facilities and other technologies rather than travel if possible. We are also working with our logistics partners to measure the GHG emissions of the work they perform on our behalf and will work with them to manage this as effectively as possible.

This year our total GHG emissions have increased by 7% but our statutory emissions have increased by just 2%. We continue to increase coverage of our scope 3 emissions data and expect to show increases in the data reported as this progresses. We have continued to increase our business over this period and have importantly seen our statutory GHG emissions normalised by revenue fall by 19% and our total GHG emissions normalized by revenue fall by 16%.

At our sites across the globe we house 4,530 people, with sites ranging in size from two people, to our UK headquarters, which houses 1,411 in eight buildings. Our buildings range from a 19th century Grade II listed cotton mill, to state-of-the-art, purpose-built modern buildings, and offices in large and small multipurpose properties around the world.

In the UK, Renishaw continues to participate in the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme and the Carbon Disclosure Project (CDP). We use the CDP as a benchmarking tool and are working extensively to ensure that our efforts in GHG emission management are fully disclosed and are as transparent as is expected by our people, customers, and investors.

Corporate social responsibility continued

Renishaw is legally obliged to report on Scope 1 and 2 emissions (as defined by the Greenhouse Gas Protocol). However, through analysis, it is evident that our Scope 3 emissions amount to a significant proportion of our carbon footprint. We will continue to disclose our Scope 1, 2, and significant Scope 3 emissions, and to put efforts into improving data quality, and expanding our Scope 3 data capture to present a more complete picture of our GHG emissions. During the year, our total GHG emissions for Scope 1 and 2 (statutory disclosure) was 21,245.15 (2016: 21,192.39; 2015: 20,659.07) tCO_2e. Our significant Scope 3 emissions (voluntary disclosure) was 24,232.49 (2016: 21,638.21; 2015: 22,403.09) tCO_2e.

To calculate our GHG emissions, we have used the GHG Protocol Corporate Accounting and Reporting Standard (revised addition), data gathered for our CRC submission, and the UK Government's GHG reporting guidance as the basis of our methodology and the source of emissions factors. Our GHG emissions are based on actual data taken from bills, invoices, meter readings and expense claims wherever possible. For our Scope 1 and 2 emissions, less than 1% of the data is based on estimates from averaged data sets.

	2015	2016[1]	**2017[3]**
Scope 1			
Gas Consumption	962.30	771.82	**1,003.62**
Owned Transport	2,293.66	2,492.30	**2,230.50**
Generator Diesel	124.31	26.38	**28.03**
Heating Oil	41.09	234.00	**244.67**
Fugitive Emissions	262.79	305.73	**266.00**
Total Scope 1 (tCO_2e)	**3,684.15**	**3,830.23**	**3,772.82**
Scope 2			
Location Based			
Purchased Heat	5.44	19.88	**4.59**
Electricity	16,963.50	17,003.42	**17,467.75**
Total Scope 2 (tCO_2e)	**16,968.94**	**17,023.30**	**17,472.34**
Total Statutory GHG emissions[2] (tCO_2e)	**20,653.09**	**20,853.53**	**21,245.16**
Normalised Statutory GHG emissions[2] by revenue (tCO_2e/£m)	**41.75**	**48.81**	**39.58**
Scope 3			
Business travel	4,030.00	4,717.04	**5,397.60**
Product distribution	11,482.33	9,534.18	**11,048.65**
Raw material purchase	1,088.41	1,260.40	**1,517.53**
Post and communications	598.66	774.00	**773.11**
WTT and T&D total[6]	5,203.68	5,352.59	**5,495.61**
Total significant Scope 3 (tCO_2e)	**22,403.08**	**21,638.21**	**24,232.49**
Total GHG emissions (tCO_2e)	**43,056.17**	**42,491.74**	**45,477.66**
Normalised total GHG emissions[4] by revenue (tCO_2e/£m)	**87.03**	**99.47**	**83.63**
Further information			
Scope 1 Out of scope (biofuel blend)	59.58	60.85	**59.13**
Scope 2 Market Based			
Electricity	16,963.50	21,375.05	**21,659.34**
Total Scope 2 (tCO_2e)[5]	**16,968.94**	**21,394.93**	**21,663.93**
Scope 3 Out of scope (biofuel blend)	38.97	29.49	**31.72**

[1] 2016 figures have been restated due to improvements in our methodology, updated GHG conversion factors and replacing the calculation used for the June 2016 data last year – see footnote 3.

[2] Statutory emissions are Scope 1 and 2 as required by the Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013.

[3] To facilitate the timely capture of information, this disclosure uses internally reported data from July to May and the June data is given as an average of the previous three months. This will be restated next year if a significant difference is seen.

[4] Total GHG emissions include Scope 1 and 2 (statutory) and significant Scope 3 (voluntarily reported) emissions.

[5] Market Based electricity is used where it is available to us. This is currently only within the UK and Europe. Where Market Based factors are not available Location Based factors are used in their place. Currently 87% of electricity consumed is covered by Market Based factors.

[6] Well to Tank and Transmission and Distribution losses total, use Location Based conversion factors for calculations.

Waste management

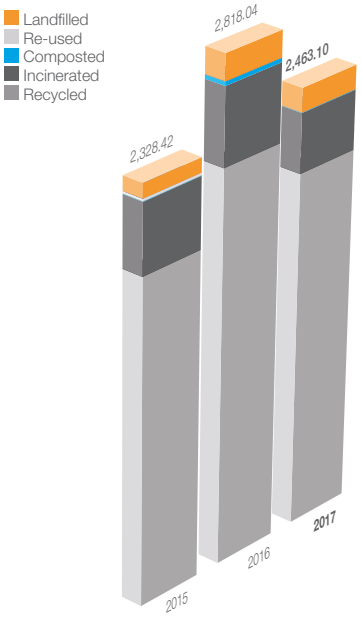
Our waste strategy, which was started in February 2014 and proved to be effective, has continued to drive our efforts throughout the year, resulting in a further 2,330 tonnes of waste being diverted from landfill. Approximately 64% of all waste generated this year originated from our UK sites where we sent less than 0.5% of waste to landfill, these sites continue to maintain their certification to the Carbon Trust Waste Standard. These sites have been recognised by the Carbon Trust for their efforts in moving waste away from landfill as a disposal option, towards recovery, recycling and reuse.

Last year, we set a target of 5% for the reduction of waste to landfill in our global operations. We have had a decrease from our global operations of 10%. We are still reusing, recycling or recovering around 95% of our waste around the world.

Electric car charging point at the new headquarters building for Renishaw, Inc.

Product compliance

We have prepared for the Restriction of the use of Hazardous Substances Regulations (RoHS), which requires most of our products to be compliant in July 2017. We continue to monitor substances against those identified as 'substances of very high concern' under the Registration, Evaluation, Authorisation and Restriction of Chemicals Directive. Whilst we do not fall within the remit of the USA's Dodd-Frank Wall Street Reform and Consumer Protection Act, we recognise that compliance with the conflict minerals assessment and disclosure aspects of such legislation is important to many of our customers. We also recognise we should have a supply chain with minimum risk, that is free of unethical practices. As such, we have worked to mitigate against conflict minerals within our supply chain. Continual investigations in our supply chain are carried out to help ensure conflict minerals are not present. Any issues we consider to be against the spirit of the Business Code are monitored, and we work with suppliers where issues are identified.



Global waste totals (tonnes)

	2015	2016[1]	**2017**
Landfilled	82.15	146.07	132.24
Re-used	12.96	0.96	0.00
Composted	2.64	23.28	2.80
Incinerated	394.71	431.02	330.11
Recycled	1,835.96	2,216.71	1,997.94
Total non-landfilled	2,246.27	2,671.97	**2,330.86**
Percentage of waste sent to landfill	3.53%	5.18%	5.37%
Total waste	2,328.42	2,818.04	**2,463.10**

[1] Includes US data for the first time which accounts for 87.2 tonnes of landfill waste in 2016.

This Strategic report was approved by the Board on 27th July 2017 and signed on its behalf by

Sir David McMurtry
Chairman and Chief Executive

Power generation

Worldwide attention is continuing to focus on expanding our use of renewable energy. Whilst equipment such as solar panels and wind turbines are in increasing supply, and research continues into making this equipment as efficient as possible, the storage of energy generated is another area where significant R&D efforts are being applied.

Dr David Boyd of Caltech uses a Renishaw inVia Raman microscope to research solar fuels.

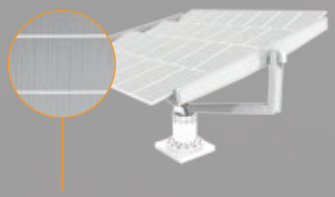
From fossil fuels to renewable energy, Renishaw products are at the heart of associated manufacturing processes. Whether in exploration and production in the oil and gas sector, or solar panel manufacture, our products are used to control the production of key componentry. This illustration highlights just a few applications within the power generation sector.

Caltech working to solve the world's energy problems with the help of inVia

The California Institute of Technology (Caltech) is on a mission to find new and effective ways to produce solar fuels using only sunlight, water and carbon dioxide. A focus of this is investigating photocatalysis and light capture. Dr David A. Boyd is using Raman spectroscopy to accelerate the discovery and in-depth understanding of photocatalysts and photoactive materials for the solar-driven CO_2 reduction reactions.

Dr Boyd uses a Renishaw custom-designed inVia Raman microscope, installed at the Joint Centre for Artificial Photosynthesis (JCAP). JCAP is one of the US Department of Energy's Energy

Solar panel manufacturing
Absolute position encoders provide smooth velocity control and high accuracy for automated operations in solar panel manufacturing and other high-tech industries.



Photovoltaic panel testing
Analysis of chemical deposits on thin film layers using Raman spectroscopy enables quality control and assurance for solar panel production.

Innovation Hubs and is led by a team from Caltech. The High Throughput Experimentation (HTE) group aims to accelerate the identification of semiconductor materials, with appropriate band energetics, for efficient photoelectrocatalysis of solar fuel reactions.

Dr Boyd said, "The inVia system is a natural fit to assist in the identification and characterisation of metal oxide catalysts. Given our sample sizes and the need to differentiate a number of possible material phases, we require large area mapping and advanced analysis capabilities. The Renishaw Empty Modelling tools have been especially invaluable."

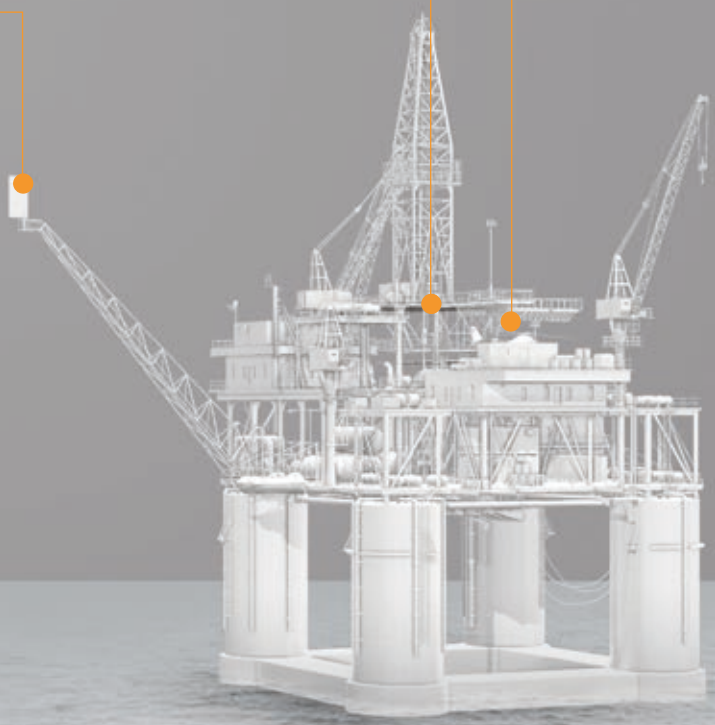
Dr Boyd and his colleagues have recently published a paper on this work in the RSC Journal of Materials Chemistry A, 'Solar Fuels Photoanodes Prepared by Inkjet Printing of Copper Vanadates.' This paper describes the processing and characterisation of these exciting new materials that address the demanding requirements needed to perform the photoelectrocatalysis oxygen evolution reaction. A key element of this work is Raman imaging, with associated data processing and visualisation, which has enabled phase mapping of the array of compositions. This has led to the identification of promising photoanodes for solar fuel applications.

The RESOLUTE™ absolute encoder is increasingly being used on manufacturing equipment for solar panels.

Gearboxes and power transmission
Equipment for inspection and quality control ensures power transmission systems meet the demanding specifications required for efficient service in power stations and hostile environments.

Large part manufacture
Equipment has to be manufactured to stringent safety requirements, requiring accurate and traceable processes. Calibration systems are used to check and verify the dimensional accuracy of high-value CNC machine tools.

Wind turbines
Probing and other process control technologies enable precision manufacture of both large and small-scale components for high-performance operation and reliability of turbines in service.



Corporate governance

> The Board is ultimately responsible to shareholders for all the Group's activities, its strategy and financial performance, the efficient use of the Group's resources and social, environmental and ethical matters.

Sir David Grant
Senior Independent Director

Introduction

With the assistance of the Audit Committee, the Board approves the Group's governance framework and reviews its risk management and internal control processes with a view to maintaining high standards of corporate governance throughout the Group.

A key focus area for 2017 has been the proposed changes to the Company's remuneration policy, which is covered in more detail in the Remuneration report beginning on page 83. In line with the Companies Act 2006, Renishaw will be submitting its new remuneration policy for shareholder approval at the 2017 AGM. The Remuneration Committee has reviewed the existing policy, which was supported by 86% of voting shareholders when put to the AGM in 2014. Our proposed changes are outlined on pages 86 to 88.
In reviewing the policy we have:

- taken into account feedback from the shareholder community;
- considered changes in market practice since 2014; and
- reviewed developments in remuneration governance, including the commentary from many stakeholders and observers on the issue of executive pay.

The Annual report on remuneration 2017 starting on page 90 sets out the details of directors' compensation throughout this financial year, which will be subject to the normal advisory vote at the AGM.

During the period, we have continued the implementation of new policies and procedures commenced last year following the introduction of the Market Abuse Regulation, by amending the Group's Share Dealing Code and insider list process and training employees in order to comply with the stricter rules on the management and disclosure of inside information.

We have worked closely with Ernst & Young LLP in their first year as our new auditors, following shareholder approval of their appointment at the 2016 AGM.

Senior management has also held four meetings of our new risk committee formed last year, in order to conduct a thorough review of our principal risks together with mitigation plans. The Board also considered the viability statement requirement, now in its second year, in the context of risk and the viability statement is contained on pages 75 to 76.

The Brexit referendum had taken place only one month prior to the date of our report last year, and the full business implications of the decision to leave the EU were uncertain. The nature of the exit remains uncertain, but it is clear that changes will need to be made in aspects of the Group's operations. However, with a strong direct presence in the EU, Renishaw is well placed to respond to changes in future trading arrangements between the UK and the EU and the risk committee will be monitoring developments closely to assess required actions as the exit and trading negotiations become clearer.

Other areas that have received particular attention include a review of our insurance provider for property and liability cover, via a tender process that led to the appointment of new insurers. We also launched a global whistleblowing facility, which is externally facilitated by Safecall, a leading provider of confidential whistleblowing lines, in order to give employees additional options should they wish to raise a serious concern.

The Board takes seriously its responsibilities for making sure that all employees are aware of their obligations to act with openness, honesty and transparency. This strong anti-corruption culture is embedded in our Group Business Code and Anti-Bribery Policy which can be found at www.renishaw.com/en/renishaw-group-business-code-14444. In 2017, we have continued to closely monitor operational risks in key regions and are implementing additional compliance policies in certain areas. In the period we entered into a contract with a market leading provider, allowing us to routinely screen new intermediaries. This has been rolled out to the Group, via updated e-learning packages on anti-bribery as well as senior management briefings. Training on our Group Business Code, which sets out the ethical standards we require, was also refreshed globally.

Scope of disclosures

This corporate governance report has been prepared in accordance with the UK Corporate Governance Code 2016 (Governance Code). The Governance Code can be viewed at www.frc.org.uk. This report, which incorporates the reports of the Audit Committee and Nomination Committee, together with the Directors' remuneration report, describes how we have applied the main principles of the Governance Code.

We report on the operation of our business in the following ways:

A review of the Group's business and likely future developments is given in the Chairman's statement and the Strategic report. Segmental information by geographical market is given in note 2 to the financial statements.

The UK Listing Authority's Disclosure Rules and Transparency Rules (DTR), require the Annual report to include a management report which can be found in the Strategic report.

The Directors' corporate governance report and Other statutory and regulatory disclosures set out on pages 66 to 77 and 94 to 96 form the Directors' report (Directors' report).

For the purposes of the DTR, which require a corporate governance statement to be included in the Directors' report, the Company's corporate governance practices are set out in the Directors' corporate governance report, which forms part of the Directors' report.

For the purposes of the UK Listing Authority's Listing Rules (LR), certain information required to be provided to the shareholders is also contained in the Directors' corporate governance report, the Directors' remuneration report and the Other statutory and regulatory disclosures, including information relating to arrangements with controlling shareholders.

For the purposes of the DTR, the information required by section 7 of such rules is referred to in the Directors' corporate governance report.

Disclosure of information under Listing Rule 9.8.4R

The information that fulfils the reporting requirements under this rule can be found in the Directors' remuneration report and other strategic and regulatory disclosures on the pages identified below, as applicable.

Section	Topic	Location
(1)	Interest capitalised	Not applicable
(2)	Publication of unaudited financial information	Not applicable
(4)	Details of long-term incentive schemes	Not applicable
(5)	Waiver of emoluments by a director	Not applicable
(6)	Waiver of future emoluments by a director	Not applicable
(7)	Non pre-emptive issues of equity for cash	Not applicable
(8)	As item (7), in relation to major subsidiary undertakings	Not applicable
(9)	Parent participation in a placing by a listed subsidiary	Not applicable
(10)	Contracts of significance	Not applicable
(11)	Provision of services by a controlling shareholder	Directors' remuneration report pages 83–93
(12)	Shareholder waivers of dividends	Not applicable
(13)	Shareholder waivers of future dividends	Not applicable
(14)	Agreements with controlling shareholders	Other statutory and regulatory disclosures pages 94–96

Board of directors

Sir David McMurtry

N*

CBE, RDI, FRS, FREng, CEng, FIMechE

Chairman and Chief Executive

- Formerly employed by Rolls-Royce plc, Bristol, for 17 years, holding the positions of Deputy Chief Designer and Assistant Chief of Engine Design for all Rolls-Royce engines manufactured at Filton, Bristol.
- Invented the original measuring probe in the early 1970s and co-founded Renishaw with John Deer in 1973.
- Responsible for group technology.

John Deer

Deputy Chairman

- Trained as a mechanical engineer and worked for Rolls-Royce plc, Bristol, for 14 years.
- Co-founded Renishaw with Sir David McMurtry in 1973, serving as Managing Director from 1974 to 1989.
- Primarily involved in the commercial direction of the Group, with particular emphasis on marketing and the establishment of the Group's wholly-owned subsidiaries.
- Responsible for group manufacturing.

Allen Roberts

FCA

Group Finance Director

- Qualified as a chartered accountant in 1972 and is a Fellow of the Institute of Chartered Accountants in England and Wales.
- Joined Renishaw in 1979 and appointed to the Board of Renishaw plc in 1980.
- Heads group finance, business systems, human resources and Wotton Travel Ltd.
- Responsible for the metrology regulatory and quality assurance function.
- Reports to the Board on corporate social responsibility matters.

Geoff McFarland

Group Engineering Director

- Graduated with a BEng in computer-aided mechanical engineering at Heriot-Watt University, and subsequently worked for several years as a research associate.
- After working briefly in the high-volume manufacturing electronic sector, joined Renishaw in 1994.
- Appointed to the Board of Renishaw plc in 2002.
- Responsible for group engineering and group IP and the additive manufacturing products line.

William Lee

Group Sales and Marketing Director

- Joined Renishaw in 1996.
- Became Director and General Manager for the laser and calibration products line in 2007 and subsequently Director and General Manager of the machine tool products line in 2014.
- Appointed to the new role of Director of Group Sales and Marketing in December 2015.
- Holds an MBA from Bath University.
- Appointed to the Executive Board in 2015.
- Appointed to the Board as Group Sales and Marketing Director in August 2016.
- Chair of the overseas marketing subsidiaries.

Carol Chesney

A* R N

FCA

Non-executive director

- Appointed to the Board of Renishaw plc in October 2012.
- Chartered accountant who worked at Arthur Andersen for seven years in audit services.
- Currently Company Secretary of Halma plc, having also been Group Financial Controller.
- Worked as Group Accountant at English China Clays plc where she was responsible for transactions.

Kath Durrant

R* N

Non-executive director

- Appointed to the Board of Renishaw plc in January 2015.
- Currently Group HR Director for Ferguson plc (formerly known as Wolseley plc) and a member of its Executive Committee.
- Previously the Group HR Director at Rolls-Royce plc.
- Held a variety of senior positions at AstraZeneca plc, including Vice President, HR and Communications for its research and development division.

Sir David Grant

A R N

CBE, FREng, FLSW, CEng, FIET

Senior Independent Director

- Appointed to the Board of Renishaw plc in April 2012.
- Currently Senior Independent Director of IQE plc, non-executive director of the Defence Science and Technology Laboratory, chair of STEMNET which at the time of writing is in the process of merging with STEM Learning, and chair of the National Physical Laboratory.
- Vice-Chancellor of Cardiff University from 2001 to 2012.
- Previously held leadership positions at Dowty Group, GEC, the Royal Academy of Engineering and Innovate UK.
- Received a knighthood in the Queen's Birthday Honours 2016 for his contributions to engineering, technology and education.

John Jeans

A R N

CBE, CEng

Non-executive director

- Appointed to the Board of Renishaw plc in April 2013.
- Currently chair of Imanova, Edinburgh Molecular Imaging and the Scottish government's Digital Health and Care Institute.
- Non-executive director of ProMetic Life Sciences Inc. and ProMetic Pharmaceuticals Small Molecule Therapeutics Ltd.
- Serves on several government bodies including the Ministerial Committee on Medical Technologies.
- Leads Innovate UK's Stratified Medicine Advisory Board and the KTN's Health Board.
- Previously chair of UK BioCentre Ltd.
- Appointed advisor to the Prime Minister at the Office of Life Sciences in June 2014.

Committees

A Audit Committee

R Remuneration Committee

N Nomination Committee

* Denotes Chair of committee

Executive Board

Sir David McMurtry
CBE, RDI, FRS, FREng, CEng, FIMechE

Chairman and Chief Executive

See page 68 for biography

John Deer
Deputy Chairman

See page 68 for biography

Allen Roberts
Group Finance Director

See page 68 for biography

Geoff McFarland
Group Engineering Director

See page 68 for biography

Will Lee
Group Sales and Marketing Director

See page 68 for biography

Leo Somerville
President, Renishaw North America

- Joined Renishaw in 1984.
- Initially served as business manager for machine tool probing and calibration products at Renishaw, Inc.
- Became President of Renishaw, Inc. in 1993 and appointed to the Executive Board in 2004.
- Appointed as a member of the International Sales and Marketing Board in 2008.
- Became President, Renishaw North America upon a re-organisation of the management of the region in 2016.

Dave Wallace
Director and General Manager, CMM Products

- Joined Renishaw in 1989 through Renishaw's sponsored student scheme.
- Worked in various functions of the business including a one-year secondment at Renishaw's German subsidiary, before being appointed Director and General Manager for the CMM products line in 2002.
- Appointed to the Executive Board in 2008.

International Sales and Marketing Board

Sean Hymas

President and Representative Director, Renishaw KK

- Joined Renishaw in 1989 following a year's sandwich placement between 1987 and 1988.
- Over 25 years' experience of international sales, marketing and product management.
- Moved to Japan in 2008 to further drive sales and marketing at Renishaw KK.
- Appointed President of Renishaw KK and to the International Sales and Marketing Board in 2012.

Rainer Lotz

Managing Director, Renishaw D-A-CH

- Joined Renishaw in 2006.
- Over 20 years' experience in related positions.
- Responsible for Renishaw's operations in Germany, Austria and Switzerland.
- Appointed as a member of the International Sales and Marketing Board in 2008.

Clive Martell

Head of Global Additive Manufacturing

- Joined Renishaw in 2015.
- Responsible for the strategy and direction of additive manufacturing.
- Over 30 years' experience in advanced engineering and international sales.
- Progressed from graduate engineer to CEO of Delcam plc, and managed the transition from AIM listed company to a division of Autodesk.
- Appointed as a member of the International Sales and Marketing Board in 2015.
- Represents Renishaw on the steering group for the UK National Strategy for Additive Manufacturing.

Jean-Marc Meffre

Managing Director, Renishaw Far East & Southern Europe

- Joined Renishaw in 1988 as Managing Director of Renishaw France.
- Holds a master's degree in Economics and Marketing.
- Responsible for all the operations in the Far East (except Japan), Australasia and Southern Europe.
- Appointed as a member of the International Sales and Marketing Board in 2008.

Rhydian Pountney

Managing Director, Renishaw UK & ROW

- Joined Renishaw in 1979.
- Appointed as a member of the International Sales and Marketing Board in 2008.
- Over 30 years' experience in sales and marketing. Responsible for sales in the UK and 11 overseas operations, including India and Russia.
- UK Chair of the Technology Collaboration in Advanced Engineering working group of the UK-India joint economic and trade committee.

John Deer

Deputy Chairman

See page 68 for biography

Allen Roberts

Group Finance Director

See page 68 for biography

Will Lee

Group Sales and Marketing Director

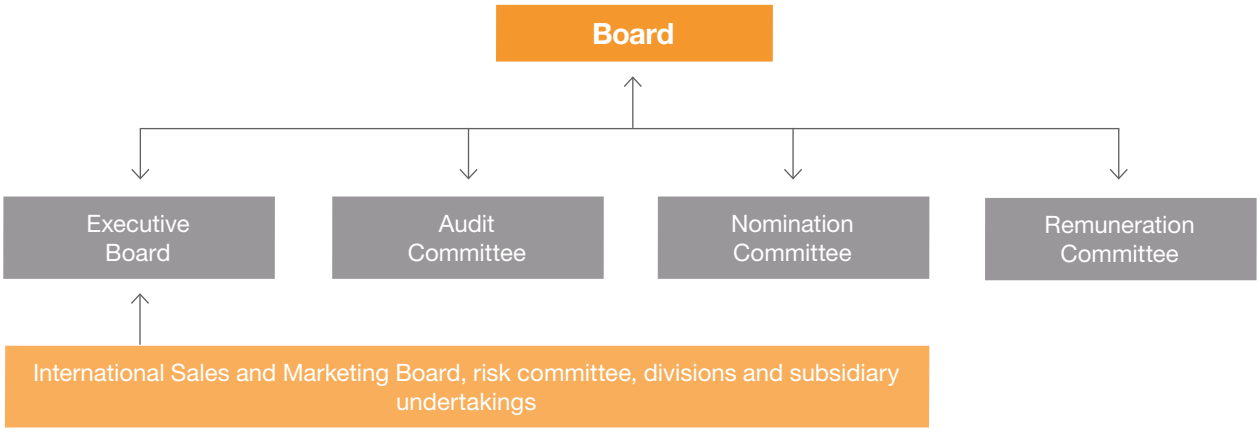
See page 68 for biography

Leo Somerville

President, Renishaw North America

See page 70 for biography

Directors' corporate governance report



A. Leadership

The role of the Board

The Board comprises four executive and four independent non-executive directors in addition to the executive Chairman. The directors holding office at the date of this report and short biographical details are given on pages 68 to 69 (Ben Taylor retired on 31st July 2016). Full biographical details are available at www.renishaw.com. Will Lee was appointed by the Board as a director with effect from 1st August 2016, and along with all other directors, will be retiring and putting himself up for election at the AGM. The Company maintains liability insurance for its directors and officers, as disclosed in the Other statutory and regulatory disclosures.

There is a formal schedule of matters specifically reserved for its decision. These include the approval of annual and half-year results and trading statements, company and business acquisitions and disposals, major capital expenditure, borrowings, material agreements, director and company secretary appointments and removals, patent-related disputes and other material litigation, forecasts and major product development projects.

The Board meets as often as is necessary to discharge its duties effectively. In the financial year ended 30th June 2017, the Board met for nine scheduled meetings and the directors' attendance record at board and committee meetings is set out at the end of this report. In addition, the non-executive directors met a number of times without executive directors present.

A high-level summary of subject areas discussed during the year is set out on page 73.

The Board has three formally constituted committees, the Audit Committee, the Remuneration Committee and the Nomination Committee.

There is an executive management committee known as the Executive Board that is responsible for the executive management of the Group's businesses. It is chaired by the Chairman and includes the executive directors and senior managers as noted on page 70. The Executive Board usually meets for two days on a monthly basis and considers the performance and strategic direction of the metrology and healthcare businesses and other matters of general importance to the Group. In addition, there is an executive sales and marketing committee known as the International Sales and Marketing Board which meets quarterly to determine the Group's sales and marketing policies and strategies and review its sales and marketing activities. This committee is chaired by the Deputy Chairman and includes the Group Finance Director, the Group Sales and Marketing Director, the directors of the five largest sales regions and the Head of Global Additive Manufacturing.

A framework of delegated authorities is in place that maps out the structure of delegation below the Board and includes the matters reserved to the Executive Board and the level of authorities given to management below the Executive Board.

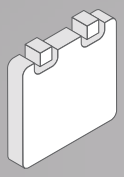
An executive risk committee meets regularly to review risks which may impact on the Group's business and to implement mitigation actions. The framework for managing risk is set out on pages 50 to 51.

The Board has adopted a conflict of interests policy, putting in place procedures for the disclosure and review of any conflicts and potential conflicts, and authorisation by the Board (if felt appropriate). Authorisations granted and the terms of such are reviewed on an annual basis. New disclosures are made where applicable.

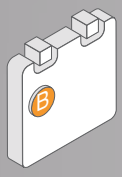
Scheduled Board and committee meetings in the period

July 2016

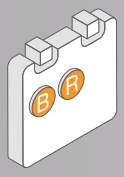
August 2016



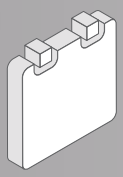
September 2016



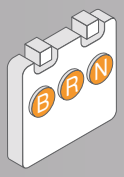
October 2016



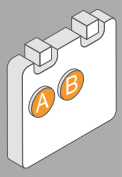
November 2016



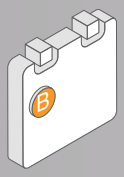
December 2016



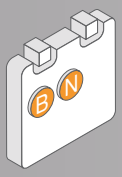
January 2017



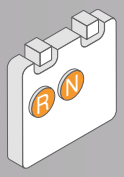
February 2017



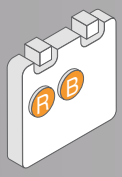
March 2017



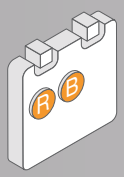
April 2017



May 2017



June 2017



Key

- A Audit Committee (3)
- R Remuneration Committee (7)
- N Nomination Committee (3)
- B Board (9)

High-level summary of subjects discussed by the Board during the year:

Strategy

- Business strategy and organisation
- Reviewing potential acquisitions/disposals
- Closure of Renishaw Diagnostics Limited and sale of assets
- Cessation of spatial measurement business and sale of assets
- Review of investment in Hieta Technologies Limited
- Products and technology
- Key business relationships

Risk

- Group's risk analysis
- Patent litigation
- Tax risk register and updates
- Group quality
- Cyber security

Governance

- Legal updates
- Market Abuse Regulation
- Board evaluation
- Committee terms of reference
- Controlling shareholder agreement
- Export control
- Appointment of new auditor
- Appointment of new director
- Whistleblowing policy
- Review of internal controls
- Government proposals on corporate governance changes

Finance

- Forecasts and targets
- Oversight of the preparation and management of the financial statements
- Dividend policy
- Trading statements

Stakeholder engagement

- AGM and other shareholder feedback
- Investor day

HR

- Succession planning/executive management structure
- Pensions
- Remuneration policy
- Salary reviews
- Bonus
- Health and safety system and updates
- Changes to maternity benefits

Directors' corporate governance report continued

Division of responsibilities/ the Chairman

The role of Chairman and Chief Executive is a combined role and thus contrary to the recommendations of the Governance Code. Sir David McMurtry has held this position since the Company listed in 1983 and he and John Deer hold the majority of the voting interests in the Company.

There has been a voting agreement in place between Sir David and John Deer since 1983, further details of which are set out in the Other statutory and regulatory disclosures on page 94. The Board considers that there is still a clear division of responsibilities at board level to ensure an appropriate balance of power and authority so that there is no one person with unfettered powers of decision. The Board and Executive Board meet on a sufficiently regular basis to make decisions of significance to the metrology and healthcare business segments and review management actions. It is intended that this combined role will continue for so long as Sir David McMurtry remains on the Board and he and John Deer hold a majority of the voting interests in the Company.

The Chairman has no other significant commitments as regards employment or directorships of other companies.

Non-executive directors

Sir David Grant is the Senior Independent Director and is available to discuss material concerns with shareholders should the normal channels of the Chairman and Chief Executive or the Group Finance Director fail to resolve such concerns. The non-executive directors meet without the executive directors present to discuss performance and other matters.

B. Effectiveness

Composition of the Board

All the non-executive directors are considered by the Board to be independent in character and judgement and there are no relationships or circumstances that are likely to affect a non-executive director's judgement.

Sir David Grant is currently the Senior Independent Director of IQE plc (having been appointed in September 2012), chair of STEMNET (appointed in December 2011) which at the date of this report is in the process of merging with STEM Learning, chair of the National Physical Laboratory (appointed in May 2015) and on the board of the Defence Science and Technology Laboratory (Dstl) (appointed in June 2012). The Company has dealings with these organisations from time to time, such as grant-funded research projects, or research, collaboration or supply agreements. The Company confirms that Sir David Grant has taken no part in decisions relating to any of the dealings between the Company and these organisations.

The dealings referred to above are not material (i.e. in aggregate they are less than 0.5% of the Company's revenue for the financial year ended 30th June 2017).

John Jeans was chair of the Council of Cardiff University from December 2011 until December 2015, is chair of Innovate UK's Stratified Medicine Steering Group (having been appointed in February 2014) and was chair of MRC Technology from December 2008 until November 2014. John was also from March 2016 to May 2017, interim Chair of the Scottish Medical Device Hub and, since May 2017, is the Chair of the Scottish Digital Health & Care Institute at Strathclyde University. The Company has dealings with these organisations from time to time, such as grant-funded research projects, or research, collaboration or supply agreements. The Company confirms that John Jeans has taken no part in decisions relating to any of the dealings between the Company and these organisations.

The dealings referred to above are not material (i.e. in aggregate they are less than 0.5% of the Company's revenue for the financial year ended 30th June 2017).

The Governance Code recommends that at least half the Board, excluding the Chairman, should comprise independent non-executive directors. The Board has complied with this requirement during the period.

Appointments to the Board

A description of the structure and activities of the Nomination Committee are set out in the Nomination Committee report on page 78.

Commitment

The terms of appointment of the non-executive directors, which includes the expected time commitment and requirement to discuss any changes to other significant commitments with the Chairman and Chief Executive in advance, are available for inspection at the AGM and the registered office upon written request.

None of the executive directors hold a directorship in a FTSE 100 company.

Development

Directors are offered the opportunity to attend formal training courses to update their knowledge of their duties as directors. Guidance notes, papers and presentations on changes to law and regulations are provided as appropriate. During the year, specific training was given to the Board by Herbert Smith Freehills on the directors' and controlling shareholders' obligations in case of any offer approach. Non-executive directors are invited to attend internal conferences, which provide information to the Group on new product development and marketing initiatives, as well as our investor days. Business presentations are given at board meetings to provide updates on, and opportunities to discuss, products and business strategies.

This year, non-executive directors met with regional management at Renishaw, Inc. in the USA. This has facilitated a deeper understanding of the Group, leadership team and Renishaw's products and markets.

An induction pack is provided to new appointees to the Board, and the induction programme (together with the continuing development programme) includes site visits and briefings by senior managers, attendance at internal senior management conferences and external trade shows, as well as foreign subsidiary visits, as applicable.

Information and support

The Board receives appropriate documentation, management accounts, forecasts and commentaries thereon in advance of each board meeting to enable its members to review the financial performance of the Group, current trading and key business initiatives. Regular financial updates are also provided between meetings. The Company Secretary advises the Board on all governance matters. All directors have access to the Company Secretary and to independent professional advice at the Company's expense where necessary to discharge their responsibilities as directors. The appointment and removal of the Company Secretary is a matter reserved for the Board.

Evaluation

The Board and its committees undertake an annual evaluation of their performance. The format of the evaluation varies each year.

For 2016, Equity Communications Limited (which assisted with the last externally facilitated evaluation in 2013) undertook interviews with the directors, discussing a list of subjects agreed by the Board. The feedback report was discussed early in this financial year, focussing on effective board presentations, succession planning and people development. Equity Communications Limited has no other connection with the Company. For 2017, an internal evaluation process was undertaken and the results will be discussed early in the 2018 financial year.

Re-election

In accordance with the Governance Code all the directors will retire from the Board at the next AGM and will offer themselves up for re-election or election (as the case may be) at the AGM.

C. Accountability

Financial and business reporting

The respective responsibilities of the directors and auditor in connection with the financial statements are explained in Directors' responsibilities on page 97 and the Independent auditor's report on pages 98 to 105.

Fair, balanced and understandable

The directors consider that the Annual report, taken as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the Group's performance, business model and strategy.

Going concern

The Group's strategy for delivering its objectives and business model, together with the factors likely to affect its future development and performance are set out in the Strategic report, where details of the financial and liquidity positions are also given. In addition, note 20 to the financial statements includes the Group's objectives and policies for managing its capital, details of its financial instruments and hedging activities and its exposures to credit risk and liquidity risk.

The Group has considerable financial resources at its disposal and the directors have considered the current financial projections. As a consequence, the directors believe that the Group is well placed to manage its business risks successfully.

After making enquiries, the directors have a reasonable expectation that both the Company and the Group have adequate resources to continue in operation for a period of at least 12 months from the date of approval of the financial statements. Accordingly, they continue to adopt the going concern basis in preparing the Annual report and accounts.

Viability statement

The Board undertakes an annual review of the corporate strategy, which includes medium term financial forecasts and an assessment of the major risks facing the business. In addition, current financial year forecasts are reviewed regularly by the Board, underpinned by regular briefings from its business sectors and subsidiaries on progress. The corporate strategy provides the foundations for monitoring of performance, budgets, risk and strategic actions by the Board.

The Board confirms that its assessment during the year of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency and/or liquidity, and which are set out in the Group's Principal risks and uncertainties on pages 52 to 53, was robust. In making the assessment, severe but plausible scenarios have been considered that estimate the potential impact of the principal risks on the financial forecasts over the assessment period.

Directors' corporate governance report continued

In accordance with provision C.2.2 of the Governance Code, whilst the Board has no reason to believe the Group will not be viable over a longer period, the period over which the Board considers it possible to form a reasonable expectation as to the Group's longer-term viability, based on the risk and sensitivity analysis undertaken, is the three-year period to 30th June 2020, taking account of the Group's current position, financial forecasts, future prospects and the potential impact of the Principal risks and uncertainties documented in the Strategic report. The Board believes that a three-year viability assessment period is appropriate as the timeframe is covered by the Group's corporate strategy, takes account of the Group's short order book and, together with the planning process set out above, it gives management and the Board sufficient, realistic visibility on the future in the context of the industry and world economic environment.

On the basis of the above and other matters considered and reviewed by the Board during the year, the Board has a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period to 30th June 2020. In assessing the Group's viability over the next three years, it is recognised that all future assessments are subject to a level of uncertainty that increases for the later part of the assessment period and that future outcomes cannot be guaranteed or predicted with any certainty.

Risk management and internal control

The Board is responsible for the Company's systems of risk management and internal control, and for reviewing their effectiveness. Any system of internal control is designed to manage rather than eliminate the risk of failure to achieve business objectives and can only provide reasonable, but not absolute assurance against material misstatement or loss.

There are defined lines of responsibility and delegation of authorities. Established and centrally documented control procedures also exist, including, for example, capital and other expenditure, information and technology security and legal and regulatory compliance. These are applied throughout the Group.

The Group internal audit function provides independent and objective assurance that the control procedures are appropriate and effectively applied. The Group Audit Manager attends Audit Committee meetings to present annual internal audit plans and the results of such internal audits. Actions are monitored by the Audit Committee on an ongoing basis.

There is an established process for the review of business risks throughout the Group including an executive risk committee as explained on pages 50 to 51.

The Board ensures that there are effective internal controls over the financial reporting and consolidation processes. Monthly accounts and forecasts are presented to the Board for review. The Group internal audit function undertakes a review of subsidiaries' accounting processes and performance to provide assurance to the Board on the integrity of the information supplied by each company forming part of the Group's consolidated results.

The Board undertakes an annual formal review of the effectiveness of the Group's system of internal controls and an updated risk and controls analysis. The review covers all material controls, including financial, operational and compliance controls and risk management systems.

The Board has conducted a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity. The Board is satisfied that there is an ongoing process for identifying, evaluating and managing the significant risks facing the Group, that has been in place during the year, is regularly reviewed and accords with the FRC guidance on risk management and control. The Board confirms that necessary action has been or is being taken to remedy any significant failings or weaknesses identified from its review.

Audit Committee and auditor

A description of the structure and activities of the Audit Committee are set out in the Audit Committee report on pages 79 to 82.

D. Remuneration

The Directors' remuneration report explains how the Company applies the Governance Code principles relating to remuneration.

E. Relations with shareholders

Dialogue with shareholders

The Board announced a new policy in the 2013 Annual report. No private meetings will be held other than shareholder meetings with the Chairman, Senior Independent Director and/or any other non-executive director where a shareholder has material issues, concerns or questions. The director attending such a meeting will communicate the shareholder's issues, concerns or questions to the Board. The Board's response will be published on the Renishaw website for the benefit of all shareholders where appropriate.

The interim and annual results and presentations are posted on the website promptly after announcement of the results to the UK Listing Authority via an RIS.

Open webcasts of presentations on annual and half-year results are held and recordings of the presentations and the subsequent question and answer sessions made available after the webcast on the Company's website. Analysts' and brokers' reports will be circulated to the Board. The Board intends to hold open discussions with any shareholder who wishes to share views with the directors at the AGM or the annual investor day at which presentations on group strategy, business segments and product lines will be given by members of the Board and senior management, as well as tours covering the Group's activities. This year, 97 visitors attended the Company's investor day, which included various Q&A sessions with the Board during the day as well as an opportunity to ask questions during tours, lunch and refreshment breaks.

Constructive use of the AGM

The AGM takes place at the Company's headquarters or one of the Company's other sites and formal notification is sent to the shareholders at least 20 working days before the meeting. A business presentation is given and all directors are available for questions during and after the meeting, including the chairs of the Audit, Remuneration and Nomination Committees. Tours of the Company's facilities are offered.

Separate resolutions are proposed for each substantially separate issue, and all resolutions are taken on a poll. The Company reports on the number of votes lodged on each resolution, the balance for and against each resolution and the number of votes withheld. This information is published via an RIS and on the Company's website following the meeting.

Disclosure rule DTR 7.2.6 R

The information regarding share capital required to be disclosed by this rule is contained in the Other statutory and regulatory disclosures.

Board and committee meeting attendance record

Shown against each director's name in the table below is the number of scheduled meetings of the Board and its committees at which the director was present, and, in brackets, the number of meetings that the director was eligible to attend during the year.

Compliance statement

The Board considers that it has complied with the requirements of the Governance Code throughout the year except in relation to the following matter (the reasons for non-compliance are stated in the report above):

- the combined role of Chairman and Chief Executive (Governance Code provision A.2.1).

Sir David Grant
Senior Independent Director
27th July 2017

Board attendance record

Meetings

The following table sets out attendance at the scheduled meetings of the Board and committees during the year.

Director	Board	Audit Committee	Remuneration Committee	Nomination Committee
Sir David McMurtry	9 (9)	–	–	3 (3)
D J Deer	9 (9)	–	–	–
B R Taylor	1 (1)[2]	–	–	–
A C G Roberts	9 (9)	–	–	–
G McFarland	8 (9)[1]	–	–	–
W E Lee	8 (8)	–	–	–
C T Chesney	9 (9)	3 (3)	7 (7)	3 (3)
K L Durrant	9 (9)	–	7 (7)	3 (3)
Sir David Grant	9 (9)	3 (3)	7 (7)	3 (3)
D J Jeans	9 (9)	3 (3)	7 (7)	3 (3)

[1] Geoff McFarland was absent for the meeting on 28th September 2016 due to illness.

[2] Ben Taylor attended his last Board meeting on 25th July 2016 before retirement.

Nomination Committee report

The Nomination Committee has an important role in leading the process for Board appointments and ensuring that the Board has the correct balance of experience, diversity and skills to support our business model and strategy.

Sir David McMurtry
Chairman and Chief Executive
Chair of the Nomination Committee

Nomination Committee role and composition

The Nomination Committee, which meets on an ad hoc basis as required, is responsible for reviewing the size, structure and composition of the Board, including its balance of skills, knowledge and experience and for nominating candidates for appointment to the Board and the role of Company Secretary.

The members of the Nomination Committee are Sir David McMurtry (Chair), Carol Chesney, Kath Durrant, Sir David Grant and John Jeans. The majority of the members of this committee are independent non-executive directors. The terms of reference of this committee are published on the Company's website.

Activities during the year

The committee met three times during the year to discuss executive management succession planning and to decide the recruitment process for the replacement of Norma Tang as Company Secretary, who gave notice of resignation in March. A recruitment consultant, Demeter Limited, was engaged to seek appropriate candidates for appointment to the dual role of general counsel and company secretary. The recruitment process is continuing. Demeter Limited has no other connection with the Company.

It was agreed that Will Lee will take over responsibility for chairing the International Sales and Marketing Board from the start of the 2018 financial year.

In relation to non-executive positions, the four non-executive directors were all appointed within the last five years and the Board considers that they are working effectively together in supporting the Board and the Company. Consequently there were no further appointments or changes considered necessary during the year.

Boardroom diversity

The Board has considered the recommendations of the "Women on Boards" report issued by Lord Davies of Abersoch, and his subsequent annual reviews, as regards setting out aspirations for the appointment of women to boards, and has decided that it is inappropriate to set out any levels that may require positive discrimination in this respect, as the overriding requirement is to appoint directors with the necessary skills and experience for the role.

However, as an international company, the Board acknowledges that diversity of all types is a benefit and should be borne in mind when recruiting to all roles within the Company, and has a policy to provide equal opportunities to all. The Board's policy is to request, where recruitment consultants are appointed for board appointment, that a proportion of female candidates are included in their shortlist.

Sir David McMurtry
Chair of the Nomination Committee
27th July 2017

Audit Committee report

The Audit Committee has a vital role to play in ensuring the integrity of our financial statements, the effectiveness of our risk management processes and internal controls, and in evaluating the performance of the external audit process. During 2017 we also monitored the various changes to the Code, agreed the content of the viability statement and monitored the transition activities of the new external auditor, Ernst & Young LLP.

Carol Chesney
Non-executive director
Chair of the Audit Committee

Audit Committee role and composition

The Audit Committee is appointed by the Board from the non-executive directors of the Company. The Audit Committee's terms of reference include all matters indicated by Disclosure and Transparency Rule 7.1 and the Code. The terms of reference are considered annually by the Audit Committee and any changes are recommended to the Board for approval.

The Audit Committee reviews the Group's accounting policies and procedures, its annual and interim financial statements before submission to the Board and its compliance with statutory requirements. The committee monitors the integrity of the Group's financial statements and announcements relating to financial performance and reviews the significant reporting judgements contained therein. It also reviews the scope, remit and effectiveness of the internal control systems and internal audit function.

The Audit Committee comprises three non-executive directors, Carol Chesney (Chair), Sir David Grant and John Jeans. The Board is satisfied that at least one member of the committee has recent and relevant financial experience, being Carol Chesney. The members of the Audit Committee have competence in the sectors in which the Company operates as set out below. The terms of reference are available on the Company's website.

		Sector experience	
Member	**Financial experience**	**Company and position**	**Sector**
Carol Chesney	Chartered accountant Worked at Arthur Andersen for 7 years Previously Group Financial Controller at Halma plc	Company Secretary at Halma plc	Technology
Sir David Grant		Senior Independent Director of IQE plc	Technology
		Director of Dstl	Technology
		Chair of NPL	Metrology
		Previously worked for Dowty Group	Manufacturing
		Previously Group Technical Director of GEC plc	Engineering
		Previously Vice-President of the Royal Academy of Engineering	Engineering
John Jeans		Chair of Imanova	Imaging services
		Chair of UK Biocentre	Healthcare
		Chair of Edinburgh Molecular Imaging	Biotechnology
		Non-executive director of ProMetic SMT	Biopharmaceuticals
		Member of the Ministerial Committee on Medical Technologies	Biotechnology
		Advisor to the Prime Minister at the Office of Life Sciences	Medical technology
		Previously worked for Smith & Nephew	Medical equipment
		Previously President of Dravon Medical (Smith & Nephew)	Medical equipment
		Previously Senior Vice President of Zimmer (Bristol-Myers Squibb)	Healthcare
		Previously President at Ortho Clinical Diagnostics International (Johnson & Johnson)	Medical diagnostics
		Previously Chairman at GE Healthcare Ltd	Healthcare

Governance

The committee meets at least three times a year with the Group Finance Director, the Head of Group Finance, the Group Financial Controller, the Group Audit Manager, the Company Secretary and the external auditor in attendance. After each meeting, the committee holds discussions with the external auditor without the executives present. These executives work closely with the chair of the committee to ensure that transparency is maintained in both meeting papers and communications between meetings with the other committee members, providing additional practical industry experience to aid discussions in and around meetings.

Audit Committee report continued

Key issues and activities

In addition to reviewing the financial reporting of the Company, the committee also spends a significant amount of time reviewing the effectiveness of the Group's internal control processes and its internal and external audit activities.

The principal activities in the year were:

Financial statements and reports

- reviewed the effectiveness of the Group's risk management and internal controls and disclosures made in the 2017 Annual report;
- reviewed the 2017 Annual report, the 2017 Interim report and all other trading updates issued during the year. The committee received a report from the external auditor on the audit of the 2017 Annual report;
- reviewed critical accounting judgements and estimation uncertainties in the accounts, being the carrying value of goodwill, capitalisation of internally generated development costs, the carrying value of inventory, amortisation and impairment of intangible assets, the classification of discontinued activities and the assumptions used to determine the defined benefit pension scheme liabilities;
- reviewed the accounting and disclosures in relation to the Group's defined benefit pension schemes;
- reviewed the effective tax rate in the accounts and provision for uncertain tax positions;
- reviewed the effectiveness of the Group's hedging policy and its application;
- reviewed the approach the external auditor took in respect of management override of controls; and
- evaluated the controls in place to ensure the Company's revenue recognition policy has been consistently applied.

Risk management

- reviewed the output from the Group's risk review process to identify, evaluate and mitigate risks and considered whether changes in risk profile were complete and adequately addressed;
- reviewed and agreed the content of the viability statement and the process undertaken to approve both it and the going concern statement (see pages 75 to 76);
- received updates on compliance with the Group's anti-bribery and corruption policy; and
- reviewed the Company's new global whistle-blowing and serious misconduct policy which was approved by the Board during the year.

Internal audit

- evaluated the scope of work to be undertaken by the internal audit function;
- reviewed progress on recommendations brought forward and considered recommendations arising during the year; and
- considered the resource levels available to the internal audit function and approved the appointment of the new dedicated Group Audit Manager.

External auditor and non-audit work

- monitored the transition activities of the new external auditor, Ernst & Young LLP;
- reviewed, considered and agreed the scope and methodology of the 2017 audit work to be undertaken by the external auditor;
- evaluated the independence and objectivity of the external auditor;
- agreed the terms of engagement and the fees to be paid to the external auditor for the audit of the 2017 financial statements;
- reviewed the level and nature of non-audit services provided by the external auditor;
- undertook an effectiveness review of the external audit process; and
- reviewed the non-audit services policy.

Significant issues in relation to the financial statements

As part of the reporting and review process, the committee has regular discussions with management and the external auditor relating to significant issues. For the current year the committee concluded that the carrying value of goodwill and the treatment of forward exchange contracts for hedging purposes were the two significant issues relating to the financial statements

The committee first focused on the impairment testing by the Company of the carrying value of goodwill. By applying knowledge and making enquiries of the relevant cash-generating units, reviewing the forecasts and the sensitivity analysis, the committee agreed with the conclusion reached that the only impairment provisions required were for the goodwill arising on consolidation of Renishaw Diagnostics Limited and Measurement Devices Limited (relating to the spatial measurement business), both of which have been classified as discontinued operations and the goodwill provided for in full.

The committee then examined the Group's technical compliance with IAS 39 given the hedging instruments utilised. A thorough assessment of the opening and closing positions indicated that certain of the Group's open contracts did not qualify for hedge accounting. The committee satisfied itself that the fair values of the hedging instruments were not misstated in terms of the opening and closing Consolidated balance sheets, however a restatement of the prior year profit, with a corresponding increase to other comprehensive income was required to ensure compliance with IAS 39.

As the Group originally intended that these contracts be qualifying hedging instruments, the committee considered the adoption of an alternative performance measure for profit which excludes the profit/loss arising on this restatement and the unwinding of the open contracts in this and future years. As such, the adjusted profit before tax disclosure has been adopted to provide stakeholders with a better measure of underlying performance.

The committee discussed these issues with the external auditor and was satisfied that its conclusions were consistent with those of the external auditor.

Approach to auditor appointment and audit quality

The committee has primary responsibility for making the recommendation on the appointment, reappointment and removal of the external auditor, which the Board puts to shareholders for approval at the AGM.

As reported last year, a tender process for the appointment of the external auditor was undertaken in 2016. Following a recommendation from the committee to the Board, Ernst & Young LLP were formally appointed at the AGM in October 2016. The committee has monitored the transition activities and audit approach undertaken by Ernst & Young LLP by way of updates provided at Audit Committee meetings and further routine discussions between the committee chair, company finance representatives and the senior representatives of Ernst & Young LLP.

When the committee assesses the effectiveness of the external audit process and the quality of the audit work throughout the year it considers:

- any issues arising from the prior year audit (conducted by KPMG LLP);
- the proposed audit plan including the identification of risks specific to the Group, audit scope and materiality thresholds;
- the delivery of the audit in line with the plan;
- the communication of matters arising during the audit to the committee;
- meetings with the external auditor without management being present;
- the independence and objectivity of the auditor; and
- feedback from executive management.

The contract for external audit will be put out to tender at least every ten years.

Independence of external auditor

In order to safeguard the independence and objectivity of the external auditor, the committee reviews the nature and extent of the non-audit services supplied, receiving reports on the balance of audit to non-audit fees.

The non-audit services policy reflects the extended list of prohibited services as set out in the latest EU audit regulation. There are also specified services which require the prior approval of the Group Finance Director and chair of the Audit Committee before the auditor may be appointed to provide such services. In addition, there are specified levels of authorisation to be obtained before the auditor may be permitted to tender for non-audit services.

For 2017, the external auditor has provided £20,000 of non-audit work including a piece of work linked to the Audit Committee's review of banking payments referred to below, and a piece of assurance work in India required under that country's legislation.

An analysis of fees paid to Ernst & Young LLP is included in note 5 to the group financial statements.

Risk management and internal controls

The committee monitors the effectiveness of the Group's internal controls and risk management processes which allows it to maintain a good understanding of the business performance and key areas of judgement and decision making within the Group.

During the year a new Group Audit Manager was appointed, with the incumbent transferring to the role of Head of Group Finance. The reorganisation allows for the internal audit function to be fully independent of the day to day operations of the finance function. Internal audit is planning to expand its use of data analytical tools to enhance the focus of audit tests. The Committee determined the effectiveness of the internal audit function as detailed in the key issues and activities section above.

Audit Committee report continued

Following a period of strong growth, the committee commissioned a review of the Group Internal Control manual to ensure that Renishaw's policies exceed best practice for an organisation of Renishaw's size and structure; this review will also reflect the management comments that the new external auditors raise. The review will be completed during 2017/18.

Like many public and private sector organisations, the Company is a potential target for external banking-related frauds, similar to those widely reported in the press. Consequently, the committee reviewed the controls applied to electronic and manual payments during the year to ensure they were sufficiently robust. The committee is satisfied that increased awareness of such frauds, internal audit's focus on this area and the controls around bank payments are adequate to detect such a fraud although the Company recognises the increasing sophistication of such attempts and is directing additional resources to support its efforts in the wider cyber arena.

In the previous year, the committee reviewed the policy by which employees of the Company may, in confidence, raise matters of concern, including possible improprieties in financial reporting or other matters. In line with the committee's recommendation, the Board enhanced the policy in February 2017 by implementing an external reporting line.

The committee also monitors the effectiveness of the Company's procedures to avoid any bribery related to the activities of the Group.

Details of risk management and internal controls are set out on pages 50 to 51 and 76.

Fair, balanced and understandable report and accounts

One of the key governance requirements is for the Annual report to be fair, balanced and understandable and that it provides the shareholders with sufficient information to assess the Company's performance, business model and strategy. Ensuring that this standard is met requires continuous assessment of the financial reporting issues affecting the Group on a year-round basis in addition to a number of focused exercises that take place during the accounts production process within a strict timeframe.

The processes adopted in relation to the Annual report included the following:

- specific ownership and responsibility for the individual sections was allocated and documented;
- during the compilation period, regular meetings were held with members of Group Finance, Group Secretariat, CSR and Corporate Communications, all primary authors of the Annual report. These meetings ensured that there was appropriate linkage between the various sections of the report and that reporting was balanced;
- an extensive review was undertaken to ensure factual accuracy;
- a qualitative review of the entire Annual report was undertaken to ensure that it promotes consistency and balance between the component elements;
- at the committee's first meeting in July 2017, the committee reviewed an initial draft of the Annual report, during which it probed and tested certain disclosures;
- at the committee's second meeting in July 2017, the committee challenged the fair, balanced and understandable assessment and examined whether appropriate balance and equal prominence had been given to favourable and unfavourable events; and
- following review and comment by both the committee and the Board, the Annual report was subject to final approval by the Board.

The committee was satisfied with the process undertaken in preparing the Annual report. Following discussions at its July 2017 meetings, the committee advised the Board that the Annual report, taken as a whole, is fair, balanced and understandable and provides the information necessary for shareholders to assess the performance, strategy and business model of the Company.

The directors' statement on a fair, balanced and understandable Annual report is set out on page 75.

Carol Chesney
Chair of the Audit Committee
27th July 2017

Directors' remuneration report

"We achieved a record turnover of £536.8m with underlying revenue growth of 14%. Adjusted profit before tax was £109.1m, and statutory profit before tax was £117.1m, an increase of 25% on an adjusted basis. Our total shareholder return during the year was 67%, ranking Renishaw in the top 25 in both the FTSE 250 and FTSE 350."

Kath Durrant
Non-executive director
Chair of the Remuneration Committee

Remuneration Committee role and composition

The Remuneration Committee is responsible for deciding the Company's framework of executive director remuneration and setting remuneration packages for each of the executive directors. The committee's aim is to motivate and retain executive directors by rewarding them with competitive salary, benefit packages and incentives. The incentives are linked to the overall performance of the Group and, in turn, to the interests of the shareholders.

The committee reviews annually the executive directors' remuneration in the context of the Group's performance during the year.

The committee also reviews the remuneration structure and packages for the next level of senior leaders across the business to ensure it is competitive and fair, and that there is appropriate progression for those identified as potential successors to the Board and senior executive team.

All the members of the committee are non-executive directors, comprising Kath Durrant (Chair), Sir David Grant, Carol Chesney and John Jeans. The terms of reference of the committee are published on the Company's website. Executive directors attend meetings of the committee by invitation for parts of the agenda as appropriate. Independent advisers are used as required.

Statement from the Chair of the Remuneration Committee

Introduction

On behalf of the Board, I am pleased to present the Directors' remuneration report for 2017.

The report complies with the requirements for reporting on directors' pay introduced in October 2013 and is split into the following three sections:

1. this statement from me as the Chair of the Remuneration Committee;
2. the remuneration policy (pages 86 to 89) which is to be put before the shareholders at the AGM on 20th October 2017 and which is intended to apply for a three-year period from that date; and
3. the annual report on remuneration (pages 90 to 93), setting out information on directors' remuneration paid during the year ended 30th June 2017, and how our policy will be implemented in the year ending 30th June 2018.

Review of the Remuneration Committee's activities

The committee met seven times during the year in order to:

- set targets at the start of the year for the annual bonus, with reference to the Company's budgets and forecasts. The targets reflected the committee's expectations for profit growth and its desire to reinforce the importance of the cash position following several years of strategic capital investment. Targets and associated bonus scheme rules were communicated to executive directors at the start of the financial year. These targets are disclosed later in this report;
- consider Will Lee's remuneration, following his appointment to the Board as Group Sales and Marketing Director, following Ben Taylor's retirement at the end of July 2016. Will's initial remuneration was set below our target market position for the role (and significantly below Ben's package), with a base salary of £325,000 but with the expectation that it would increase substantially, subject to performance, once he became established in the position. Shareholders will note that as a result of Will's excellent performance in the role this year that the Committee has awarded Will a substantial salary increase to take his salary to around that of the other non-founding executive directors – a base salary of £398,000;
- appoint Mercer Kepler as independent professional remuneration advisers;
- approve director salary increases and bonuses, and the Chairman and Chief Executive's expenses; and
- conduct a detailed review of the Company's remuneration policy, further details of which are provided below.

Directors' remuneration report continued

Review of the remuneration policy

Three years ago at our 2014 AGM shareholders approved a new three-year remuneration policy for Renishaw, with 86% of votes in favour. At the 2015 and 2016 AGMs shareholders supported the implementation of our policy with 98% in favour. This year we are seeking approval of a new remuneration policy that is designed to operate over the next three years.

We have reviewed our policy taking into account:

- the strategic opportunities and operational challenges the Company may face in the next few years;
- the external corporate governance environment;
- commentary from advisory bodies; and
- the views of our shareholders, including the majority shareholders.

This year we have operated with the support of independent professional remuneration advisors. Giving due consideration to all these inputs, applying our own experience, and assessing the needs of Renishaw, the committee concluded that some changes should be made to the present policy. In May 2017 we wrote to all our shareholders outlining our proposals and inviting feedback. Where feedback was received this was also taken into account by the committee.

In summary, the proposed changes to the policy include:

- introduction of a new deferred annual equity incentive plan, with a maximum opportunity of 50% of salary. This deferred annual equity incentive will only be earned for performance beyond the level at which the maximum annual bonus is payable. Any award made under the deferred annual equity incentive will be delivered in Renishaw shares that normally vest on the third anniversary of grant, subject to continued employment;
- introduction of a minimum shareholding requirement for executive directors of 50% of salary; and
- clarification in the recruitment policy of the flexibility available to the committee to buy out awards forfeited by external appointees, if necessary, to secure the right individual.

In considering these proposed policy changes the committee considered the following areas to be of particular importance:

(1) Performance

Renishaw is well placed to continue its long term growth trajectory, based on its continued commitment to innovation and product development. The Company, whilst retaining significant capability in the UK, continues to successfully expand its sales, marketing, applications engineering and distribution presence around the world. Its global reach and relevance to high-value manufacturing mitigates to some extent the potential headwinds posed by Brexit uncertainty.

We expect Renishaw to continue to be positioned to perform well. Stretching performance targets are therefore at the heart of our remuneration approach for executive directors and leaders supporting them. Target setting takes place in a strategic context, and seeks to reflect our expectation that Renishaw will continue to grow substantially over the long term, but also takes into account the opportunities and challenges that can affect businesses with short order books.

In the past year, performance in the core metrology businesses has been strong, innovation in these businesses continues apace and relationships with high-value manufacturers and organisations in their supply chain continue to deepen.

Proposed changes to the remuneration policy include the introduction of an additional opportunity for executive directors to earn a deferred annual equity incentive award in the event that performance exceeds the annual bonus maximum performance target. Any deferred annual equity incentive award would be earned only for additional performance beyond the current maximum performance level, and would be capped at 50% of salary. The decision to propose deferred shares and a longer term element to remuneration is intended to help align non-founder executive directors with long-term shareholder interests, and help smooth remuneration through business cycles.

(2) Succession

Under the leadership of Sir David McMurtry and John Deer the Company has developed into a formidable global force in the science and application of advanced metrology solutions. A key role of the Remuneration Committee is to help the Board ensure that we are capable of attracting, developing and retaining the next generation of leaders. In developing the proposed new remuneration policy the committee has taken into account the potential need for the Company to attract and retain leadership talent during the life of the next policy.

The Company has strong internal candidates for promotion and succession to the Board, and the proposed changes to the policy provide additional flexibility in the event that it is necessary to recruit externally. The proposals provide the flexibility to compensate new recruits (if necessary) for incentive awards they may have to forfeit on joining Renishaw. In such an event the fair value of any buyout award would not exceed the fair value of the awards being replaced, taking into account vesting and performance criteria. Awards would as far as possible be replaced on a like-for-like basis.

The committee has also taken a decision that where appointments are made, salaries may be set at a level that subsequently requires staged increases to the package, rather than the more typical large single increase on appointment. This enables us to ensure that new appointees demonstrate they can fully perform in their new role before they can move to the median package for the role. This approach may require the committee to subsequently apply a higher percentage increase to the individual's salary than the average percentage increase across the workforce.

(3) The views of our shareholders

An unprecedented level of commentary regarding executive pay has been seen over the past year in the UK media. Institutional shareholders and their governance departments, advisory bodies, the government and other political parties have offered their perspectives. Renishaw's peers, international competitors, our customers and employees have their views too. The committee is mindful of all these views and opinions and has sought to steer a path that ensures that the remuneration policy can be supported by a majority of the institutional and private shareholders, as well as by our majority shareholders – and is in the best long-term interests of the Company.

Historically, feedback from proxy advisors and some institutional shareholders has questioned the absence of a long term incentive for our executives. The committee therefore explored a range of alternatives to best address this concern. Renishaw is a long-term business, and its leadership has invested significantly in R&D over many decades. The culture of the business is imbued with a long-term perspective and a desire to innovate. In reviewing alternatives for a long-term incentive, the committee was necessarily cognisant of the views of the Company's majority shareholders who concur with the commentary in the recent BEIS Select Committee report that traditional LTIPs are not necessarily right for all companies.

The committee is therefore proposing to introduce a longer term element in the form of the deferred annual equity incentive plan, alongside a new requirement for all executive directors to build up and maintain a minimum shareholding. In this way, we believe that the new remuneration policy will help align executives' remuneration more closely with Company performance and the long-term interests of all shareholders. It will also help address the impact of the absence of an LTIP on the overall competitiveness of the package. The initial level of minimum shareholding required will be 1× the maximum opportunity available under the new deferred annual equity incentive plan, broadly in line with the ratio of minimum shareholding requirements and share-based incentive opportunities at other FTSE 250 companies.

The committee has also proposed a change in the policy to place a cap on total remuneration which we hope will provide additional assurance to shareholders.

The details of the proposed remuneration policy are contained in the following pages. The committee and the Board recommend this policy to shareholders, and hope we can count on your support.

Kath Durrant
Chair of the Remuneration Committee
27th July 2017

Directors' remuneration report continued

Remuneration policy

This section of the Directors' remuneration report sets out the proposed directors' remuneration policy of the Company.

Executive directors' policy table

Set out below is a table describing each component of the remuneration package for executive directors. Other than the introduction of the deferred annual equity incentive opportunity for performance levels beyond the present annual bonus maximum performance target, and the introduction of minimum shareholding guidelines, the changes to the policy are minor and intended to aid clarity and improve transparency.

Total remuneration policy	Purpose and relevance to strategy	Operation	Maximum	Performance measures
Total remuneration	To attract, motivate and retain talented executive directors to support delivery of Renishaw's strategy and maximise long-term shareholder value.	Executive director remuneration is designed to be simple, conservative, and aligned with shareholder interests.	A cap on total remuneration at upper quartile of the relevant market for the position in question, will apply.	Described below in relation to each constituent element of remuneration.

Our total remuneration policy comprises the following constituent elements:

Element of remuneration	Purpose and relevance to strategy	Operation	Maximum	Performance measures
Base salary	To provide a competitive remuneration package to motivate and retain executive directors of the required quality to help the Group meet its objectives to deliver the Group's strategy.	Renishaw aims to pay base salaries between median and upper quartile, reflecting that its variable pay opportunities remain significantly below market. Executive director salaries are benchmarked against equivalent positions for relevant industrial sectors based on factors such as sector, size and location. Base salaries are reviewed annually taking into account the average increase across the Group, and specifically the UK where executive directors are located in the UK.	Salaries are set to deliver total remuneration in accordance with the policy defined above. Base salary increases will normally be capped at the level of salary increases for the broader workforce, unless the committee in its absolute discretion determines that a higher increase is appropriate. Example circumstances include: to reflect a significant change in a director's role or responsibilities, or if (in shareholders' interests) a director was intentionally appointed on a below-market total remuneration opportunity initially and their subsequent performance in the role warrants an above-average salary increase. The rationale for any above-average increase will be disclosed in the relevant Annual remuneration report.	Continued good performance

Element of remuneration	Purpose and relevance to strategy	Operation	Maximum	Performance measures
Benefits	To provide market-competitive benefits to motivate and retain executive directors and to support them to give maximum attention to their role.	Benefits provided on an ongoing basis include: • a car or car allowance; • private medical insurance; • life assurance; • long-term disability cover; • home telephone costs. If, on the recruitment of a new executive director, relocation is required to the director's place of work, the necessary relocation support may be provided.	Excluding accommodation and relocation costs, benefits are capped at £50k p.a.	Not applicable.
Annual short-term bonus	To incentivise and reward execution of the Group's objectives.	The committee sets Group performance targets, including a threshold below which no bonus is earned increasing from zero on a straight-line basis to a target at which 75% of salary would be earned, and to a cap at which a maximum 100% of salary could be earned. Part or all of any bonus paid may be subject to repayment in the event of any material financial misstatement, error in calculation or misconduct.	100% of salary	Based on Group performance, primarily measured by profit before tax (the key measure of Group performance used by shareholders and by the Board). The committee may introduce other metrics (financial and non-financial) to reflect the Group's priorities, or make adjustments to appropriately reflect underlying performance, provided that the bonus will always be subject to achievement of the threshold financial performance. Targets will be set around the Group's internal strategic plan. Any non-financial metrics shall not form more than 25% of the overall bonus opportunity.
Deferred annual equity incentive plan	As per the annual short-term bonus above.	If performance exceeds the level at which a maximum annual short-term bonus is earned, incremental profit growth beyond this level may be rewarded through a deferred annual equity incentive. Any such award is deferred in shares for a period of three years. Dividends may accrue on deferred shares over the deferral period and, if so, will be paid as additional shares (or a cash equivalent) on vesting. Part or all of any deferred annual equity award may be subject to repayment in the event of any material financial misstatement, error in calculation or misconduct.	50% of salary	As per the annual short-term bonus above.

Directors' remuneration report continued

Element of remuneration	Purpose and relevance to strategy	Operation	Maximum	Performance measures
Pension	To provide a competitive pension as appropriate to motivate and retain executive directors of the required quality to meet the Group's objectives	Each of Allen Roberts and Geoff McFarland receives a payment of 15% of salary, being the amount that would otherwise be contributed to a pension scheme on their behalf. Will Lee is entitled to an annual pension contribution of 15% of salary to the Company's defined contribution scheme, but, as agreed by the committee, most of this is taken as a salary supplement, with the level of pension contribution dependent on the value of his pension pot from time to time and the annual allowance. For any new executive director, annual contributions of 15% of salary would be made to the Company's defined contribution scheme or all or part as an allowance paid in lieu, as agreed by the committee. Geoff McFarland and Will Lee are deferred members of the Company's defined benefit scheme which closed for future accruals on 5th April 2007. Sir David McMurtry and John Deer receive no pension contribution or allowance in lieu.	The maximum contribution to the defined contribution scheme, or, where applicable, additional salary payment in lieu of contributions will be 15% of base salary	Not applicable
Minimum shareholding guideline	Supports the alignment of executive and shareholder interests	Executive directors are expected to build up and maintain a level of share ownership of at least 50% of base salary. 50% of any net vested share awards (after sales to meet tax liabilities) must be retained until the minimum shareholding guideline is met.	Not applicable	Not applicable

Approach to recruitment remuneration

When agreeing the remuneration package for a new executive director, the committee will apply the policy for the existing executive directors to ensure a reasonably consistent approach, except as set out below.

For an external hire, base salary will be set in line with the factors set out in the policy table, taking into account the individual's experience and the amount required to attract the individual to join the Company. The committee may also consider paying compensation to new hires who forfeit any award under the variable remuneration arrangements with a previous employer. Any such buyout awards would have a fair value no higher than that of the awards being replaced, and would be structured as far as possible to replicate the awards being forfeited, in terms of vesting horizons and performance linkage.

Where a new executive director is required to relocate from their home location to take up their role, the committee may provide reasonable relocation assistance and other appropriate allowances if business needs require it.

When an internal appointment is made, any pre-existing obligations will be honoured and payment will be permitted under the policy.

Committee discretion in exceptional circumstances

The committee retains discretion in exceptional circumstances to offer a long-term incentive to support Renishaw in securing the best executive director candidate if the committee considers it to be in shareholders' best interests to do so. Any use of this discretion would be limited by our internal policy for the aggregate of all incentive opportunities (as a percentage of salary) not to exceed market median, and for an individual executive director's total remuneration not to exceed upper quartile. Any use of this discretion would be accompanied by a full rationale in the relevant Annual remuneration report.

Service contracts and policy on payment for loss of office

The executive directors' service contracts require 12 months' notice of termination by either party. There are no obligations in any executive director's service contract or non-executive director's letter of appointment which would require the Company to pay a specific amount of compensation for loss of office.

The executive directors' service contracts reflect the Company's policy regarding notice periods. No payment will be made for a termination by the Company for a breach by the executive director of his or her service contract. In other cases, payment in lieu of notice will be considered up to the 12 months' notice period to cover base salary, benefits and pension contributions.

If additional compensation is required to be considered, such as on a settlement agreement, the committee will consider all relevant commercial factors affecting the specific case.

Statement of consideration of employment conditions elsewhere in the Group

The committee takes into account the pay and employment conditions of the Group in the country in which the executive director resides, and is satisfied that the approach taken is fair and reasonable based on market conditions and practice and the best interests of shareholders. When considering the annual salary review, the average base salary increase awarded to employees provides a guide when determining the salaries of the executive directors (located in the same country).

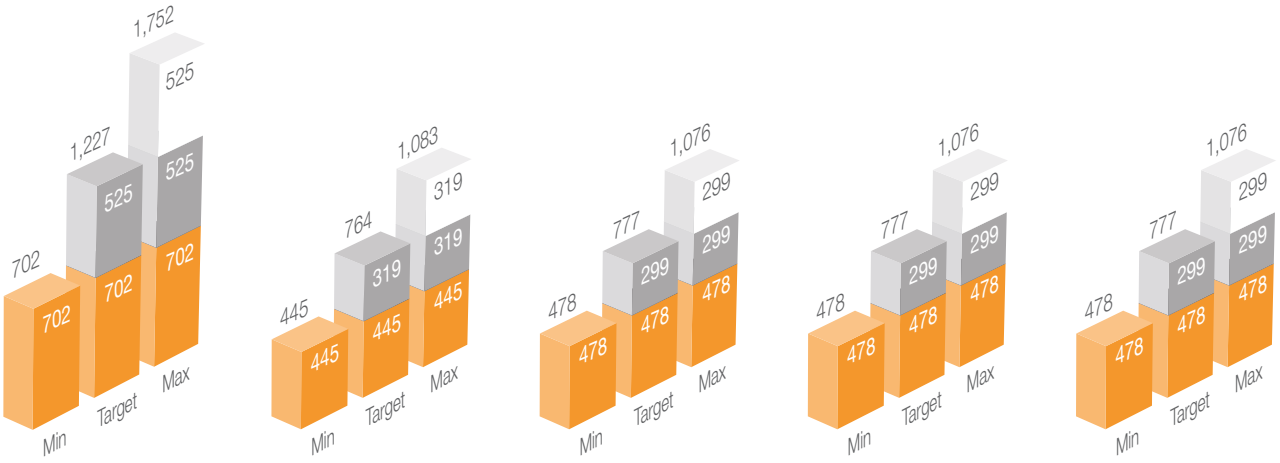
The Company does not specifically consult with employees on its executive director remuneration policy.

Statement of consideration of shareholder views

The committee has taken into account feedback provided by external shareholders when drawing up the remuneration policy. At the AGM in 2016, the advisory vote on the Directors' remuneration report received proxy votes of 97.97% in favour. At the AGM in 2014, the binding vote on the remuneration policy received proxy votes of 86.42% in favour. The main feedback related to the absence of a long-term share incentive, which the committee has sought to address through the proposed introduction of the deferred annual equity incentive plan.

Illustrations of application of remuneration policy

The bar charts set out below for each executive director show: firstly, the minimum remuneration payable in respect of salary, benefits and pension; secondly, the remuneration payable if performance is in line with the Company's expectations; and thirdly, the remuneration payable if the maximum bonus and deferred annual equity incentive is payable for the financial year ending 30th June 2018.



Sir David McMurtry | **John Deer** | **Allen Roberts** | **Geoff McFarland** | **Will Lee**

Minimum remuneration

Bonus for target profit before tax

Additional maximum bonus including deferred annual equity incentive

All figures £'000

Non-executive directors' policy table

The remuneration of the non-executive directors is determined by the executive directors and consists of a board fee only. There is no entitlement to any additional fees nor any bonus, incentive plans or pension. Set out below is a table showing the fees for the non-executive directors of the Company:

Element of remuneration	Purpose and relevance to strategy	Operation	Maximum	Performance measures
Board fees	To provide a competitive fee to attract and retain non-executive directors of the required quality to meet the Group's objectives.	All non-executive directors are paid the same fee, irrespective of membership of, or their chairing of, board committees. The fees are reviewed annually with reference to fees payable to non-executive directors of companies of a similar size and complexity. Reasonable expenses that are incurred by directors in undertaking their duties as a director are reimbursed	The maximum aggregate non-executive director fees payable are set by the Company's Articles of Association, currently an aggregate of £300,000 per annum.	Not applicable.

The non-executive directors are appointed for an initial three-year period subject to annual performance review and re-election at AGMs, unless terminated earlier by either party on one month's written notice. Appointments will not normally continue beyond nine years in office.

Directors' remuneration report continued

Annual remuneration report

This section of the report sets out the remuneration of the directors in the year ended 30th June 2017 and also contains details of how we intend to implement the policy for the forthcoming financial year. The information on pages 90 to 93 has been audited where required under the regulations and is indicated as audited where applicable.

Single total figure table (audited)

	Salary/fees		Benefits		Bonus		Pension		Total	
	2017 £'000	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000
Sir David McMurtry	**681**	666	**2**	2	**524**	0	**n/a**	n/a	**1,207**	668
D J Deer	**411**	402	**20**	20	**316**	0	**n/a**	n/a	**747**	422
A C G Roberts	**385**	377	**20**	19	**296**	0	**58**	57	**759**	453
G McFarland	**385**	377	**19**	18	**296**	0	**58**	57	**758**	452
B R Taylor[1]	**87**	463	**2**	22	**n/a**	0	**6**	70	**95**	555
W E Lee[2]	**313**	n/a	**18**	n/a	**242**	n/a	**43**	n/a	**616**	n/a
C T Chesney	**50**	44	**2**	n/a	**n/a**	n/a	**n/a**	n/a	**52**	44
K L Durrant	**50**	44	**1**	n/a	**n/a**	n/a	**n/a**	n/a	**51**	44
Sir David Grant	**50**	44	**0**	n/a	**n/a**	n/a	**n/a**	n/a	**50**	44
D J Jeans	**50**	44	**3**	n/a	**n/a**	n/a	**n/a**	n/a	**53**	44

[1] Ben Taylor retired from the Board on 31st July 2016.

[2] Will Lee was appointed to the Board on 1st August 2016. His remuneration shown in the table above reflects the part-year from this date to 30th June 2017.

Benefits

	Car allowance £'000	**Private medical cover applies to all executive directors and home telephone costs, insurance on personal cars and M4 bridge toll fees apply to some directors £'000**
Sir David McMurtry	n/a	2
D J Deer	18	2
A C G Roberts	18	2
G McFarland	18	1
B R Taylor[1]	2	0
W E Lee[2]	18	0

[1] Ben Taylor retired from the Board on 31st July 2016. [2] Will Lee was appointed to the Board on 1st August 2016.

Bonus

The committee establishes bonus targets taking into account the strategic growth expectations of the business, other financial parameters and strategic objectives that are required to be achieved. This year two financial measures were targeted, no non-financial measures were used.

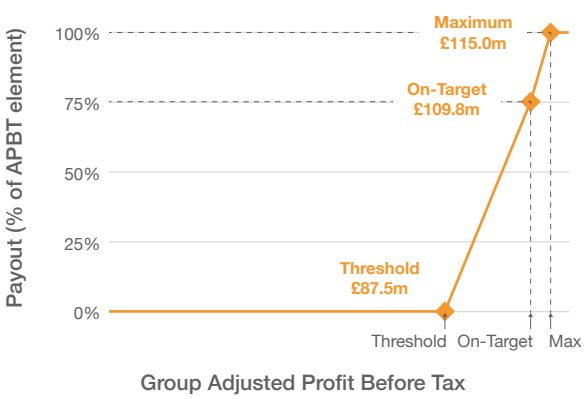
Under the current policy executive directors may earn up to 100% of base pay as a bonus. For the year in question, the bonus was determined by two elements:

1. Group profit growth (85% of the total opportunity)

This was based on how far the Group's Adjusted Profit Before Tax (APBT) performance in 2017 exceeded the APBT for 2016 (£87.5m).

Adjusted profit before tax for the present year grew by 25% to £109.1m, and resulted in a payment level of 73% for this element of the bonus scheme (worth 62% of salary).

FY2017 annual bonus – APBT payout profile



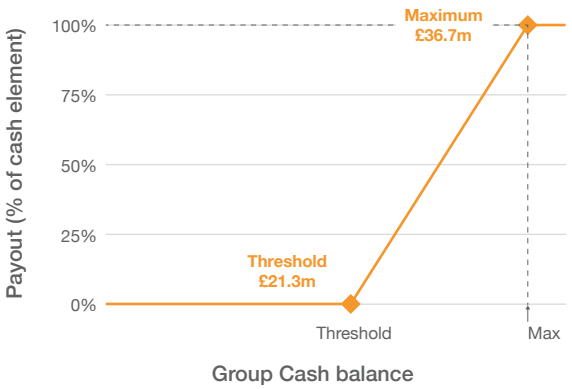
2. Group cash generation (15% of the total opportunity)

Given the uncertain macroeconomic environment at the start of the year, and a reducing level of cash reserves the committee decided it was prudent to set a target for cash balances to be improved.

The cash balance at the end of the year was £51.9m compared to net £21.3m at the end of the previous year, resulting in a payment level of 100% for this element of the bonus scheme (worth 15% of salary).

As a result of performance against the APBT and cash targets set for the 2017 bonus, executive directors received a bonus worth 77% of salary.

FY2017 annual bonus – cash payout profile



Total pension entitlements

G McFarland and W E Lee are members of the Company's closed defined benefit scheme. The normal retirement age is 65. On death, pension benefits would pass to dependants.

Since the closure of the DB scheme, contributions have been made to a defined contribution scheme.

At 30th June 2017:	Value of DB pension entitlement	Pension contributions
G McFarland	£28,933 per annum	Paid in cash
W E Lee	£8,677 per annum	£7,117 pension contribution and the balance paid in cash

Payments to past directors

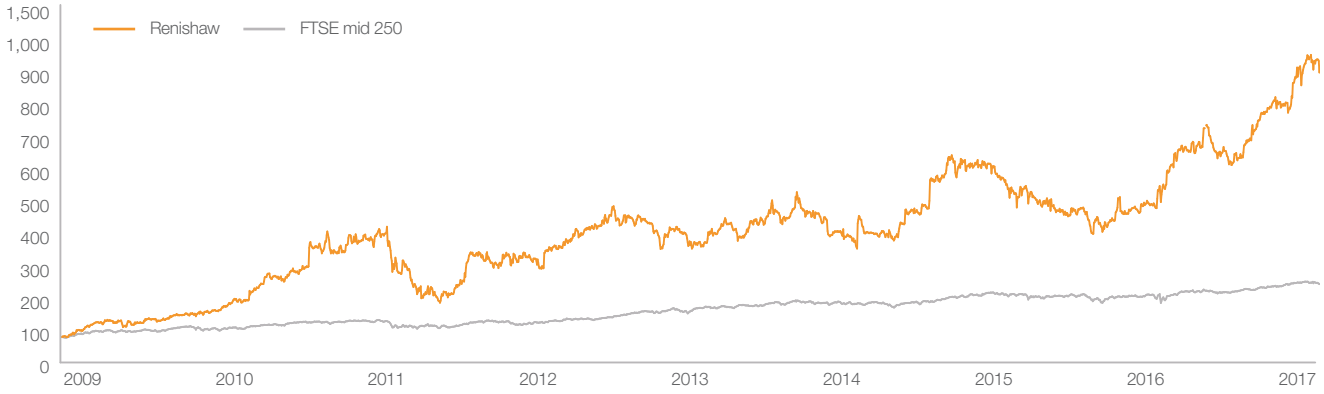
No payments were made to past directors during the year.

Loss of office payments

There was no termination of employment of directors during the year.

Performance graph

The graph above shows the Company's total shareholder return (TSR) performance, compared with the FTSE mid 250 index, which the directors believe is the most appropriate broad index for comparison, as Renishaw is a constituent of this index. TSR performance has been rebased to 100 at 30th June 2009.



Chief Executive total remuneration

The table below sets out information relating to Sir David McMurtry, who was the Chief Executive for each of the years in question:

Year	Single figure of total remuneration (£'000)	Annual bonus payout against maximum opportunity %	Long-term incentive vesting rates against maximum opportunity %
2017	1,207	77%	n/a
2016	668	0%	n/a
2015	1,298	100%	n/a
2014	632	0%	n/a
2013	663	10%	n/a
2012	969	69%	n/a
2011	1,066	100%	n/a
2010	472	0%	n/a

Directors' remuneration report continued

Executive directors serving as non-executive directors of other companies

During the year none of the executive directors served as a non-executive director of any other company in respect of which any remuneration was received.

Statement of directors' shareholding and share interests

During the year, none of the directors were required to own shares in the Company, although the remuneration policy proposed for approval by the shareholders at the AGM in 2017 includes a minimum shareholding guideline. As at 30th June 2017 the share interests (including the interests of connected persons) of the directors who have served on the Board at any time during the year are:

	Number of ordinary shares of 20p each
Sir David McMurtry	26,377,291
D J Deer	12,233,040
A C G Roberts	5,165
G McFarland	2,000
B R Taylor[1]	147
W E Lee[2]	600
C T Chesney	500
K L Durrant	–
Sir David Grant	–
D J Jeans	–

[1] Ben Taylor retired from the Board on 31st July 2016

[2] Will Lee was appointed to the Board on 1st August 2016

There were no share-based payments made or share schemes in place during the year.

Percentage change in remuneration of the Chief Executive

The following table sets out the percentage change in the Chief Executive's remuneration compared to the percentage change in average remuneration of UK employees from 2016 to 2017:

	2017 £'000	2016 £'000	Chief Executive % change	UK employees (average) % change
Salary	681	666	+2.25%	+3.75%
Benefits	2	2	0%	+8.9%
Annual bonus	524	0	n/a	+21%

UK employees have been chosen as a comparator group in order to avoid the impact of exchange rate movements over the year. UK employees make up 65% of the total number of group employees.

Relative importance of spend on pay

The following table sets out the total amount spent in the current financial year and the previous year on remuneration to all group employees and on dividends to shareholders:

	2017 £'000	2016 £'000	change %
Employee remuneration	211,572	183,769	+15.1%
Shareholder dividends paid	34,939	33,847	+3.2%

Except as shown above, no other distributions have been made to shareholders or other payments or uses of profit or cash flow which impact on the understanding of the relative importance of spend on pay.

Statement of implementation of remuneration policy in the next year

Base salary

The executive directors' salaries, except for Will Lee, will be increased at a rate less than the average for the UK workforce, (which was 3.46%) and the salaries will be as follows from 1st July 2017:

	30th June 2017 £'000	1st July 2017 £'000
Sir David McMurtry	681	700
D J Deer	411	425
A C G Roberts	385	398
G McFarland	385	398
W E Lee	325	398

Will Lee was promoted to Group Sales and Marketing Director early in the financial year. This was a significant promotion from his previous role and, in line with our approach to ensuring merit-based pay, his salary on appointment was set below market median with the intent to keep this under review once he had established himself in the new role and had the opportunity to prove his capabilities. His performance since appointment has been assessed by the Board as excellent, with his leadership of the global sales and marketing organisation being particularly strong, and his contribution to the Board providing deep insight to key decisions. As noted in the Chairman's statement, Will Lee will take over responsibility for chairing the International Sales and Marketing Board from the start of the new financial year. As a result, his salary will be increased to a competitive level, by 22.46% for the 2018 financial year.

Annual bonus

As set out in the policy, the maximum bonus opportunity for the year ending 30th June 2018 will continue to be 100% of salary for executive directors. The bonus for the year ending 30th June 2018 will be based on financial targets. The bonus scheme targets have been set based on the policy as set out in the policy table, and will be disclosed in next year's Annual remuneration report.

Deferred annual equity incentive

For the 2018 financial year, executive directors will be eligible for an award of up to 50% of salary under the new deferred annual equity incentive, subject to stretching targets (in excess of the level required for the annual bonus to pay out in full) being achieved. Any award under this plan will be delivered in Renishaw shares that normally vest on the third anniversary of grant, subject to continued employment over that period. The targets set in relation to the deferred annual equity incentive will be disclosed in next year's Annual remuneration report.

Consideration by directors of matters relating to directors' remuneration

During the year, the Remuneration Committee considered the amount of the executive directors' salary and the framework for the annual bonus. The members of the Remuneration Committee for this purpose were:

K L Durrant

C T Chesney

Sir David Grant

D J Jeans

Mercer Kepler assisted the committee in reviewing and benchmarking the director and senior management remuneration arrangements. Mercer Kepler is a founder member of the Remuneration Consultants Group and, as such, voluntarily operates under the code of conduct in relation to executive remuneration consulting in the UK. Total professional fees paid to Mercer Kepler during the year were £46,300. Mercer Kepler was appointed by the committee and have not advised the Company on any other matters. During the year, the actuarial advisory division of Mercer Limited (Mercer Kepler's parent company) provided advice to the trustees of the Company's UK defined benefit pension scheme and in relation to the defined contribution scheme. This work is entirely separate from the work done by Mercer Kepler for the committee. The committee is of the opinion that the advice received from Mercer Kepler is objective and independent.

The Company Secretary acts as secretary to the committee.

Statement of voting at general meeting

At the annual general meeting held on 13th October 2016, votes cast in respect of the Directors' remuneration report were as follows:

Resolution	Votes for	% for	Votes against	% against	Total votes cast	Votes withheld
Approval of remuneration report	60,194,113	97.97%	1,249,698	2.03%	61,443,811	137,302

At the annual general meeting on 16th October 2014, votes cast by proxy in respect of the remuneration policy were as follows:

Resolution	Votes for	% for	Votes against	% against	Total votes cast	Votes withheld
Approval of remuneration policy	52,998,077	86.42%	8,323,776	13.57%	61,321,853	623,285

The Company is required to provide in this report any reasons known to it for a significant percentage of votes against either the Directors' remuneration report or the remuneration policy and any actions taken in response. The Company deems a significant percentage of votes against as being more than 20%. No commentary is therefore necessary in respect of the voting on either of the above resolutions.

This report was approved by the Board of directors and has been signed on its behalf by:

Kath Durrant
Chair of the Remuneration Committee
27th July 2017

Other statutory and regulatory disclosures

Review of the business

A review of the business and likely future developments is given in the Chairman's statement and the Strategic report. Segmental information by geographical market is given in note 2 to the financial statements.

The principal activities of the Company are the design, manufacture, sale, distribution and service of metrology and healthcare products and solutions outlined on page 2 of the Strategic report. The Group has established and acquired overseas manufacturing, marketing and distribution subsidiaries to manufacture some of the Group's products and to provide support to customers in our major markets in the following regions outside the UK:

- Europe: Denmark, Finland, Germany, Hungary, France, Italy, Spain, Switzerland, Netherlands, Czech Republic, Poland, Russia, Sweden and Austria;
- Americas: USA, Mexico, Brazil and Canada;
- Far East: Japan, Hong Kong, Australia, South Korea, People's Republic of China, Singapore and Taiwan; and
- other regions: India, Turkey and Israel.

There are also representative offices in Malaysia, Vietnam, Indonesia and Thailand and an associate company in Slovenia, RLS, which is 50%-owned.

Also part of the Group is a subsidiary in Slovenia which designs and arranges the procurement of application-specific integrated circuits for the Group and for RLS.

Further information is available on the Company's website: www.renishaw.com.

Dividends

The directors propose a final dividend of £28,751,474 or 39.5p per share (2016: £25,839,932 or 35.5p per share) which, together with the interim dividend of £9,098,568 or 12.5p per share (2016: £9,098,568 or 12.5p) makes a total amount of dividends for the year of £37,850,042 or 52.0p per share, compared to £34,938,500 or 48.0p per share for the previous year.

Directors and their interests

The directors at the end of the year are listed on page 92 together with their interests in the share capital of the Company (with the equivalent number of voting rights), as notified to the Company.

All the interests were beneficially held with the exception of 2,434,411 shares (2016: 2,434,411 shares) which were non-beneficially held by D J Deer but in respect of which he has voting rights.

There has been no change in the holdings shown on page 92 in the period 1st July 2017 to 27th July 2017. In accordance with the provisions of the Governance Code all directors will retire and, being eligible, offer themselves for re-election at the Annual General Meeting (AGM) to be held on 20th October 2017. Details of directors who offer themselves up for re-election or election, as the case may be, are shown on pages 68 and 69 and full biographical details are available at www.renishaw.com.

Sir David McMurtry, as one party, and D J Deer and Mrs M E Deer, as the other party, have entered into an agreement relating to the way each party would vote in respect of his or her shares if requested by the other party to do so. Under this agreement Sir David McMurtry, John Deer and Mrs Deer agree that (i) Mr and Mrs Deer will vote their shares in favour of any ordinary resolution if requested to do so by Sir David McMurtry and (ii) Sir David McMurtry will vote his shares against any special or extraordinary resolution if requested to do so by John Deer. The voting arrangement was renewed in 2013 for a further period of five years and will terminate on the earlier of 25th May 2018 and the deaths of both of Sir David McMurtry and John Deer.

The rules on appointment, reappointment and retirement by rotation of the directors and their powers are set out in the Company's Articles of Association. There are no powers given to the directors that are regarded as unusual.

Directors' and officers' indemnity insurance

Subject to the provisions of the Companies Act 2006, the Company's Articles of Association provide for the directors and officers of the Company to be appropriately indemnified. The Company maintains insurance for its directors and officers in respect of their acts and omissions during the performance of their duties.

Share capital and change of control

Details of the Company's share capital, including rights and obligations, is given in note 19 to the financial statements. The Company is not a party to any significant agreements that might terminate upon a change of control of the Company.

A shareholder's authority for the purchase by the Company of a maximum of 10% of its own shares was in existence during the 2017 financial year. However, the Company did not purchase any of its own shares during that time.

Auditor

A resolution to re-appoint Ernst & Young LLP as the auditor of the Company will be proposed at the forthcoming AGM.

Disclosure of information to auditor

The directors who held office at the date of approval of this statement confirm that, so far as they are each aware, there is no relevant audit information of which the Company's auditor is unaware, and each director has taken all the steps that he or she ought to have taken as a director to make himself/herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

Annual general meeting

The notice convening the AGM and an explanation of the resolutions sought are set out in a separate circular. At the meeting, the Company will be seeking shareholder approval for, amongst other things, the ability to make market purchases of its own ordinary shares, up to a total of 10% of the issued share capital, as well as the approval of a new forward-looking Directors' remuneration policy intended to continue for the next three years.

The directors consider that all the resolutions proposed are in the best interests of the Company and its shareholders as a whole and unanimously recommend that shareholders vote in favour of the resolutions, as they intend to do in respect of their own holdings.

Substantial shareholdings

Apart from the shareholdings (and corresponding voting rights) of Sir David McMurtry and John Deer (36.23% and 16.80% respectively), the table below discloses the voting rights that have been notified to the directors under the requirements of the UK Listing Authority's Disclosure Rules and Transparency Rules DTR 5, which represent 3% or more of the voting rights attached to issued shares in the Company, as at 30th June 2017.

Substantial shareholdings	% of issued share capital	Number of shares
Baillie Gifford & Co	5.25%	3,846,993
BlackRock, Inc.	4.92%	3,578,133
Capital Research and Management Company	4.76%	3,465,730
Standard Life Investments Limited	4.99%	3,631,612

Research and development

The Group has a continuing commitment to a high level of research and development. The expenditure involved is directed towards the research and development of new products relating to metrology, including computer-aided design and manufacturing systems, and relating to healthcare products, including Raman spectroscopy systems, dental and craniomaxillofacial implants and certain areas in the medical devices field. Further information on the expenditure on research and development is contained in the Financial review section of the Strategic report.

Employees

The retention of highly-skilled employees is essential to the future of the business, and the directors place great emphasis on the continuation of the Company's approved training policy. Health and safety matters are given special attention by the directors and well established systems of safety management are in place throughout the Group to safeguard employees, customers and visitors.

Employment policies are designed to provide equal opportunities irrespective of race, religion, sex, age, disability or sexual orientation. Proper consideration is given to applications for employment from disabled people where suitable for appropriate vacancies. Employees who become disabled whilst with the Company will be given every opportunity to continue their employment through reasonable adjustment to their working conditions, equipment, or where this is not possible, re-training for other positions. They will also be afforded opportunities to continue training and gain promotion on the same basis as any other employee.

Details on information provided to employees on the performance of the business, consultation with employees and performance incentives are contained in the description of corporate social responsibility activities set out on pages 54 to 63.

There are no agreements with employees providing for compensation for any loss of employment that occurs because of a takeover bid.

Donations

No political donations were made during the year.

Controlling shareholders' arrangements

The Listing Rules require that premium listed companies with "controlling shareholders" (defined as a shareholder who individually or with any of their concert parties exercises or controls 30% or more of the votes that may be cast on all or substantially all the matters at the Company's general meeting) must enter into a relationship agreement containing specific independence provisions.

The independence provisions required by the Listing Rules are that:

(i) transactions and arrangements with the controlling shareholder (and/or any of its associates) will be conducted at arm's length and on normal commercial terms;

(ii) neither the controlling shareholder nor any of its associates will take any action that would have the effect of preventing the Company from complying with its obligations under the Listing Rules; and

(iii) neither the controlling shareholder nor any of its associates will propose or procure the proposal of a shareholder resolution which is intended or appears to be intended to circumvent the proper application of the Listing Rules.

By virtue of his shareholding in the Company, Sir David McMurtry (Chairman and Chief Executive 36.2% shareholder) is a controlling shareholder. John Deer (Deputy Chairman, together with his wife, 16.8%) is also a controlling shareholder by virtue of a long-standing voting agreement between John Deer (and his wife) with Sir David McMurtry. The Board confirms that the Company has not been able to enter into a relationship agreement with its controlling shareholders, containing the independence provisions required by the Listing Rules. The Financial Conduct Authority (FCA) has been notified of this, as required by the Listing Rules. The controlling shareholders have informed the Board that they are not willing to enter into a relationship agreement because they are of the view that the requirement to enter into the relationship agreement infringes upon their rights as shareholders and their track record demonstrates that they act in the best interests of the Company.

Other statutory and regulatory disclosures continued

As a result of there being no relationship agreement in place, the Listing Rules provide that certain enhanced oversight measures will apply to the Company.

This means that, unless and to the extent that the FCA agrees otherwise, all transactions with the controlling shareholders must be approved by the Company's shareholders (excluding the controlling shareholders) in accordance with the related party transaction requirements of the Listing Rules, and none of the normal exemptions apply.

Guidance has been received from the FCA about the application of the enhanced oversight measures to the remuneration and benefits received by the controlling shareholders in their capacity as executive directors (in accordance with the Company's approved remuneration policy) as well other ordinary course corporate matters, such as the payment of dividends by the Company to all shareholders. The FCA has confirmed that either these are not transactions or arrangements that fall within the enhanced oversight measures or that the FCA will permit a modification of the enhanced oversight measures so that they will not apply provided that the arrangements remain in the ordinary course of business and, in the case of salary reviews and bonuses, provided that they fall within the small transaction exemption in the Annex to LR 11. This guidance continues to apply in respect of remuneration awarded under the new remuneration policy, if approved at the AGM.

Greenhouse gas emissions

The disclosures concerning greenhouse gas emissions required by law are set out in the Corporate social responsibility report on page 62.

Signed on behalf of the Board.

Norma Tang
Company Secretary
27th July 2017

Renishaw plc
Registered number 1106260
England and Wales

Directors' responsibilities

The directors are responsible for preparing the Annual report and the group and the company financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare group and company financial statements for each financial year. Under that law the directors have prepared the group financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union (EU) and have prepared the company financial statements in accordance with UK Accounting Standards, including FRS 101 'Reduced Disclosure Framework'.

Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the group and the company and of their profit or loss for that period.

In preparing each of the group and company financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- for the group financial statements, state whether they have been prepared in accordance with IFRSs as adopted by the EU, subject to any material departures disclosed and explained in the financial statements;
- for the company financial statements, state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the company financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the group and the company will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the Company's transactions and disclose with reasonable accuracy at any time the financial position of the Group and the Company; and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for taking such steps as are reasonably open to them to safeguard the assets of the Group and the Company to prevent and detect fraud and other irregularities.

Under applicable law and regulations, the directors are also responsible for preparing a strategic report, directors' report, directors' remuneration report and corporate governance statement that complies with that law and those regulations.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Responsibility statement of the directors in respect of the annual financial report

We confirm that to the best of our knowledge:

- the financial statements, prepared in accordance with the applicable set of accounting standards, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and of the Company and the undertakings; and
- the Strategic report and the Directors' report include a fair review of the development and performance of the business during the year and the position of the Company and the Group at the year end, together with a description of the principal risks and uncertainties that they face.

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

Signed on behalf of the Board.

Allen Roberts
Group Finance Director
27th July 2017

Independent auditor's report to the members of Renishaw plc

Opinion

In our opinion:

- Renishaw plc's group financial statements and parent company financial statements (the "financial statements") give a true and fair view of the state of the Group's and of the parent company's affairs as at 30th June 2017 and of the Group's profit for the year then ended;
- the group financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union;
- the parent company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice, including FRS 101 'Reduced Disclosure Framework'; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006, and, as regards the group financial statements, Article 4 of the IAS Regulation.

We have audited the financial statements of Renishaw plc which comprise:

Group	Parent company
Consolidated balance sheet as at 30th June 2017	Balance sheet as at 30th June 2017
Consolidated income statement for the year then ended	Statement of changes in equity for the year then ended
Consolidated statement of comprehensive income and expense for the year then ended	Related notes C.26 to C.42 to the financial statements including a summary of significant accounting policies
Consolidated statement of changes in equity for the year then ended	
Consolidated cash flow statement for the year then ended	
Related notes 1 to 25 to the financial statements, including a summary of significant accounting policies	

The financial reporting framework that has been applied in the preparation of the group financial statements is applicable law and International Financial Reporting Standards (IFRSs) as adopted by the European Union. The financial reporting framework that has been applied in the preparation of the parent company financial statements is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice), including FRS 101 'Reduced Disclosure Framework'.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report below. We are independent of the Group and Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to principal risks, going concern and viability statement

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

- the disclosures in the annual report, set out on pages 52 to 53, that describe the principal risks and explain how they are being managed or mitigated;
- the directors' confirmation, set out on page 52, in the Annual report that they have carried out a robust assessment of the principal risks facing the entity, including those that would threaten its business model, future performance, solvency or liquidity;
- the directors' statement, set out on page 75, in the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them, and their identification of any material uncertainties to the entity's ability to continue to do so over a period of at least twelve months from the date of approval of the financial statements;
- whether the directors' statement in relation to going concern required under the Listing Rules in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit; or
- the directors' explanation, set out on pages 75 to 76, in the Annual report as to how they have assessed the prospects of the entity, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the entity will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

Overview of our audit approach

Key audit matters	• Revenue recognition as a result of inappropriate cut off via manipulation of timing of revenue recognition. • Susceptibility to management override through the posting of manual topside adjustments during the consolidation process. • The valuation of the Group's forward currency derivatives and assessment of hedging activities. • Carrying value of goodwill.
Audit scope	• We performed an audit of the complete financial information of seven components and audit procedures on specific balances for a further six components. • The components where we performed full or specific audit procedures accounted for 94% of Profit before tax, 92% of Revenue and 90% of Total Assets.
Materiality	• Overall Group materiality of £4.7m which represents 4.6% of Group Profit before tax for both continuing and discontinued operations.

Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters were addressed in the context of our audit of the financial statements as a whole, and in our opinion thereon, and we do not provide a separate opinion on these matters.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Revenue recognition. Revenue recognition as a result of inappropriate cut off via manipulation of timing of revenue recognition, continuing revenue of £536.8m (2016: £427.2m) and discontinued revenue of £7.2m (2016: £7.0m). As described in note 1 of the consolidated financial statements, where certain products require installation, part of the revenue may be deferred until the installation is complete. Furthermore, where goods and services are sold as a bundle, the fair value of services is deferred and recognised over the period to which the service relates with the remaining revenue recognised on despatch. No revenue should be recognised if there are significant uncertainties regarding recovery of the consideration due, or the possible return of goods. This results in the potential for management manipulation of the timing of revenue recognition. Refer also to page 80 (Audit Committee report).	We identified and assessed the design of key controls to validate that revenue recognition was appropriate and applied in accordance with the Group's accounting policies. We performed cut off procedures by testing items from revenue recognised during the year and subsequent to year end to gain assurance over the completeness and existence of deferred revenue balances at year end. We tested credit notes issued after the balance sheet date to assess appropriate revenue recognition in the period. We looked for and tested journal entries within normal business processes relating to revenue transactions close to the year end to ensure they were valid, by agreeing the journals to originating documentation. We performed testing on revenue recorded through journal entries outside of normal business processes to establish whether a service had been provided in the financial year to support the revenue recognised. We performed other substantive, transactional testing and analytical procedures to validate that revenue transactions had been appropriately recorded in the Consolidated income statement at the right time. The above work was performed at all full scope and specific scope locations with third party revenue streams. We ensured that the financial statement disclosures were in accordance with accounting standards.	Based on our procedures we are satisfied that the revenue cut-off was appropriate.

Independent auditor's report to the members of Renishaw plc
continued

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Management override Susceptibility to management override during the post-close consolidation adjustments process. We consider that management is in a position to perpetrate fraud through the manipulation of top-side journal entries during the consolidation process. We focused on this area due to the manual nature of the consolidation process and the non-routine judgemental nature of some of the journals posted.	We performed walkthroughs of the consolidation process at various month ends throughout the year, including the interim and year end to assess the design effectiveness of the underlying consolidation process. For all full and specific scope locations we independently verified the results of the consolidated entities by agreeing the results included in the consolidation directly to the results audited by the component audit teams. For a sample of the remaining entities we verified the results of the consolidated entities to the underlying source data. We selected all consolidation journals exceeding 15% performance materiality and obtained evidence to verify the validity and accuracy of the journals being posted.	We found no evidence of management override in the post-close consolidation adjustments.
The valuation of the Group's forward currency derivatives and assessment of hedging activities Refer to the Audit Committee report (page 80 to 81) and notes 1, 13 and 25 of the Consolidated Financial Statements. As described in note 1 of the consolidated financial statements the Group uses derivative financial instruments to manage risks arising from changes in foreign currency exchange rates relating to forecast sales. The Group designates certain derivatives as hedges of a particular risk associated with a recognised asset or liability or a highly probable forecast transaction (cash flow hedge). Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. Changes in the fair value of foreign currency derivatives which are ineffective or do not meet the criteria for hedge accounting in IAS 39 are recognised in the Consolidated income statement. We focused on this area due to the complexity of some of the derivatives entered into, and the magnitude of the carrying value of the derivative assets and liabilities on the balance sheet, being £3.5m and £56.7m respectively (2016: £0.9m and £70.6m).	We obtained direct external confirmation of the valuation for each of the forward currency contracts held and agreed these to the fair values of the derivatives recorded by the Group. We ensured that the requirements of IAS 39 Financial Instruments: Recognition and Measurement (IAS 39) were met by: • ensuring the appropriateness of the methodology used by management to hedge account. We reviewed the terms and conditions of all the different categories of forward currency contracts open at the year end and determined whether hedge accounting was permissible under IAS 39; • challenging management's assessment of whether hedge accounting was permissible under IAS 39 for forward currency contracts open at the previous year end; • using EY specialists to test a sample of valuations to ensure that the fair values of the forward currency derivatives had been reasonably calculated; • using EY specialists to evaluate management's documentation and assessment of hedge effectiveness; and • ensuring that the financial statement disclosures were in accordance with accounting standards.	As at 30th June 2016 certain forward foreign currency open contracts were treated as qualifying for hedge accounting when they did not meet the hedge effectiveness criteria. This has resulted in a prior year restatement, being a £25.8m reduction to profit (excluding tax impact) and a £25.8m increase in Other Comprehensive Income (excluding tax impact). We have confirmed that the disclosures in note 25 were in accordance with the requirements of IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors. We confirmed that the valuation of the Group's forward currency derivatives, the assessment of hedging activities for the year ended 30th June 2017 and the disclosures within notes 13 and 25 were in accordance with the requirements of IAS 39, Financial Instruments: Recognition and Measurement.

Risk	Our response to the risk	Key observations communicated to the Audit Committee
Carrying value of goodwill Refer to the Audit Committee report (page 80 and 81); and notes 1 and 10 of the Consolidated Financial Statements. We focused on this area due the size of the goodwill balance of £13.3m (2016: £21.3m) and because (i) significant levels of goodwill have arisen from Renishaw plc acquisitions in recent years, (ii) management's assessment of value in use of the Group's cash-generating units (CGUs) involves judgement about the future results of the business and discount rates applied to future cash flow forecasts, (iii) adverse changes in assumptions, particularly relating to forecast cash flows and discount rates, could reduce the recoverable amount below the carrying amount, and give rise to an impairment charge and (iv) a number of these acquisitions are still in the research and development stage which makes forecasting inherently more judgemental.	We challenged management's assumptions used in its impairment models for assessing the recoverability of the carrying value of goodwill. We focused on the appropriateness of CGU identification, methodology applied to estimate recoverable values, discount rates and forecast cash flows. Specifically: • we validated that the changes in CGUs identified were consistent with changes in the business and reflect the lowest level at which management monitors goodwill in accordance with the requirements of IAS 36, Impairment of Assets (IAS 36); • we tested the methodology applied in the value in use calculation as compared to the requirements of IAS 36 and the mathematical accuracy of management's model; • we inspected the cash flow forecasts used in the valuation to ensure that they were consistent with information approved by the Board and reviewed the historical accuracy of management's forecasts by comparing to actual performance; • we challenged management on its cash flow forecasts and the growth rates for the year ended 30th June 2018 and beyond by considering evidence available to support these assumptions, their consistency with findings from other areas of our audit and by performing sensitivity analyses; • the discount rates and long term growth rates applied within the model were assessed by an EY business valuation specialist, including comparison to economic and industry forecasts, where appropriate; • for certain CGUs with lower headroom, we performed sensitivity analyses by stress testing key assumptions in the model with downside scenarios to understand the parameters that, should they arise, could lead to a different conclusion in respect of the carrying value of goodwill; and • we considered the appropriateness of the related disclosures provided in note 10 of the Group financial statements. The entire goodwill balance was subject to full scope audit procedures by the primary audit team.	Based on the results of our work, we agree with management's conclusion that an impairment of goodwill at a CGU level is required in the current year, amounting to £8.4m, disclosed within discontinued operations. We confirmed that the disclosures within note 10 were in accordance with the requirements of IAS 36, Impairment of Assets.

In the prior year the risks of material misstatement were identified as Carrying Value of Inventory and Carrying Value of Goodwill.

Independent auditor's report to the members of Renishaw plc
continued

An overview of the scope of our audit

Tailoring the scope

Our assessment of audit risk, our evaluation of materiality and our allocation of performance materiality determine our audit scope for each entity within the Group. Taken together, this enables us to form an opinion on the consolidated financial statements. We take into account size, risk profile, the organisation of the group and effectiveness of group-wide controls, changes in the business environment and other factors such as recent Internal audit results when assessing the level of work to be performed at each entity.

In assessing the risk of material misstatement to the Group financial statements, and to ensure we had adequate quantitative coverage of significant accounts in the financial statements, of the 47 reporting components of the Group, we selected 13 components covering entities within China, Germany, Hong Kong, India, Ireland, Italy, Japan, Mexico, Spain, South Korea, UK and USA, which represent the principal business units within the Group.

Of the 13 components selected, we performed an audit of the complete financial information of seven components ("full scope components") which were selected based on their size or risk characteristics. For the remaining six components ("specific scope components"), we performed audit procedures on specific accounts within that component that we considered had the potential for the greatest impact on the significant accounts in the financial statements either because of the size of these accounts or their risk profile. For the remaining components, audit procedures were undertaken to respond to any potential risks of material misstatement to the Group financial statements.

The reporting components where we performed audit procedures accounted for 94% (2016: 83%) of the Group's Profit before tax, 92% (2016: 90%) of the Group's Revenue and 90% (2016: 78%) of the Group's Total Assets.

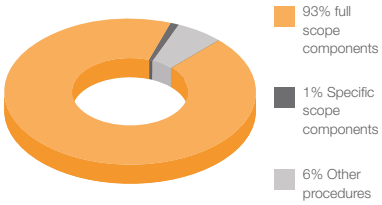
For the current year, the seven full scope components contributed 93% (2016: 83%) of the Group's Profit before tax. The full scope Profit before tax coverage of 93% represents six full scope components having a positive contribution of 98% offset by one full scope component having a negative contribution of 5%. The full scope entities contributed 87% (2016: 83%) of the Group's Revenue and 81% (2016: 78%) of the Group's Total Assets.

The specific scope components contributed 1% (2016: 0%) of the Group's Profit before tax, 5% (2016:0%) of the Group's Revenue and 9% (2016: 0%) of the Group's Total Assets. The audit scope of these components may not have included testing of all significant accounts of the component but will have contributed to the coverage of accounts significant to the consolidated Group.

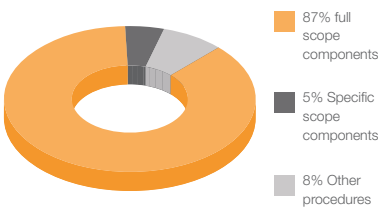
Of the remaining 34 components that together represent 6% of the Group's Profit before tax, none are individually greater than 5% of the Group's Profit before tax. For these components, we performed other procedures, including analytical review to respond to any potential risks of material misstatement to the Group financial statements.

The following charts illustrate the coverage obtained from the work performed by our audit.

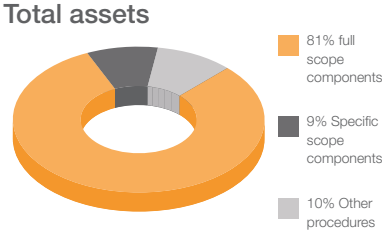
Profit before tax



Revenue



Total assets



Changes from the prior year

We have increased the scope of components in China, India, Italy, Mexico, South Korea and Spain to specific scope.

Involvement with component teams

In establishing our overall approach to the Group audit, we determined the type of work that needed to be undertaken at each of the components by us, as the primary audit engagement team, (primary audit team), or by component auditors from other EY global network firms operating under our instruction. Of the seven full scope components, all audit procedures were performed on two of these directly by the primary audit team, and of the six specific scope components, all audit procedures were performed on four of these directly by the primary audit team. The primary audit team performed all the audit procedures on two full scope components, one located in the UK and one located

in the USA, and four specific scope components located in Italy, Spain, Mexico and China respectively. For the remaining five full scope components and two specific scope components, where the work was performed by component auditors, we determined the appropriate level of involvement to enable us to determine that sufficient audit evidence had been obtained as a basis for our opinion on the Group as a whole.

At the start of the audit a meeting was held with representatives from all full scope component teams. In addition, during the current year's audit cycle, visits were undertaken by the Senior Statutory Auditor, or his designate, to the component teams in Germany, India, Ireland and the USA. These visits involved discussing the audit approach with the component team, discussing key risk areas, meeting with local management, and attending planning meetings. The primary audit team interacted regularly with the component teams during all stages of the audit, reviewed key working papers, attended all closing meetings via video conferencing facilities and were responsible for the scope and direction of the audit process. This, together with the additional procedures performed at Group level, gave us appropriate evidence for our opinion on the Group financial statements.

Our application of materiality

We apply the concept of materiality in planning and performing the audit, in evaluating the effect of identified misstatements on the audit and in forming our audit opinion.

Materiality

The magnitude of an omission or misstatement that, individually or in the aggregate, could reasonably be expected to influence the economic decisions of the users of the financial statements. Materiality provides a basis for determining the nature and extent of our audit procedures.

We determined materiality for the Group to be £4.7 million (2016: £4 million), which is 4.6% (2016: 5 %) of Group Profit before tax for continuing and discontinued operations. We believe that Group Profit before tax for continuing and discontinued operations provides us with a consistent year-on-year basis for determining materiality and is a generally accepted auditing benchmark for listed entities.

Performance materiality

The application of materiality at the individual account or balance level. It is set at an amount to reduce to an appropriately low level the probability that the aggregate of uncorrected and undetected misstatements exceeds materiality.

On the basis of our risk assessments, together with our assessment of the Group's overall control environment, our judgement was that performance materiality was 75% (2016: 75%) of our planning materiality, namely £3.5m (2016: £3m). We have set performance materiality at this percentage due to the past history of few misstatements indicating a lower risk of misstatement in the financial statements.

Audit work at component locations for the purpose of obtaining audit coverage over significant financial statement accounts is undertaken based on a percentage of total performance materiality. The performance materiality set for each component is based on the relative scale and risk of the component to the Group as a whole and our assessment of the risk of misstatement at that component. In the current year, the range of performance materiality allocated to components was £0.5m to £2.3m (2016: £2m).

Reporting threshold

An amount below which identified misstatements are considered as being clearly trivial.

We agreed with the Audit Committee that we would report to them all uncorrected audit differences in excess of £0.235m (2016: £0.2m), which is set at 5% of planning materiality, as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds.

We evaluate any uncorrected misstatements against both the quantitative measures of materiality discussed above and in light of other relevant qualitative considerations in forming our opinion.

Other information

The other information comprises the information included in the Annual report set out on pages 1 to 96, including the Strategic Report, set out on pages 1 to 65, Governance, set out on pages 66 to 96, and Shareholder information, set out on pages 148 to 150, other than the financial statements and our auditor's report thereon. The directors are responsible for the other information.

Our opinion on the financial statements does not cover the other information and, accordingly, except to the extent otherwise explicitly stated in this report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of the other information, we are required to report that fact. We have nothing to report in this regard.

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

- **Fair, balanced and understandable set out on page 75 –** the statement given by the directors that they consider the Annual report and financial statements taken as a whole is fair, balanced and understandable and provides the information necessary for shareholders to assess the group's performance, business model and strategy, is materially inconsistent with our knowledge obtained in the audit; or

Independent auditor's report to the members of Renishaw plc
continued

- **Audit Committee reporting set out on pages 79 to 82 –** the section describing the work of the Audit Committee does not appropriately address matters communicated by us to the audit committee; or
- **Directors' statement of compliance with the UK Corporate Governance Code set out on page 77 –** the parts of the directors' statement required under the Listing Rules relating to the company's compliance with the UK Corporate Governance Code containing provisions specified for review by the auditor in accordance with Listing Rule 9.8.10R(2) do not properly disclose a departure from a relevant provision of the UK Corporate Governance Code.

Opinions on other matters prescribed by the Companies Act 2006

In our opinion, the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

In our opinion, based on the work undertaken in the course of the audit:

- the information given in the Strategic report and the Directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic report and the Directors' report have been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the Group and the parent company and its environment obtained in the course of the audit, we have not identified material misstatements in the Strategic report or the Directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

- adequate accounting records have not been kept by the parent company, or returns adequate for our audit have not been received from branches not visited by us; or
- the parent company financial statements and the part of the Directors' remuneration report to be audited are not in agreement with the accounting records and returns; or
- certain disclosures of directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of directors

As explained more fully in the Directors' responsibilities statement set out on page 97, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the directors are responsible for assessing the Group and Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or the Company or to cease operations, or has no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

This report is made solely to the Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the Company's members as a body, for our audit work, for this report, or for the opinions we have formed.

Explanation of the extent to which our audit can detect fraud

The objectives of our audit, in respect to fraud, are: to identify and assess the risks of material misstatement of the financial statements due to fraud; to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and to respond appropriately to fraud or suspected fraud identified during the audit. However, the primary responsibility for the prevention and detection of fraud rests with both those charged with governance of the entity and management.

Our approach was as follows:

- We obtained an understanding of the legal and regulatory frameworks that are applicable to the Group and determined that the most significant frameworks which are directly relevant to specific assertions in the financial statements are those that relate to the reporting framework (IFRS, FRS 101 and the Companies Act 2006 and UK Corporate Governance Code) and the relevant tax compliance regulations in the UK and overseas jurisdictions in which the Group operates as referred to in the 'Tailoring the Scope' paragraph above. In addition, we concluded that there are certain significant laws and regulations which may have an effect on the determination of the amounts and disclosures in the financial statements being the Listing Rules of the UK Listing Authority, the Bribery Act 2010, Occupational Health and Safety Regulations, the Data Protection Act 1998, and export controls.
- We understood how the Group complies with these legal and regulatory frameworks through our assessment of the Group's approach to governance, demonstrated by the Board's approval of the Group's governance framework and the Board's review of the Group's risk management and internal control processes. As a result of the Board's review of the Group's risk management and internal control framework an executive risk committee was established which in turn formed working groups to focus on anti-bribery, information and cyber security, and data protection. The Group's anti-corruption culture is embedded in Renishaw's Group Business Code and Anti-Bribery Policy.
- We assessed the susceptibility of the Group's financial statements to material misstatement, including how fraud might occur by: considering the programs and controls that the Group has established to address risks identified by the entity, or that otherwise prevent, deter and detect fraud; how senior management monitor those programs and controls, and evaluating conditions in the context of incentive/pressure to commit fraud, considering the opportunity to commit fraud and the potential rationalisation of the fraudulent act.
- Based on this understanding we designed our audit procedures to identify non-compliance with such laws and regulations identified in the paragraphs above. Our procedures involved: journal entry testing, with a focus on manual consolidation journals and journals indicating large or unusual transactions based on our understanding of the business; inquiries of legal counsel, executive management, internal audit, divisional heads and all full and specific component finance managers; and focused testing, as referred to in the Key Audit Matters section above.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at https://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.

Other matters we are required to address

- Following the recommendation of the Audit Committee, we were appointed as auditors by the Board of Directors of Renishaw plc and signed an engagement letter on 11th November 2016. We were appointed by the Company at the AGM on 13th October 2016 to audit the financial statements for the year ending 30th June 2017 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments is one year, covering the year ending 30th June 2017.
- The non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or the Company and we remain independent of the Group and the Company in conducting the audit.
- The audit opinion is consistent with the additional report to the Audit Committee.

Paul Mapleston
(Senior statutory auditor)

for and on behalf of Ernst & Young LLP, Statutory Auditor

Bristol

27th July 2017

Notes:

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

Consolidated income statement

for the year ended 30th June 2017

from continuing operations	notes	2017 £'000	Restated* 2016 £'000
Revenue	2	**536,807**	427,224
Cost of sales		**(251,384)**	(208,565)
Gross profit		**285,423**	218,659
Distribution costs		**(112,691)**	(93,843)
Administrative expenses		**(52,376)**	(40,200)
Losses from the fair value of financial instruments		**(3,601)**	(23,436)
Operating profit		**116,755**	61,180
Financial income	4	**766**	872
Financial expenses	4	**(2,256)**	(1,800)
Share of profits of associates and joint ventures		**1,836**	1,451
Profit before tax	5	**117,101**	61,703
Income tax expense	7	**(14,343)**	(9,983)
Profit for the year from continuing operations		**102,758**	51,720
Loss for the year from discontinued operations	8	**(13,931)**	(4,024)
Profit for the year		**88,827**	47,696
Profit attributable to:			
Equity shareholders of the parent company		**88,955**	48,220
Non-controlling interest	19	**(128)**	(524)
Profit for the year		**88,827**	47,696
		pence	pence
Dividend per share arising in respect of the year	19	**52.0**	48.0
Dividend per share paid in the year		**48.0**	46.5
Earnings per share from continuing operations (basic and diluted)	6	**141.3**	71.8
Losses per share from discontinued operations (basic and diluted)	6	**(19.1)**	(5.6)

* Certain amounts shown here do not correspond to the 2016 consolidated financial statements and reflect adjustments detailed in notes 1 and 25.

Consolidated statement of comprehensive income and expense

for the year ended 30th June 2017

	notes	2017 £'000	Restated* 2016 £'000
Profit for the year		**88,827**	47,696
Other items recognised directly in equity:			
Items that will not be reclassified to the Consolidated income statement:			
Remeasurement of defined benefit liabilities	14	**(1,608)**	(20,868)
Deferred tax on remeasurement of defined benefit scheme liabilities		**(835)**	3,480
Total for items that will not be reclassified		**(2,443)**	(17,388)
Items that may be reclassified to the Consolidated income statement:			
Exchange differences in translation of foreign operations		**3,889**	8,409
Comprehensive income and expense of associates and joint ventures		**173**	753
Effective portion of changes in fair value of cash flow hedges, net of recycling	19	**8,495**	(65,396)
Deferred tax on effective portion of changes in fair value of cash flow hedges	19	**(1,573)**	12,640
Total for items that may be reclassified		**10,984**	(43,594)
Total other comprehensive income and expense, net of tax		**8,541**	(60,982)
Total comprehensive income and expense for the year		**97,368**	(13,286)
Attributable to:			
Equity shareholders of the parent company		**97,496**	(12,762)
Non-controlling interest	19	**(128)**	(524)
Total comprehensive income and expense for the year		**97,368**	(13,286)

*Certain amounts shown here do not correspond to the 2016 consolidated financial statements and reflect adjustments detailed in notes 1 and 25.

Consolidated balance sheet

at 30th June 2017

	notes	2017 £'000	Restated* 2016 £'000
Assets			
Property, plant and equipment	9	**228,050**	213,917
Intangible assets	10	**54,507**	61,255
Investments in associates and joint ventures	11	**7,311**	5,658
Long-term loans to associates and joint ventures	20	**3,080**	–
Deferred tax assets	12	**39,115**	40,996
Derivatives	13	**3,546**	76
Total non-current assets		**335,609**	321,902
Current assets			
Inventories	15	**87,697**	94,959
Trade receivables	20	**137,507**	114,945
Current tax		**2,276**	1,166
Other receivables	20	**15,907**	18,090
Derivatives	13	**–**	859
Pension scheme cash escrow account	14	**12,850**	15,279
Cash and cash equivalents	16,20	**51,942**	31,278
Total current assets		**308,179**	276,576
Current liabilities			
Trade payables		**19,544**	22,379
Overdraft	16,20	**–**	9,975
Current tax		**2,803**	3,558
Provisions	17	**2,960**	2,375
Derivatives	13	**25,261**	19,987
Other payables	18	**37,304**	18,345
Total current liabilities		**87,872**	76,619
Net current assets		**220,307**	199,957
Non-current liabilities			
Employee benefits	14	**66,787**	67,823
Deferred tax liabilities	12	**13,844**	21,999
Derivatives	13	**31,471**	50,652
Total non-current liabilities		**112,102**	140,474
Total assets less total liabilities		**443,814**	381,385
Equity			
Share capital	19	**14,558**	14,558
Share premium		**42**	42
Currency translation reserve	19	**10,510**	6,448
Cash flow hedging reserve	19	**(31,049)**	(37,971)
Retained earnings		**450,803**	401,930
Other reserve		**(460)**	(460)
Equity attributable to the shareholders of the parent company		**444,404**	384,547
Non-controlling interest	19	**(590)**	(3,162)
Total equity		**443,814**	381,385

*Certain amounts shown here do not correspond to the 2016 consolidated financial statements and reflect adjustments detailed in notes 1 and 25.

These financial statements were approved by the Board of directors on 27th July 2017 and were signed on its behalf by:

Sir David McMurtry **A C G Roberts**
Directors

Consolidated statement of changes in equity

for the year ended 30th June 2017

Year ended 30th June 2016 (restated*)	Share capital £'000	Share premium £'000	Currency translation reserve £'000	Cash flow hedging reserve £'000	Retained earnings £'000	Other reserve £'000	Non-controlling interest £'000	Total £'000
Balance at 1st July 2015 as reported	14,558	42	(2,714)	17,171	402,559	(460)	(2,638)	428,518
Restatement	–	–	–	(2,386)	2,386	–	–	–
Balance at 1st July 2015 restated	14,558	42	(2,714)	14,785	404,945	(460)	(2,638)	428,518
Profit/(loss) for the year	–	–	–	–	48,220	–	(524)	47,696
Other comprehensive income and expense (net of tax)								
Remeasurement of defined benefit pension liabilities	–	–	–	–	(17,388)	–	–	(17,388)
Foreign exchange translation differences	–	–	8,409	–	–	–	–	8,409
Relating to associates and joint ventures	–	–	753	–	–	–	–	753
Changes in fair value of cash flow hedges	–	–	–	(52,756)	–	–	–	(52,756)
Total other comprehensive income and expense	–	–	9,162	(52,756)	(17,388)	–	–	(60,982)
Total comprehensive income and expense	–	–	9,162	(52,756)	30,832	–	(524)	(13,286)
Dividends paid	–	–	–	–	(33,847)	–	–	(33,847)
Balance at 30th June 2016	14,558	42	6,448	(37,971)	401,930	(460)	(3,162)	381,385
Year ended 30th June 2017								
Profit/(loss) for the year	–	–	–	–	88,955	–	(128)	88,827
Other comprehensive income and expense (net of tax)								
Remeasurement of defined benefit pension liabilities	–	–	–	–	(2,443)	–	–	(2,443)
Foreign exchange translation differences	–	–	3,889	–	–	–	–	3,889
Relating to associates and joint ventures	–	–	173	–	–	–	–	173
Changes in fair value of cash flow hedges	–	–	–	6,922	–	–	–	6,922
Total other comprehensive income and expense	–	–	4,062	6,922	(2,443)	–	–	8,541
Total comprehensive income and expense	–	–	4,062	6,922	86,512	–	(128)	97,368
Acquisition of non-controlling interest	–	–	–	–	(2,700)	–	2,700	–
Dividends paid	–	–	–	–	(34,939)	–	–	(34,939)
Balance at 30th June 2017	**14,558**	**42**	**10,510**	**(31,049)**	**450,803**	**(460)**	**(590)**	**443,814**

*Certain amounts shown here do not correspond to the 2016 consolidated financial statements and reflect adjustments detailed in notes 1 and 25.

More details of share capital and reserves are given in note 19.

Consolidated statement of cash flow

for the year ended 30th June 2017

	notes	2017 £'000	Restated* 2016 £'000
Cash flows from operating activities			
Profit for the year		**88,827**	47,696
Adjustments for:			
Amortisation of development costs	10	**13,645**	9,116
Amortisation of other intangibles	10	**10,230**	2,313
Depreciation	9	**22,192**	18,258
Loss on sale of property, plant and equipment		**2,085**	166
(Gains)/losses from the fair value of financial instruments		**(8,022)**	25,772
Share of profits from associates and joint ventures	11	**(1,836)**	(1,451)
Financial income	4	**(766)**	(872)
Financial expenses	4	**2,256**	1,800
Tax expense	7	**13,132**	8,988
		52,916	64,090
Decrease/(increase) in inventories		**7,262**	(17,286)
Increase in trade and other receivables		**(21,062)**	(2,951)
Increase/(decrease) in trade and other payables		**14,699**	(12,439)
Increase in provisions	17	**585**	660
		1,484	(32,016)
Defined benefit pension contributions		**(4,204)**	(2,708)
Income taxes paid		**(23,768)**	(21,883)
Cash flows from operating activities		**115,255**	55,179
Investing activities			
Purchase of property, plant and equipment		**(42,637)**	(52,996)
Development costs capitalised	10	**(15,886)**	(12,246)
Purchase of other intangibles		**(754)**	(1,294)
Investment in subsidiaries, associates and joint ventures		**–**	(284)
Sale of property, plant and equipment		**5,526**	826
Sale of property, plant and equipment relating to discontinued activities		**960**	–
Interest received	4	**766**	872
Dividends received from associates and joint ventures	11	**356**	310
Payments from/(to) pension scheme escrow account (net)		**2,429**	(548)
Cash flows from investing activities		**(49,240)**	(65,360)
Financing activities			
Interest paid	4	**(696)**	(231)
Dividends paid	19	**(34,939)**	(33,847)
Cash flows from financing activities		**(35,635)**	(34,078)
Net increase/(decrease) in cash and cash equivalents		**30,380**	(44,259)
Cash and cash equivalents at the beginning of the year		**21,303**	82,171
Effect of exchange rate fluctuations on cash held		**259**	(16,609)
Cash and cash equivalents at the end of the year	16	**51,942**	21,303

*Certain amounts shown here do not correspond to the 2016 consolidated financial statements and reflect adjustments detailed in notes 1 and 25.

Notes (forming part of the financial statements)

1. Accounting policies

Basis of preparation

Renishaw plc (the Company) is a company incorporated in the UK. The group financial statements consolidate those of the Company and its subsidiaries (together referred to as the Group) and equity account the Group's interest in associates and joint ventures. The parent company financial statements present information about the Company as a separate entity and not about the Group.

The group financial statements have been prepared and approved by the directors in accordance with International Financial Reporting Standards as adopted by the EU (adopted IFRS). The parent company financial statements have been prepared in accordance with Financial Reporting Standard 101 "Reduced Disclosure Framework". The consolidated financial statements are presented in Sterling, which is the Company's functional currency and the Group's presentational currency, and all values are rounded to the nearest thousand (£'000).

The accounting policies set out below have, unless otherwise stated, been applied consistently to all periods presented in these group financial statements. Judgements made by the directors, in the application of these accounting policies, that have a significant effect on the financial statements and estimates with a significant risk of material adjustment in the next year are noted below.

The Group identified a number of prior period adjustments during the year, resulting in a restatement of the comparative period in the 2017 financial statements, as detailed in note 25. A third balance sheet has not been presented as the movements are identified in the Consolidated statement of changes in equity.

Renishaw GmbH, Pliezhausen, Germany has chosen to exercise the right under section 264 – sub-section 3 of the German Commercial Code (HGB) on exemption and preparation. The consolidated financial statements of the Group include the financial statements of Renishaw GmbH, Pliezhausen, Germany.

Basis of accounting

The financial statements have been prepared under the historical cost convention, subject to fair value items referred to in the derivative financial instruments note below. The accounting policies set out below have been consistently applied in preparing both the 2016 and 2017 financial statements.

Critical accounting judgements and estimation uncertainties

The preparation of financial statements in conformity with adopted IFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. The estimates and underlying assumptions are reviewed on an ongoing basis.

The areas of key estimation uncertainty and critical accounting judgement that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities in the next financial year are listed below:

Critical accounting judgements

(i) Capitalisation of development costs

Product development costs are capitalised once a project has reached a certain stage of development and these costs are subsequently amortised over a five-year period. Judgements are required to assess whether the new product development has reached the appropriate point for capitalisation of costs to begin. Should a product be subsequently obsoleted, the accumulated capitalised development costs would need to be immediately written off in the Consolidated income statement.

(ii) Discontinued activities

The closure of certain lines of business have been treated as discontinued operations on the basis that the directors are of the opinion that the underlying performance of the business is better reflected by classifying these items as discontinued.

Key sources of estimation uncertainty

(i) Inventory

Determining the value of inventory requires judgement, especially in respect of provisioning for slow moving and potentially obsolete inventory. Management consider historic and future forecast sales patterns of individual stock items when calculating inventory provisions. For most inventory lines, provisions are based on the excess levels held compared to a maximum three year outlook. Where strategic purchases of critical components have been made, an outlook beyond three years is considered where appropriate. The sensitivities around estimates vary significantly from line to line.

1. Accounting policies (continued)

Critical accounting judgements and estimation uncertainties (continued)

(ii) Defined benefit pension scheme liabilities

Determining the value of the future defined benefit obligation requires judgement in respect of the assumptions used to calculate present values. These include future mortality, discount rate, inflation and salary increases. Management makes these judgements in consultation with an independent actuary. Details of the estimates and judgements in respect of the current year are given in note 14.

(iii) Amortisation of intangibles and impairment

The periods of amortisation of intangible assets require judgements to be made on the estimated useful lives of the intangible assets to determine an appropriate rate of amortisation. Future assessments of impairment may lead to the writing off of certain amounts of intangible assets and the consequent charge in the Consolidated income statement for the accelerated amortisation. Capitalised development costs are written off over five years, the period over which demand forecasts can be predicted with more certainty.

(iv) Impairment of goodwill

Determining whether goodwill is impaired requires an estimation of the value in use of cash-generating units (CGUs) to which goodwill has been allocated. The value in use calculation involves an estimation of the future cash flows of CGUs and also the selection of appropriate discount rates, which involves judgement, to calculate present values (see note 10).

Basis of consolidation

Subsidiaries – Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed or has rights to variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. In assessing control, the Group takes into consideration potential voting rights that are exercisable. The acquisition date is the date on which control is transferred to the acquirer. The financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. Losses applicable to the non-controlling interests in a subsidiary are allocated to the non-controlling interests even if doing so causes the non-controlling interests to have a deficit balance.

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

Transactions eliminated on consolidation – Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

New, revised or changes to existing accounting standards

The following accounting standards have been issued but are not yet effective and have not been applied by the Group:

IFRS 15 Revenue from contracts with customers – This is effective for accounting periods beginning on or after 1st January 2018. The new standard requires the separation of performance obligations within contracts with customers and the contractual value to be allocated to each of the performance obligations. Revenue is then recognised as each performance obligation is satisfied. The introduction of this standard is not expected to have a material impact on the results of the Group due to the relatively straightforward contractual terms and conditions with customers.

IFRS 9 Financial instruments – This is effective for accounting periods beginning on or after 1st January 2018. The introduction of this standard is not expected to have a material impact on the net assets or results of the Group, but may result in additional disclosures.

IFRS 16 Leases – This has a mandatory effective date of 1st January 2019. The new standard will eliminate the classification of leases as either operating or finance leases and result in operating leases being treated as finance leases. This will result in previously recognised operating leases being treated as property, plant and equipment along with a finance leases creditor. The introduction of this standard will increase the value of property, plant and equipment and the finance lease liability on the balance sheet but it is unlikely to have a material effect on the profit in any year.

1. Accounting policies (continued)

Revenue

Revenue from the sale of goods is recognised in the Consolidated income statement when the significant risks and rewards of ownership have been transferred to the buyer, which is normally the time of despatch. Where certain products require installation, part of the revenue may be deferred until the installation is complete. No revenue is recognised if there are significant uncertainties regarding recovery of the consideration due, or the possible return of goods. Revenue from the sale of services is recognised over the period to which the service relates. Where goods and services are sold as a bundle, the fair value of services is deferred and recognised over the period to which the service relates with the remaining revenue recognised on despatch.

Foreign currencies

Consolidation - Foreign subsidiaries' results are translated into Sterling at weighted average exchange rates for the year, which is effected by translating each foreign subsidiary's monthly results at exchange rates applicable to each of the respective months. Assets and liabilities denominated in foreign currencies at the balance sheet date are translated into Sterling at the foreign exchange rates ruling at that date. Differences on exchange resulting from the translation of overseas assets and liabilities are recognised in other comprehensive income and accumulated in equity.

Transactions and balances - Monetary assets and liabilities denominated in foreign currencies are reported at the rates prevailing at the time, with any gain or loss arising from subsequent exchange rate movements being included as an exchange gain or loss in the Consolidated income statement. Foreign currency differences arising from transactions are recognised in the Consolidated income statement.

Hedging of net investments in foreign operations - Gains and losses arising on currency borrowings used to hedge the foreign currency exposure on the net assets of the foreign operations are recognised in other comprehensive income and expense and accumulated in equity, to the extent that hedge accounting criteria are met and are included in the Consolidated statement of comprehensive income and expense. Any ineffective portion is recognised immediately in the Consolidated income statement. The effectiveness of the hedging is tested monthly.

Foreign currency derivative cash flow hedges

Foreign currency derivatives are used to manage risks arising from changes in foreign currency rates relating to overseas sales. The Group does not enter into derivatives for speculative purposes. Foreign currency derivatives are stated at their fair value being the estimated amount that the Group would pay or receive to terminate them at the balance sheet date based on prevailing foreign currency rates.

Changes in the fair value of foreign currency derivatives which are designated and effective as hedges of future cash flows are recognised in other comprehensive income and in the currency hedging reserve, and subsequently transferred to the carrying amount of the hedged item or the Consolidated income statement. Realised gains or losses on cash flow hedges are therefore recognised in the Consolidated income statement in the same period as the hedged item.

Hedge accounting is discontinued when the hedging instrument expires or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the hedging instrument previously recognised in equity is retained in equity until the hedged transaction occurs. If the hedged transaction is no longer expected to occur, the net cumulative gain or loss recognised in equity is then transferred to the Consolidated income statement.

Changes in fair value of foreign currency derivatives which are ineffective or do not meet the criteria for hedge accounting in IAS 39 'Financial instruments: recognition and measurement' are recognised in the Consolidated income statement.

Goodwill and other intangible assets

Costs related to the acquisition, other than those associated with the issue of debt or equity securities, are expensed as incurred. Deferred consideration relating to acquisitions is subject to discounting to the date of acquisition and subsequently unwound to the date of the final payment. Goodwill arising on acquisition represents the difference between the cost of the acquisition and the fair value of the net identifiable assets acquired, net of deferred tax. Identifiable intangibles are those which can be sold separately or which arise from legal rights regardless of whether those rights are separable.

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group.

Goodwill is stated at cost less any accumulated impairment losses. It is not amortised but is tested annually for impairment or earlier if there are any indications of impairment. The annual impairment review involves comparing the carrying amount to the estimated recoverable amount and recognising an impairment loss if the recoverable amount is lower. Impairment losses are recognised through the Consolidated income statement.

Intangible assets such as customer lists, patents, trade marks, know-how and intellectual property that are acquired by the Group are stated at cost less amortisation and impairment losses. Amortisation is charged to the Consolidated income statement on a straight-line basis over the estimated useful lives of the intangible assets. The estimated useful lives of the intangible assets included in the Consolidated balance sheet reflect the benefit derived by the Group and vary from five to ten years.

Notes continued

1. Accounting policies (continued)

Intangible assets – research and development costs

Expenditure on research activities is recognised in the Consolidated income statement as an expense as incurred. Expenditure on development activities is capitalised if the product or process is technically and commercially feasible and the Group intends and has the technical ability and sufficient resources to complete development, future economic benefits are probable and the Group can measure reliably the expenditure attributable to the intangible asset during its development.

Development activities involve a plan or design for the production of new or substantially improved products or processes. The expenditure capitalised includes the cost of materials, direct labour and an appropriate proportion of overheads. Other development expenditure is recognised in the Consolidated income statement as an expense as incurred.

Capitalised development expenditure is amortised over five years and is stated at cost less accumulated amortisation and less accumulated impairment losses. Capitalised development expenditure is removed from the balance sheet ten years after being fully amortised.

Intangible assets – software licences

Intangible assets, comprising software licences that are acquired by the Group, are stated at cost less accumulated amortisation and impairment losses. Amortisation is charged on a straight-line basis over the estimated useful life of the assets. The useful life of each of these assets is assessed on an individual basis and they range from 2 to 10 years.

Property, plant and equipment

Freehold land is not depreciated. Other assets are stated at cost less accumulated depreciation. Depreciation is provided to write off the cost of assets less their estimated residual value on a straight-line basis over their estimated useful economic lives as follows:

Freehold buildings 50 years, Plant and equipment 3 to 25 years, Vehicles 3 to 4 years.

Impairment on non-current assets

All non-current assets are tested for impairment whenever there is an indication that their carrying value may be impaired. An impairment loss is recognised in the Consolidated income statement to the extent that an asset's carrying value exceeds its recoverable amount, which represents the higher of the asset's net realisable value and its value in use. An asset's value in use represents the present value of the future cash flows expected to be derived from the asset or from the cash-generating unit to which it relates. The present value is calculated using a discount rate that reflects the current market assessment of the time value of money and the risks specific to the asset concerned.

Goodwill and capitalised research and development costs are subject to an annual impairment test.

Inventory and work in progress

Inventory and work in progress is valued at the lower of cost and net realisable value. In respect of work in progress and finished goods, cost includes all production overheads and the attributable proportion of indirect overhead expenses that are required to bring inventories to their present location and condition. Overheads are absorbed into inventories on the basis of normal capacity or on actual hours if higher.

Warranty provisions

The Group provides a warranty from the date of purchase, except for those products that are installed by the Group where the warranty starts from the date of completion of the installation. This is typically for a 12-month period, although up to three years is given for a small number of products. A warranty provision is included in the financial statements, which is calculated on the basis of historical returns and internal quality reports.

Discontinued activities

Where a line of the Group's business is treated as a discontinued operation, the financial statements have been re-presented and restated where required as if operations discontinued during the current year had been discontinued from the start of the comparative year. Discontinued operations are excluded from the results of continuing operations and are presented as a single amount as a profit or loss after tax from discontinued operations in the Consolidated income statement.

Alternative performance measures

The financial statements are prepared in accordance with adopted IFRS and applied in accordance with the provisions of the Companies Act 2006. In measuring our performance, the financial measures that we use include those which have been derived from our reported results in order to eliminate factors which distort year-on-year comparisons.

These are considered non-GAAP financial measures. We believe this information, along with comparable GAAP measurements, is useful to investors in providing a basis for measuring our operational performance. Our management uses these financial measures, along with the most directly comparable GAAP financial measures, in evaluating our performance (see note 24).

1. Accounting policies (continued)

Employee benefits

The Group operates contributory pension schemes, largely for UK, Ireland and USA employees, which were of the defined benefit type up to 5th April 2007, 31st December 2007 and 30th June 2012 respectively, at which time they ceased any future accrual for existing members and were closed to new members.

The schemes are administered by trustees who are independent of the group finances. Pension scheme assets of the defined benefit schemes are measured using market value. Pension scheme liabilities are measured using a projected unit method and discounted at the current rate of return on a high-quality corporate bond of equivalent term and currency to the liability. Remeasurements arising from defined benefit schemes comprise actuarial gains and losses, the return on scheme assets (excluding interest) and the effect of the asset ceiling (if any, excluding interest). The Company recognises them immediately in other comprehensive income and all other expenses related to defined benefit schemes are included in the Consolidated income statement.

The pension schemes' surpluses, to the extent that they are considered recoverable, or deficits are recognised in full and presented on the face of the Consolidated balance sheet under employee benefits. Where a guarantee is in place in relation to a pension scheme deficit, liabilities are reported in accordance with IFRIC 14. Foreign-based employees are covered by state, defined benefit and private pension schemes in their countries of residence. Actuarial valuations of foreign pension schemes were not obtained, apart from Ireland and USA, because of the limited number of foreign employees. For defined contribution schemes, the amount charged to the Consolidated income statement represents the contributions payable to the schemes in respect of the accounting period.

Accruals are made for holiday pay, based on a calculation of the number of days holiday earned during the year, but not yet taken.

Going concern

The Group's business activities, together with the factors likely to affect its future development, performance and position, are set out in the Strategic report, where also given are details of the financial and liquidity positions. In addition, note 20 in the financial statements includes the Group's objectives and policies for managing its capital, details of its financial instruments and hedging activities and its exposures to credit risk and liquidity risk. The Group has considerable financial resources at its disposal and the directors have considered the current financial projections. As a consequence, the directors believe that the Group is well placed to manage its business risks successfully.

After making enquiries, the directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for a period of at least 12 months from the date of approval of the financial statements. Accordingly, they continue to adopt the going concern basis in preparing the Annual report and accounts.

Taxation

Tax on the profit for the year comprises current and deferred tax. Tax is recognised in the Consolidated income statement except to the extent that it relates to items recognised directly in other comprehensive income, in which case it is recognised in the Consolidated statement of comprehensive income and expense. Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the balance sheet date, and any adjustment to tax payable in previous years.

Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The following temporary differences are not provided for: the initial recognition of goodwill, the initial recognition of assets or liabilities that affect neither accounting nor taxable profit other than in a business combination and differences relating to investments in subsidiaries to the extent that they will probably not reverse in the foreseeable future. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantively enacted at the balance sheet date. A deferred tax asset is recognised only to the extent that it is probable that future taxable profits will be available against which the asset can be utilised.

Government grants

Government grants, comprising R&D tax credits are recognised in the Consolidated income statement as a deduction against expenditure.

Pension scheme cash escrow account

The Company holds a pension scheme escrow account as part of the security given for the UK defined benefit pension scheme. This account is shown within current assets in the Consolidated balance sheet as it may be used to settle pension scheme liabilities immediately upon enforcement of the charge over the account.

Cash and cash equivalents

Cash and cash equivalents comprise cash balances and short-term (with an original maturity of less than three months) deposits. Bank overdrafts that are repayable on demand form part of cash and cash equivalents for the purpose of the Consolidated statement of cash flow.

Notes continued

2. Segmental analysis

Renishaw manages its operations in two segments, comprising metrology and healthcare products. The results of these segments are regularly reviewed by the Board to allocate resources to segments and to assess their performance. The Group evaluates performance of the segments on the basis of profit before interest, tax and discontinued operations. Within the operating segment of metrology, there are multiple product offerings with similar economic characteristics, and where the nature of the products and production processes and their customer base are similar. More details of the Group's products and services are given in the Strategic report.

Year ended 30th June 2017	**Metrology £'000**	**Healthcare £'000**	**Total £'000**
Revenue	**503,378**	**33,429**	**536,807**
Depreciation and amortisation	**32,983**	**3,831**	**36,814**
Operating profit/(loss) before loss from fair value of financial instruments	**126,830**	**(6,474)**	**120,356**
Share of profits from associates and joint ventures	**1,836**	**–**	**1,836**
Net financial expense	**–**	**–**	**(1,490)**
Losses from the fair value of financial instruments	**–**	**–**	**(3,601)**
Profit before tax	**–**	**–**	**117,101**

Year ended 30th June 2016 (restated)	Metrology £'000	Healthcare £'000	Total £'000
Revenue	398,853	28,371	427,224
Depreciation and amortisation	26,234	3,003	29,237
Operating profit/(loss) before loss from fair value of financial instruments	87,717	(3,101)	84,616
Share of profits from associates and joint ventures	1,451	–	1,451
Net financial expense	–	–	(928)
Losses from the fair value of financial instruments	–	–	(23,436)
Profit before tax	–	–	61,703

There is no allocation of assets and liabilities to operating segments. Depreciation is included within certain other overhead expenditure which is allocated to segments on the basis of the level of activity.

The analysis of revenue by geographical market was:

	2017 £'000	Restated 2016 £'000
Far East, including Australasia	**248,905**	193,274
Continental Europe	**129,941**	110,315
North, South and Central America	**113,577**	88,029
UK and Ireland	**27,595**	22,752
Other regions	**16,789**	12,854
Total group revenue	**536,807**	427,224

Revenue in the previous table has been allocated to regions based on the geographical location of the customer. Countries with individually material revenue figures in the context of the Group were:

	2017 £'000	Restated 2016 £'000
China	**134,984**	106,457
USA	**95,927**	77,856
Germany	**56,403**	48,205
Japan	**52,166**	49,318

2. Segmental analysis (continued)

There was no revenue from transactions with a single external customer which amounted to more than 10% of the Group's total revenue.

The following table shows the analysis of non-current assets by geographical region:

	2017 £'000	2016 £'000
United Kingdom	**183,102**	190,396
Overseas	**109,846**	90,434
Total non-current assets	**292,948**	280,830

No overseas country had non-current assets amounting to 10% or more of the Group's total non-current assets.

3. Personnel expenses

The aggregate payroll costs for the year were:

	2017 £'000	2016 £'000
Wages and salaries	**171,993**	148,852
Compulsory social security contributions	**19,341**	16,856
Contributions to defined contribution schemes	**20,238**	18,061
Total payroll costs	**211,572**	183,769

The average number of persons employed by the Group during the year was:

	2017 Number	2016 Number
UK	**2,842**	2,755
Overseas	**1,553**	1,437
Average number of employees	**4,395**	4,192

Key management personnel have been assessed to be the directors of the Company. The total remuneration of the directors was:

	2017 £'000	2016 £'000
Short-term employee benefits	**4,223**	2,542
Post-employment benefits	**165**	184
Total remuneration of the directors	**4,388**	2,726

Full details of directors' remuneration are given in the Directors' remuneration report.

4. Financial income and expenses

Financial income	2017 £'000	2016 £'000
Interest receivable	**766**	872

Financial expenses	2017 £'000	2016 £'000
Net interest on pension schemes' liabilities (note 14)	**1,560**	1,569
Bank interest payable	**696**	231
Total financial expenses	**2,256**	1,800

Notes continued

5. Profit before tax

Included in the profit before tax are the following costs/(income):

	notes	2017 £'000	2016 £'000
Depreciation of property, plant and equipment	(a)	**22,098**	17,951
Amortisation of intangibles	(a)	**14,945**	11,349
Research and development expenditure	(b)	**53,544**	44,431
Research and development tax credit	(b)	**(6,692)**	(2,420)
Loss on sale of property, plant and equipment	(c)	**1,917**	166
Foreign currency losses/(gains)	(c)	**301**	(642)
Auditor:			
Audit of these financial statements	(c)	**177**	169
Audit of subsidiary undertakings pursuant to legislation	(c)	**230**	195
Audit assurance	(c)	**5**	13
Tax compliance	(c)	**–**	30
Tax advisory	(c)	**–**	103
Audit of pension schemes	(c)	**–**	20
Other services in relation to pension schemes	(c)	**–**	264
All other non-audit fees	(c)	**15**	46

These costs/(income) can be found under the following headings in the Consolidated income statement: (a) within cost of sales, distribution costs and administrative expenses; (b) within cost of sales; and (c) within administrative expenses.

6. Earnings per share

Basic and diluted earnings per share from continuing operations are calculated on earnings of £102,886,000 (2016: £52,244,000) and on 72,788,543 shares, being the number of shares in issue during both years. Basic and diluted losses per share from discontinued operations are calculated on losses of £13,931,000 (2016: £4,024,000) and on 72,788,543 shares, being the number of shares in issue during both years. There is no difference between the weighted average earnings per share and the basic and diluted earnings per share.

7. Income tax expense

	2017 £'000	2016 £'000
Current tax:		
UK corporation tax on profits for the year	**6,418**	6,804
UK corporation tax – prior year adjustments	**610**	860
Overseas tax on profits for the year	**12,997**	7,651
Total current tax	**20,025**	15,315
Deferred tax:		
Origination and reversal of other temporary differences	**(1,589)**	(4,403)
Prior year adjustments	**(3,647)**	–
Effect on deferred tax for changes in the UK tax rate	**(446)**	(929)
	(5,682)	(5,332)
Tax charge on profit	**14,343**	9,983

Phased reductions in the UK rate of corporation tax to 19% from 1st April 2017 and 17% from 1st April 2020 have been substantively enacted. Deferred tax assets and liabilities have been calculated based on the rate expected to be applicable when the relevant item reverses.

	2017 £'000	2016 £'000
Total tax charge:		
Income tax expense reported in the Consolidated income statement	**14,343**	9,983
Tax attributable to discontinued operations	**(1,211)**	(995)
	13,132	8,988

7. Income tax expense (continued)

The tax for the year is lower (2016: lower) than the weighted average of the UK standard rate of corporation tax of 19.75% (2016: 20%).

The differences are explained as follows:

	2017 £'000	Restated 2016 £'000
Profit before tax from continuing operations	**117,101**	61,703
Loss before tax from discontinued operations	**(15,142)**	(5,019)
Total profit before tax	**101,959**	56,684
Tax at 19.75% (2016: 20%)	**20,137**	11,337
Effects of:		
Different tax rates applicable in overseas subsidiaries	**(1,886)**	(2,653)
UK patent box	**(4,025)**	(423)
Expenses not deductible for tax purposes	**310**	266
Companies with unrelieved tax losses	**1,960**	461
Items with no tax effect	**226**	(290)
Prior year adjustments	**(3,037)**	860
Effect on deferred tax for change in UK tax rate	**(446)**	(929)
Other differences	**(107)**	359
Tax charge on profit	**13,132**	8,988
Effective tax rate	**12.9%**	15.9%

The current year patent box benefit of £4.0m is significantly higher than the prior year as a result of favourable exchange rate movements. Prior year adjustments totalling a credit of £3.0m arose primarily from the correction of a deferred tax liability held in respect of the currency translation reserve.

The Group's future effective tax rate (ETR) will mainly depend on the geographic mix of profits and whether there are any changes to tax legislation in the Group's most significant countries of operations. Phased reductions in the UK rate of corporation tax to 19% (from 1st April 2017) and 17% (from 1st April 2020) have been substantively enacted which is expected to impact the ETR in due course. Tax rate reductions are being considered in a number of countries where the Group operates. The patent box benefit has a significant impact on the ETR and is unpredictable due to factors such as currency rate movements and the level of capital allowances claimed in any given year. The Group does not expect the future tax rate to be materially impacted by the changes to the international tax landscape resulting from the package of measures developed under the OECD base erosion and profit shifting project.

8. Discontinued operations

In October 2016, the Group decided to discontinue operations at Renishaw Diagnostics Limited (healthcare segment) and in June 2017, to discontinue the spatial measurements business (metrology segment), on the basis of continued losses. Certain assets of the business were sold. Financial information relating to the discontinued operations is set out below:

	2017 £'000	2016 £'000
Revenue	**7,217**	7,038
Expenses	**(13,914)**	(12,057)
Goodwill impairment	**(8,445)**	–
Loss before tax	**(15,142)**	(5,019)
Tax credit	**1,211**	995
Loss for the year from discontinued operations	**(13,931)**	(4,024)

Cash flow	2017 £'000	2016 £'000
Loss for the year	**(13,931)**	(4,024)
Adjustments for operating activities	**12,155**	(635)
Cash flows used in operating activities	**(1,776)**	(4,659)
Cash flows from investing activities	**420**	168
Net decrease in cash and cash equivalents from discontinued operations	**(1,356)**	(4,491)

Notes continued

9. Property, plant and equipment

Year ended 30th June 2017	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1st July 2016	**142,665**	**187,048**	**9,600**	**14,886**	**354,199**
Additions	**6,273**	**13,336**	**1,118**	**21,910**	**42,637**
Transfers	**23,050**	**5,524**	**–**	**(28,574)**	**–**
Disposals	**(8,267)**	**(6,489)**	**(1,067)**	**–**	**(15,823)**
Currency adjustment	**1,940**	**1,603**	**242**	**–**	**3,785**
At 30th June 2017	**165,661**	**201,022**	**9,893**	**8,222**	**384,798**
Depreciation					
At 1st July 2016	**27,241**	**107,045**	**5,996**	**–**	**140,282**
Charge for the year	**2,976**	**17,727**	**1,489**	**–**	**22,192**
Released on disposals	**(2,292)**	**(4,000)**	**(960)**	**–**	**(7,252)**
Currency adjustment	**537**	**839**	**150**	**–**	**1,526**
At 30th June 2017	**28,462**	**121,611**	**6,675**	**–**	**156,748**
Net book value					
At 30th June 2017	**137,199**	**79,411**	**3,218**	**8,222**	**228,050**
At 30th June 2016	115,424	80,003	3,604	14,886	213,917

At 30th June 2017, properties with a net book value of £66,606,000 (2016: £66,485,000) were subject to a fixed charge to secure the UK defined benefit pension scheme liabilities.

Additions to assets in the course of construction of £21,910,000 (2016: £23,194,000) comprise £17,972,000 (2016: £12,938,000) for freehold land and buildings and £3,938,000 (2016: £10,256,000) for plant and equipment.

Year ended 30th June 2016	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1st July 2015	127,097	145,642	8,575	7,875	289,189
Additions	4,462	23,865	1,475	23,194	52,996
Transfers	2,141	14,042	–	(16,183)	–
Disposals	(1,020)	(2,162)	(1,190)	–	(4,372)
Currency adjustment	9,985	5,661	740	–	16,386
At 30th June 2016	142,665	187,048	9,600	14,886	354,199
Depreciation					
At 1st July 2015	22,608	91,393	5,596	–	119,597
Charge for the year	2,915	14,283	1,060	–	18,258
Released on disposals	(621)	(1,831)	(1,129)	–	(3,581)
Currency adjustment	2,339	3,200	469	–	6,008
At 30th June 2016	27,241	107,045	5,996	–	140,282
Net book value					
At 30th June 2016	115,424	80,003	3,604	14,886	213,917
At 30th June 2015	104,489	54,249	2,979	7,875	169,592

10. Intangible assets

Year ended 30th June 2017	Goodwill on consolidation £'000	Other intangible assets £'000	Internally generated development costs £'000	Software licences £'000	Total £'000
Cost					
At 1st July 2016	**21,268**	**11,249**	**101,463**	**22,587**	**156,567**
Additions	**–**	**300**	**15,886**	**454**	**16,640**
Disposals	**(1,784)**	**–**	**–**	**–**	**(1,784)**
Currency adjustment	**435**	**98**	**–**	**25**	**558**
At 30th June 2017	**19,919**	**11,647**	**117,349**	**23,066**	**171,981**
Amortisation					
At 1st July 2016	**–**	**10,939**	**67,682**	**16,691**	**95,312**
Charge for the year	**–**	**198**	**13,645**	**1,587**	**15,430**
Impairments	**8,445**	**–**	**–**	**–**	**8,445**
Released on disposal	**(1,784)**	**–**	**–**	**–**	**(1,784)**
Currency adjustment	**–**	**50**	**–**	**21**	**71**
At 30th June 2017	**6,661**	**11,187**	**81,327**	**18,299**	**117,474**
Net book value					
At 30th June 2017	**13,258**	**460**	**36,022**	**4,767**	**54,507**
At 30th June 2016	21,268	310	33,781	5,896	61,255

Year ended 30th June 2016	Goodwill on consolidation £'000	Other intangible assets £'000	Internally generated development costs £'000	Software licences		Total £'000
				In use £'000	In the course of acquisition £'000	
Cost						
At 1st July 2015	19,736	10,655	89,475	21,490	25	141,381
Additions	–	44	12,246	1,201	49	13,540
Transfers	–	–	–	74	(74)	–
Disposals	–	–	(258)	(249)	–	(507)
Currency adjustment	1,532	550	–	71	–	2,153
At 30th June 2016	21,268	11,249	101,463	22,587	–	156,567
Amortisation						
At 1st July 2015	–	9,914	58,824	14,979	–	83,717
Charge for the year	–	617	9,116	1,696	–	11,429
Released on disposal	–	–	(258)	(48)	–	(306)
Currency adjustment	–	408	–	64	–	472
At 30th June 2016	–	10,939	67,682	16,691	–	95,312
Net book value						
At 30th June 2016	21,268	310	33,781	5,896	–	61,255
At 30th June 2015	19,736	741	30,651	6,511	25	57,664

Goodwill acquired has arisen on the acquisition of a number of businesses and has an indeterminable useful life. Therefore it is not amortised but is tested for impairment annually and at any point during the year when an indicator of impairment exists. Goodwill is allocated to the CGUs, which are mainly the statutory entities acquired. This is the lowest level in the Group at which goodwill is monitored for impairment and is at a lower level than the Group's operating segments. In the following table, only the goodwill relating to the acquisition of R&R Fixtures, LLC is expected to be subject to tax relief.

Notes continued

10. Intangible assets (continued)

The analysis of acquired goodwill on consolidation is:

	2017 £'000	2016 £'000
itp GmbH	**3,038**	2,886
Renishaw Mayfield S.A.	**1,823**	1,738
R&R Fixtures, LLC	**5,327**	5,168
Renishaw Software Limited	**1,559**	1,559
Other smaller acquisitions	**1,511**	1,472
Renishaw Diagnostics Limited (92.4%)	**–**	1,784
Measurement Devices Limited	**–**	6,661
Total acquired goodwill	**13,258**	21,268

The recoverable amounts of acquired goodwill are based on value in use calculations. These calculations use cash flow projections based on either the financial business plans approved by management for next five financial years, or estimated growth rates over the five years, which are set out below. The cash flows beyond this forecast are extrapolated to perpetuity using a nil growth rate on a prudent basis, to reflect the uncertainties over forecasting further than five years.

Key assumptions

The key assumptions utilised in the value in use calculations are:

Discount rate

The following pre-tax discount rates have been used in discounting the projected cash flows:

	2017 Discount rate	2016 Discount rate
itp GmbH	**12%**	12%
Renishaw Software Limited	**12%**	12%
R&R Fixtures, LLC	**12%**	12%
Renishaw Mayfield S.A.	**15%**	15%

Forecast cash flows and future growth rates

	2017 Basis of forecast	2016 Basis of forecast
itp GmbH	**5% growth rate**	5% growth rate
Renishaw Software Limited	**5% growth rate**	5% growth rate
R&R Fixtures, LLC	**5 year business plan**	5 year business plan
Renishaw Mayfield S.A.	**5 year business plan**	5 year business plan

These forecast cash flows are considered prudent estimates based on management's view of the future and experience of past performance of the individual CGUs and are calculated at a disaggregated level. The key judgement within these business plans is the forecasting of revenue growth, given that the cost bases of the businesses can be flexed in line with revenue performance.

The average growth rates included in the significant CGUs' business plans are as follows:

	2017 Average revenue growth	2016 Average revenue growth
R&R Fixtures, LLC	**14%**	13%

These business plans are recognised as key inputs to the impairment calculation. They are monitored by management regularly and updated for expected variances in future performance.

Sensitivity to key assumptions

Management have performed sensitivity analysis on the key assumptions detailed above.

10. Intangible assets (continued)

Discount rate

An increase of 5% in the discount rate would not result in an impairment on any of the CGUs. Management believe any increase in discount rates above 5% to be remote.

Forecast cash flows and future growth rates

Given the average revenue growth assumptions included in the five-year business plans, management's sensitivity analysis involves a reduction of 10% in the forecast cash flows utilised in those business plans and therefore into perpetuity. For there to be an impairment there would need to be a reduction of 44% for R&R Fixtures, LLC. Management deem the likelihood of this reduction to be remote.

11. Investments in associates and joint ventures

The Group's investments in associates and joint ventures (all investments being in the ordinary share capital of the associate and joint ventures), whose accounting years end on 30th June, except where noted otherwise, were:

	Country of incorporation and principal place of business	**Ownership 2017 %**	Ownership 2016 %
RLS merilna tehnika d.o.o.	Slovenia	**50.0**	50.0
Metrology Software Products Limited	England & Wales	**50.0**	50.0
HiETA Technologies Limited (31st December)	England & Wales	**24.9**	24.9

For the nature of the activities, see note C.42.

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**5,658**	3,480
Dividends received	**(356)**	(310)
Share of profits of associates and joint ventures	**1,836**	1,451
Other comprehensive income and expense	**173**	753
Additions	**–**	284
Balance at the end of the year	**7,311**	5,658

Summarised aggregated financial information for associates and joint ventures:

	Joint ventures		Associate	
	2017 £'000	2016 £'000	**2017 £'000**	2016 £'000
Revenue	**8,729**	6,244	**55**	38
Share of profits/(loss) for the year	**2,116**	1,595	**(280)**	(144)
Assets	**9,012**	6,540	**310**	413
Liabilities	**2,387**	1,850	**796**	645

12. Deferred tax assets and liabilities

Balances at the end of the year were:

	2017			2016		
	Assets £'000	**Liabilities £'000**	**Net £'000**	Assets £'000	Liabilities £'000	Net £'000
Property, plant and equipment	**–**	**(9,337)**	**(9,337)**	–	(6,969)	(6,969)
Intangible assets	**–**	**(4,330)**	**(4,330)**	–	(8,061)	(8,061)
Intragroup trading (inventory)	**16,016**	**–**	**16,016**	13,454	–	13,454
Pension schemes	**11,024**	**–**	**11,024**	12,529	–	12,529
Derivatives	**10,146**	**–**	**10,146**	13,244	–	13,244
Other	**1,929**	**(177)**	**1,752**	1,769	(6,969)	(5,200)
Balance at the end of the year	**39,115**	**(13,844)**	**25,271**	40,996	(21,999)	18,997

Notes continued

12. Deferred tax assets and liabilities (continued)

The movements in the deferred tax balance during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**18,997**	(2,455)
Reallocation to current tax	**3,000**	–
Movements in the Consolidated income statement	**5,682**	5,332
Movement in relation to the cash flow hedging reserve	**(1,573)**	12,640
Movement in relation to the pension schemes	**(835)**	3,480
Total movement in the Consolidated statement of comprehensive income and expense	**(2,408)**	16,120
Balance at the end of the year	**25,271**	18,997

The deferred tax movement in the Consolidated income statement is analysed as:

	2017 £'000	2016 £'000
Property, plant and equipment	**(2,368)**	(1,380)
Intangible assets	**3,731**	(44)
Intragroup trading (inventory)	**2,562**	4,217
Pension schemes	**(669)**	(349)
Other	**2,426**	2,888
Total movement for the year	**5,682**	5,332

No deferred tax asset has been recognised in respect of tax losses carried forward of £22,147,000 (2016: £16,393,000) due to the uncertainty over their recoverability, as a significant proportion held in overseas subsidiaries may only be carried forward for a limited period of time.

13. Derivatives

For both the Group and the Company:

Derivatives comprising the fair value of outstanding forward contracts with positive fair values were:

	2017 £'000	2016 £'000
Derivatives designated as hedging instruments	**2,083**	579
Derivatives not designated as hedging instruments	**1,463**	356
Total derivatives with positive fair values	**3,546**	935

	2017 £'000	2016 £'000
Total current	**–**	859
Total non-current	**3,546**	76
Total derivatives with positive fair values	**3,546**	935

Derivatives comprising the fair value of outstanding forward contracts with negative fair values were:

	2017 £'000	2016 £'000
Derivatives designated as hedging instruments	**41,560**	49,079
Derivatives not designated as hedging instruments	**15,172**	21,560
Total derivatives with negative fair values	**56,732**	70,639

	2017 £'000	2016 £'000
Total current	**25,261**	19,987
Total non-current	**31,471**	50,652
Total derivatives with negative fair values	**56,732**	70,639

14. Employee benefits

The Group operates a number of pension schemes throughout the world. As noted in the accounting policies, actuarial valuations of foreign pension schemes are not obtained for the most part because of the limited number of foreign employees. The major scheme, which covers the UK-based employees, was of the defined benefit type. This scheme, along with the Ireland and USA defined benefit schemes, has ceased any future accrual for current members and these schemes are closed to new members. UK, Ireland and USA employees are now covered by defined contribution schemes.

The total pension cost of the Group for the year was £20,238,000 (2016: £18,061,000), of which £165,000 (2016: £184,000) related to directors and £6,292,000 (2016: £4,854,000) related to overseas schemes.

The latest full actuarial valuation of the UK defined benefit scheme was carried out as at September 2015 and updated to 30th June 2017 by a qualified independent actuary. The mortality assumption used for 2017 is S2PMA and S2PFA tables, CMI (core) 2016 model with long-term improvements of 1% per annum.

The major assumptions used by the actuary for the UK and Ireland schemes were:

	30th June 2017		30th June 2016		30th June 2015	
	UK scheme	**Ireland scheme**	UK scheme	Ireland scheme	UK scheme	Ireland scheme
Rate of increase in pension payments	**3.3%**	**1.6%**	3.2%	1.5%	3.4%	1.6%
Discount rate	**2.7%**	**2.2%**	3.2%	2.0%	4.0%	3.0%
Inflation rate (RPI)	**3.4%**	**1.6%**	3.3%	1.5%	3.6%	1.6%
Inflation rate (CPI)	**2.4%**	**–**	2.3%	–	2.6%	–
Retirement age	**64**	**65**	64	65	64	65

The assets and liabilities in the defined benefit schemes were:

	30th June 2017 £'000	**% of total assets**	30th June 2016 £'000	% of total assets	30th June 2015 £'000	% of total assets	30th June 2014 £'000	% of total assets	30th June 2013 £'000	% of total assets
Market value of assets:										
Equities	**169,433**	**99**	145,914	98	138,174	98	127,805	98	117,114	99
Bonds and cash	**1,275**	**1**	3,313	2	2,325	2	1,950	2	1,653	1
	170,708	**100**	149,227	100	140,499	100	129,755	100	118,767	100
Actuarial value of liabilities	**(237,495)**	**–**	(217,050)	–	(188,593)	–	(172,823)	–	(160,485)	–
Deficit in the schemes	**(66,787)**	**–**	(67,823)	–	(48,094)	–	(43,068)	–	(41,718)	–
Deferred tax thereon	**11,024**	**–**	12,528	–	9,398	–	8,141	–	8,973	–

All equities have quoted prices in active markets in the UK, North America, Europe, Asia-Pacific, Japan and emerging markets.

Note C.36 gives the analysis of the UK defined benefit pension scheme. For the other schemes, the market value of assets at the end of the year was £20,386,000 (2016: £17,646,000) and the actuarial value of liabilities was £24,312,000 (2016: £23,348,000).

The weighted average duration of the defined benefit obligation is around 24 years.

For a sensitivity analysis of certain elements of the UK defined benefit pension scheme, see the Financial review section of the Strategic report. It is expected that contributions to defined benefit schemes for the next financial year will be at a similar level to the current year.

The movements in the schemes' assets and liabilities were:

Year ended 30th June 2017	**Assets £'000**	**Liabilities £'000**	**Total £'000**
Balance at the beginning of the year	**149,227**	**(217,050)**	**(67,823)**
Contributions paid	**4,204**	**–**	**4,204**
Interest on pension schemes	**4,681**	**(6,241)**	**(1,560)**
Remeasurement gain/(loss)	**19,028**	**(20,636)**	**(1,608)**
Benefits paid	**(6,432)**	**6,432**	**–**
Balance at the end of the year	**170,708**	**(237,495)**	**(66,787)**

Notes continued

14. Employee benefits (continued)

Year ended 30th June 2016	Assets £'000	Liabilities £'000	Total £'000
Balance at the beginning of the year	140,499	(188,593)	(48,094)
Contributions paid	2,708	–	2,708
Interest on pension schemes	5,552	(7,121)	(1,569)
Remeasurement gain/(loss)	3,166	(24,034)	(20,868)
Benefits paid	(2,698)	2,698	–
Balance at the end of the year	149,227	(217,050)	(67,823)

The analysis of the amount recognised in the Consolidated statement of comprehensive income and expense was:

	2017 £'000	2016 £'000
Actuarial (loss)/gain arising from:		
– Changes in demographic assumptions	**1,797**	1,523
– Changes in financial assumptions	**(25,471)**	(24,828)
– Experience adjustment	**4,127**	6,968
Return on plan assets excluding interest income	**18,739**	669
Adjustment to liabilities for IFRIC 14	**(800)**	(5,200)
Total amount recognised in the Consolidated statement of comprehensive income and expense	**(1,608)**	(20,868)

The cumulative amount of actuarial gains and losses recognised in the Consolidated statement of comprehensive income and expense was a loss of £107,264,000 (2016: loss of £105,656,000).

The life expectancies implied by the mortality assumption at age 65 are:

	2017 years	2016 years
Male currently aged 65	**21.9**	21.9
Female currently aged 65	**23.7**	23.9
Male currently aged 45	**23.0**	23.2
Female currently aged 45	**25.0**	25.2

An agreement has been entered into with the trustees of the UK defined benefit pension scheme in relation to deficit funding plans which supersede all previous arrangements. The Company has agreed to pay all monthly pensions payments and lump sum payments, and transfer payments up to a limit of £1,000,000 in each year (Benefits in Payment).

A number of UK properties owned by the Company are subject to fixed charges. One or more of the properties may be released from the fixed charge if on a subsequent valuation, the value of all properties under charge exceed 120% of the deficit.

The Company has also established an escrow bank account, which is subject to a floating charge. The balance of this account was £12,850,000 at the end of the year (2016: £15,279,000). The funds will be released back to the Company from the escrow account over a period of 6 years.

The agreement continues until 30th June 2031, but may end sooner if the deficit (calculated on a self sufficiency basis as defined in the agreement) is eliminated in the meantime. At 30th June 2031 the Company is obliged to pay any deficit at that time. All properties will be released from charge when the deficit no longer exists. The charges may be enforced by the trustees if one of the following occurs: (a) the Company does not pay any Benefits in Payment; (b) an insolvency event occurs in relation to the Company; or (c) the Company does not pay any deficit at 30th June 2031.

Under the Ireland defined benefit pension scheme deficit funding plan, a property owned by Renishaw (Ireland) Limited is subject to a registered fixed charge to secure the Ireland defined benefit pension scheme's deficit.

No scheme assets are invested in the Group's own equity.

The present value of projected future contributions under the new agreement relating to the UK defined benefit scheme exceeds the value of the deficit at the year-end, therefore, under IFRIC 14, the UK defined benefit pension scheme's liabilities have been increased by £16,200,000, to represent the maximum discounted liability as at 30th June 2017 (2016: £15,400,000).

15. Inventories

An analysis of inventories at the end of the year was:

	2017 £'000	2016 £'000
Raw materials	**32,477**	35,932
Work in progress	**19,705**	26,225
Finished goods	**35,515**	32,802
Balance at the end of the year	**87,697**	94,959

During the year, the amount of inventories recognised as an expense in the Consolidated income statement was £167,395,000 (2016: £135,718,000) and the amount of write-down of inventories recognised as an expense in the Consolidated income statement was £6,466,000 (2016: £2,454,000). At the end of the year, the gross cost of inventories which had provisions held against them totalled £15,413,000 (2016: £10,134,000).

16. Cash and cash equivalents

An analysis of cash and cash equivalents at the end of the year was:

	2017 £'000	2016 £'000
Bank balances and cash in hand	**46,492**	26,416
Short-term deposits	**5,450**	4,862
Overdraft	**–**	(9,975)
Balance at the end of the year	**51,942**	21,303

The UK defined benefit pension scheme cash escrow account is shown separately within current assets. Overdrafts are shown separately within current liabilities.

17. Provisions

Warranty provision

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**2,375**	1,715
Created during the year	**2,195**	1,878
Utilised in the year	**(1,610)**	(1,218)
	585	660
Balance at the end of the year	**2,960**	2,375

The warranty provision has been calculated on the basis of historical return-in-warranty information and other internal reports. It is expected that most of this expenditure will be incurred in the next financial year and all expenditure will be incurred within three years of the balance sheet date.

18. Other payables

Balances at the end of the year were:

	2017 £'000	2016 £'000
Payroll taxes and social security	**7,642**	6,304
Other creditors and accruals	**29,662**	12,041
Total other payables	**37,304**	18,345

Other creditors and accruals include increases in the group bonus provision, provisions for deferred income and pension fund accruals. The Group's exposure to currency and liquidity risk related to trade and other payables is disclosed in note 20.

Notes continued

19. Share capital and reserves

Share capital

	2017 £'000	2016 £'000
Allotted, called-up and fully paid 72,788,543 ordinary shares of 20p each	**14,558**	14,558

The ordinary shares are the only class of share in the Company. Holders of ordinary shares are entitled to vote at general meetings of the Company and receive dividends as declared. The Articles of Association of the Company do not contain any restrictions on the transfer of shares nor on voting rights.

Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of the foreign operations, offset by foreign exchange differences on bank liabilities which have been accounted for in other comprehensive income and accumulated in equity on account of them being classified as hedging instruments.

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**6,448**	(2,714)
Gain on net assets of foreign currency operations	**4,848**	28,778
Loss on foreign currency overdrafts held for the purpose of net investment hedging	**(959)**	(20,369)
Gain in the year relating to subsidiaries	**3,889**	8,409
Currency exchange differences relating to associates	**173**	753
Balance at the end of the year	**10,510**	6,448

Cash flow hedging reserve

The cash flow hedging reserve, for both the Group and the Company, comprises all foreign exchange differences arising from the valuation of forward exchange contracts which are effective hedges and mature after the year end. These are valued on a mark-to-market basis, are accounted for in other comprehensive income and accumulated in equity, and are recycled through the Consolidated income statement and Company income statement when the hedged item affects the income statement. The forward contracts mature over the next three and a half years.

Movements during the year were:

	2017 £'000	Restated 2016 £'000
Balance at the beginning of the year	**(37,971)**	14,785
Movements during the year	**8,495**	(65,396)
Deferred tax movement	**(1,573)**	12,640
Balance at the end of the year	**(31,049)**	(37,971)

Dividends paid

Dividends paid comprised:

	2017 £'000	2016 £'000
2016 final dividend paid of 35.5p per share (2015: 34.0p)	**25,840**	24,748
Interim dividend paid of 12.5p per share (2016: 12.5p)	**9,099**	9,099
Total dividends paid	**34,939**	33,847

A final dividend in respect of the current financial year of £28,751,474 (2016: £25,839,932) at the rate of 39.5p net per share (2016: 35.5p) is proposed to be paid on 25th October 2017 to shareholders on the register on 22nd September 2017.

19. Share capital and reserves (continued)

Non-controlling interest

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**(3,162)**	(2,638)
Acquisition of remaining shareholding in Renishaw Mayfield S.A.	**2,700**	–
Share of loss for the year	**(128)**	(524)
Balance at the end of the year	**(590)**	(3,162)

The non-controlling interest represents the minority shareholdings in Renishaw Diagnostics Limited – 7.6%.

20. Financial instruments

The Group has exposure to credit risk, liquidity risk and market risk arising from its use of financial instruments. This note presents information about the Group's exposure to these risks, along with the Group's objectives, policies and processes for measuring and managing the risks.

Fair value

There is no significant difference between the fair value of financial assets and financial liabilities and their carrying value in the Consolidated balance sheet. All financial assets and liabilities are held at amortised cost, apart from the forward exchange contracts, which are held at fair value, with changes going through the Consolidated income statement unless subject to hedge accounting.

The fair values of the forward exchange contracts have been calculated by a third party expert, discounting estimated future cash flows on the basis of market expectations of future exchange rates, representing level 2 in the IFRS 13 fair value hierarchy. The IFRS 13 level categorisation relates to the extent the fair value can be determined by reference to comparable market values. The classifications range from level 1 where instruments are quoted on an active market through to level 3 where the assumptions used to arrive at fair value do not have comparable market data.

Credit risk

The Group's liquid funds are substantially held with banks with high credit ratings and the credit risk relating to these funds is therefore limited. The Group carries a credit risk relating to non-payment of trade receivables by its customers. Credit evaluations are carried out on all new customers before credit is given above certain thresholds. There is a spread of risks among a large number of customers with no significant concentration with one customer or in any one geographical area. The Group establishes an allowance for impairment in respect of trade receivables where recoverability is considered doubtful.

An analysis by currency of the Group's financial assets at the year end is as follows:

	Trade receivables		Other receivables		Cash (including overdraft)	
Currency	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000	**2017 £'000**	2016 £'000
Pound Sterling	**8,122**	6,520	**11,544**	12,819	**142,493**	102,149
US Dollar	**41,751**	37,183	**745**	667	**(45,149)**	(34,733)
Euro	**22,784**	20,757	**3,117**	2,504	**(37,744)**	(37,823)
Japanese Yen	**16,343**	15,195	**386**	391	**(16,366)**	(17,946)
Other	**48,507**	35,290	**3,195**	2,606	**8,708**	9,656
	137,507	114,945	**18,987**	18,987	**51,942**	21,303

The above trade receivables, other receivables and cash are predominately held in the functional currency of the relevant entity, with the exception of £5,324,000 of Euro-denominated trade receivables being held in the Company, along with some foreign currency cash balances which are of a short-term nature. Also, see note below on net assets and associated borrowings, regarding the holding of foreign currency borrowings by the Company in respect of its hedging activity.

The ageing of trade receivables past due, but not impaired, at the end of the year was:

	2017 £'000	2016 £'000
Past due 0–1 month	**16,836**	16,033
Past due 1–2 months	**7,746**	5,345
Past due more than 2 months	**5,577**	6,998
Balance at the end of the year	**30,159**	28,376

20. Financial instruments (continued)

Movements in the provision for impairment of trade receivables during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**2,921**	2,964
Changes in amounts provided	**452**	919
Amounts utilised	**(258)**	(962)
Balance at the end of the year	**3,115**	2,921

The maximum exposure to credit risk is £221,286,000, comprising the Group's trade and other receivables, cash and cash equivalents and derivative assets.

Liquidity risk

The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, without incurring unacceptable losses or risking damage to the Group's reputation. The Group uses monthly cash flow forecasts to monitor cash requirements.

In respect of net cash, the carrying value approximates to fair value because of the short maturity of the deposits and borrowings. Interest rates are floating and based on libor/libid, which can change over time, affecting the Group's interest income. An increase of 1% in interest rates would result in an increase in interest income of approximately £400,000.

The market value of forward exchange contracts is determined by reference to market data.

The contractual maturities of financial liabilities at the year end were:

		Contractual cash flows		
Year ended 30th June 2017	**Carrying amount £'000**	**Up to 1 year £'000**	**1–2 years £'000**	**2–5 years £'000**
Trade payables	**19,544**	**19,544**	**–**	**–**
Other payables	**33,972**	**33,972**	**–**	**–**
Forward exchange contracts	**56,732**	**25,261**	**22,114**	**9,357**
	110,248	**78,777**	**22,114**	**9,357**

Year ended 30th June 2016	Carrying amount £'000	Up to 1 year £'000	1–2 years £'000	2–5 years £'000
Trade payables	22,379	22,379	–	–
Overdraft	9,975	9,975	–	–
Other payables	18,345	18,345	–	–
Forward exchange contracts	70,639	19,987	22,801	27,851
	121,338	70,686	22,801	27,851

The maturities of non-current other receivables at the year end were:

	2017 £'000	2016 £'000
Receivable between 1 and 2 years	**907**	76
Receivable between 2 and 5 years	**6,062**	–
	6,969	76

Market risk

As noted in the Strategic report under Principal risks and uncertainties, the Group operates in a number of foreign currencies with the majority of sales being made in these currencies, but with most manufacturing being undertaken in the UK, Ireland and India.

Exchange rates and sensitivity analysis

The Group has hedged a significant proportion of its forecasted US Dollar, Euro and Japanese Yen revenues and hence the impact on the Group's results resulting from fluctuations in these exchange rates against Sterling is lessened.

20. Financial instruments (continued)

The following are the exchange rates which have been applicable during the financial year.

Currency	2017 Year end exchange rate	2017 Average exchange rate	2016 Year end exchange rate	2016 Average exchange rate
US Dollar	**1.30**	**1.27**	1.34	1.47
Euro	**1.14**	**1.16**	1.20	1.33
Japanese Yen	**146**	**139**	137	171
Average US Dollar forward contract rates		**1.50**		1.58
Average Euro forward contract rates		**1.16**		1.23
Average Japanese Yen forward contract rates		**151**		125

The Company has US Dollar, Japanese Yen and Euro forward contracts which mature after the balance sheet date. The fair value of these contracts at the year end resulted in a loss carried forward of £43,040,000 (2016: loss £56,460,000).

The nominal amounts of foreign currencies relating to these forward contracts are, in Sterling terms:

	2017 £'000	2016 £'000
US Dollar	**394,858**	354,416
Euro	**136,903**	132,013
Japanese Yen	**89,782**	81,581

The Group classifies these forward contracts as cash flow hedges and states them at fair value. The forward contracts cover monthly revenues over the next three and a half years. Further details are noted in the treasury policies in the Financial review section of the Strategic report.

For the Group's foreign currency denominated monetary assets and liabilities at the balance sheet date, if Sterling appreciated by 5% against the US Dollar, Euro and Japanese Yen, this would increase profit before taxation and other equity by the following amounts:

	Profit £'000	Other equity £'000
US Dollar	5,415	5,646
Euro	3,181	948
Japanese Yen	494	1,809

Net assets and associated borrowings

The Group maintains foreign currency borrowings as a method of providing hedging against the currency translation risk of the net assets of its overseas subsidiaries. The level of hedging in place at the year end for the major currencies and their relative base borrowing interest rates, were:

Currency	Net assets of subsidiary £'000	Currency borrowing £'000	Base borrowing interest rate %
US Dollar	74,532	49,975	0%
Euro	59,323	42,880	0%
Japanese Yen	24,042	19,998	1.25%

The currency borrowings are short-term, with floating interest rates. For the net assets of the overseas subsidiaries not hedged, a 5% change in exchange rates will affect reserves by approximately £6,100,000.

Capital management

The Group defines capital as being the equity attributable to the owners of the Company, which is captioned on the Consolidated balance sheet. The Board's policy is to maintain a strong capital base and to maintain a balance between significant returns to shareholders, with a progressive dividend policy, whilst ensuring the security of the Group supported by a sound capital position. The Group may adjust dividend payments due to changes in economic and market conditions which affect, or are anticipated to affect, group results.

Notes continued

21. Operating leases

The total of future minimum lease payments under non-cancellable operating leases (all of which relate to land and buildings in subsidiaries) were:

	2017 £'000	2016 £'000
Due in less than one year	**3,375**	3,165
Due between one and five years	**4,994**	6,239
Total future minimum lease payments	**8,369**	9,404

Lease payments recognised as an expense during the year were:

	2017 £'000	2016 £'000
Total lease payments for the financial year	**3,456**	2,651

22. Capital commitments

Capital commitments at the end of the year, for which no provision has been made in the financial statements, were:

	2017 £'000	2016 £'000
Authorised and committed	**6,812**	17,783

23. Related parties

Associates, joint ventures and other related parties had the following transactions and balances with the Group:

	2017 £'000	2016 £'000
Purchased goods and services from the Group during the year	**852**	640
Sold goods and services to the Group during the year	**12,450**	8,573
Paid dividends to the Group during the year	**310**	310
Amounts owed to the Group at the year end	**220**	264
Amounts owed by the Group at the year end	**294**	411
Loans owed to the Group at the year end	**4,966**	4,366

There were no bad debts written off during the year (2016: £nil).

24. Alternative performance measures

Alternative performance measures are - Revenue at constant exchange rates, Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit.

Revenue at constant exchange rates is defined as revenue recalculated using the same rates as were applicable to the previous year and excluding forward contract gains and losses.

Revenue at constant exchange rates	2017 £'000	2016 £'000
Statutory revenue as reported	**536,807**	427,224
Adjustment for exchange rate movements and forward contract gains and losses	**(51,978)**	(2,614)
Revenue at constant exchange rates	**484,829**	424,610

Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit - These measures are defined as the profit before tax, earnings per share and operating profit after excluding gains and losses in fair value from the forward currency contracts which did not qualify for hedge accounting.

The losses from fair value of financial instruments not effective for cash flow hedging have been excluded from statutory profit before tax, statutory earnings per share and statutory operating profit in arriving at adjusted profit before tax, adjusted earnings per share and adjusted operating profit to reflect the Board's intent that the instruments would provide effective hedges.

The Board consider these alternative performance measures to be more relevant and reliable in evaluating the Group's performance.

24. Alternative performance measures (continued)

The amounts shown below as reported in revenue represent the amount by which revenue would change had all the derivatives qualified as eligible for hedge accounting.

Adjusted profit before tax:	**2017 £'000**	2016 £'000
Statutory profit before tax	**117,101**	61,703
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**(11,623)**	2,336
- reported in losses from the fair value of financial instruments	**3,601**	23,436
Adjusted profit before tax	**109,079**	87,475

Adjusted earnings per share:	**2017 pence**	2016 pence
Statutory earnings per share	**141.3**	71.8
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**(12.9)**	2.6
- reported in losses from the fair value of financial instruments	**4.0**	26.0
Adjusted earnings per share	**132.4**	100.4

Adjusted operating profit:	**2017 £'000**	2016 £'000
Statutory operating profit	**116,755**	61,180
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**(11,623)**	2,336
- reported in losses from the fair value of financial instruments	**3,601**	23,436
Adjusted operating profit	**108,733**	86,952

Adjustments to the segmental operating profit:

Metrology	**2017 £'000**	2016 £'000
Operating profit before loss from fair value of financial instruments	**126,830**	87,717
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**(10,921)**	2,293
Adjusted metrology operating profit	**115,909**	90,010

Healthcare	**2017 £'000**	2016 £'000
Operating loss before loss from fair value of financial instruments	**(6,474)**	(3,101)
Fair value gains and losses on financial instruments not eligible for hedge accounting:		
- reported in revenue	**(702)**	43
Adjusted healthcare operating loss	**(7,176)**	(3,058)

25. Restatement of previous year

The previous year's results have been restated for the following:

Certain foreign currency forward contracts used as hedging instruments did not qualify for hedge accounting as they did not meet the hedge effectiveness criteria set out in the International Accounting Standard IAS39 'Financial Instruments: Recognition and Measurement. To ensure technical compliance with this standard it has been deemed necessary to restate the 2016 financial statements resulting in a £25.8m reduction to the profit before tax for that year and a corresponding increase in other comprehensive income.

In October 2016, the Board decided to discontinue operations at Renishaw Diagnostics Limited (RDL), resulting in the closure of the business. The RDL business has been accounted for as a discontinued activity, with comparative figures for the previous year being restated accordingly. In June 2017, after an extensive review of the spatial measurements business, the Board decided to discontinue this line of business. This business has also been accounted for as a discontinued activity, with comparative figures for the previous year being restated accordingly.

The R&D tax credit, previously accounted for within the Income tax expense line has been reclassified to be part of cost of sales, thereby showing it as part of the profit before tax.

Notes continued

25. Restatement of previous year (continued)

The previous year has been restated for the following:

Consolidated income statement	Previously reported £'000	Discontinued activities £'000	R&D tax credit £'000	Forward contracts £'000	Restated total £'000
Revenue	436,598	(7,038)	–	(2,336)	427,224
Cost of sales	(218,308)	7,323	2,420	–	(208,565)
Gross profit	218,290	285	2,420	(2,336)	218,659
Distribution costs	(97,808)	3,965	–	–	(93,843)
Administration costs	(40,969)	769	–	–	(40,200)
Loss from the fair value of financial instruments	–	–	–	(23,436)	(23,436)
Operating profit	79,513	5,019	2,420	(25,772)	61,180
Finance income and expenses	(928)	–	–	–	(928)
Share of profits of associates and joint ventures	1,451	–	–	–	1,451
Profit before tax	80,036	5,019	2,420	(25,772)	61,703
Income tax expense	(11,465)	(995)	(2,420)	4,897	(9,983)
Profit for the year from continuing operations	68,571	4,024	–	(20,875)	51,720
Loss for the year from continuing operations	–	(4,024)	–	–	(4,024)
Profit for the year	68,571	–	–	(20,875)	47,696
Earnings per share on continuing activities (pence)	94.9	5.6	–	(28.7)	71.8

Consolidated statement of comprehensive income and expense - restated lines					
Profit for the year	68,571	–	–	(20,875)	47,696
Effective portion of changes in fair value of cash flow hedges	(65,396)	–	–	25,772	(91,168)
Tax on effective portion of changes in fair value of cash flow hedges	12,640	–	–	(4,897)	17,537

There are no changes to the total comprehensive income and expense.

Consolidated statement of cash flow - restated lines					
Profit for the year	68,571	–	–	(20,875)	47,696
Losses in the fair value of financial instruments	–	–	–	25,772	25,772
Tax expense	11,465	–	2,420	(4,897)	8,988
Income taxes paid	(19,463)	–	(2,420)	–	(21,883)

There are no changes to the total cash flow.

Balance sheet The changes to reserves were:	Currency hedging reserve £'000	Retained earnings £'000
Balance at 1st July 2015 as reported	17,171	402,559
Restatement of opening cash flow hedging reserve (a)	(2,386)	2,386
Profit for the year as reported	–	69,095
Remeasurement of defined benefit pension liability as reported	–	(17,388)
Changes in the fair value of financial instruments as reported	(73,631)	–
Adjustment to the fair value of financial instruments (b)	20,875	(20,875)
Dividends paid as reported	–	(33,847)
Restated balance at 30th June 2016	(37,971)	401,930
Balance at 30th June 2016 as reported	(56,460)	420,419
Adjustments (a) and (b) above	18,489	(18,489)
Restated balances at 30th June 2016	(37,971)	401,930

Company balance sheet

at 30th June 2017

	notes	2017 £'000	Restated* 2016 £'000
Assets			
Property, plant and equipment	C.27	**136,082**	137,677
Intangible assets	C.28	**39,487**	46,786
Investments in subsidiaries	C.29	**294,357**	304,353
Investments in associates and joint ventures	C.30	**1,468**	1,468
Long-term loans to associates and joint ventures		**3,080**	–
Deferred tax assets	C.31	**20,905**	25,102
Derivatives	13	**3,546**	76
Total non-current assets		**498,925**	515,462
Current assets			
Inventories	C.32	**51,706**	60,051
Trade receivables	C.33	**171,395**	146,994
Current tax		**1,817**	–
Other receivables		**6,091**	8,053
Derivatives	13	–	859
Pension scheme cash escrow account	14	**12,850**	15,279
Cash and cash equivalents		**23,273**	1,921
Total current assets		**267,132**	233,157
Current liabilities			
Trade payables		**11,963**	16,955
Overdraft		–	10,735
Current tax		–	762
Provisions	C.34	**2,390**	1,787
Derivatives	13	**25,261**	19,987
Other payables	C.35	**137,003**	81,402
Total current liabilities		**176,617**	131,628
Net current assets		**90,515**	101,529
Non-current liabilities			
Employee benefits	C.36	**62,861**	62,121
Deferred tax liabilities	C.31	**12,109**	12,051
Derivatives	13	**31,471**	50,652
Total non-current liabilities		**106,441**	124,824
Total assets less total liabilities		**482,999**	492,167
Equity			
Share capital	C.37	**14,558**	14,558
Share premium		**42**	42
Cash flow hedging reserve	19	**(31,049)**	(37,971)
Retained earnings		**499,448**	515,538
Total equity		**482,999**	492,167

*Certain amounts shown here do not correspond to the 2016 financial statements and reflect adjustments detailed in notes C.26 and C.40.

The Company reported a profit for the financial year ended 30th June 2017 of £22,165,000 (2016: loss £12,259,000).

These financial statements were approved by the Board of directors on 27th July 2017 and were signed on its behalf by:

Sir David McMurtry **A C G Roberts**
Directors

Company statement of changes in equity

for the year ended 30th June 2017

Year ended 30th June 2016 (Restated)	Share capital £'000	Share premium £'000	Cash flow hedging reserve £'000	Retained earnings £'000	Total £'000
Balance at 1st July 2015 as reported	14,558	42	17,171	573,212	604,983
Restatement	–	–	(2,386)	2,386	–
Balance at 1st July 2015 restated	14,558	42	14,785	575,598	604,983
Loss for the year	–	–	–	(12,259)	(12,259)
Other comprehensive income and expense (net of tax)					
Remeasurement of defined benefit pension scheme liabilities	–	–	–	(13,954)	(13,954)
Changes in fair value of cash flow hedges	–	–	(52,756)	–	(52,756)
Total other comprehensive income and expense	–	–	(52,756)	(13,954)	(66,710)
Total comprehensive income and expense	–	–	(52,756)	(26,213)	(78,969)
Dividends paid	–	–	–	(33,847)	(33,847)
Balance at 30th June 2016	14,558	42	(37,971)	515,538	492,167
Year ended 30th June 2017					
Profit for the year	–	–	–	22,165	22,165
Other comprehensive income and expense (net of tax)					
Remeasurement of defined benefit pension scheme liabilities	–	–	–	(3,316)	(3,316)
Changes in fair value of cash flow hedges	–	–	6,922	–	6,922
Total other comprehensive income and expense	–	–	6,922	(3,316)	3,606
Total comprehensive income and expense	–	–	6,922	18,849	25,771
Dividends paid				(34,939)	(34,939)
Balance at 30th June 2017	**14,558**	**42**	**(31,049)**	**499,448**	**482,999**

Notes to the Company financial statements

C.26. Accounting policies

The following accounting policies have been applied consistently in dealing with items which are considered material in relation to the financial statements of the Company.

Basis of preparation

The financial statements were prepared in accordance with Financial Reporting Standard 101 'Reduced Disclosure Framework' (FRS 101). In preparing these financial statements, the Company applies the recognition, measurement and disclosure requirements of International Financial Reporting Standards as adopted by the EU (adopted IFRS), but makes amendments where necessary in order to comply with the Companies Act 2006.

The Company has applied the exemptions available under FRS 101 in respect of the following disclosures:

– A cash flow statement and related notes.

– Comparative period reconciliations for share capital, tangible fixed assets and intangible fixed assets.

– Disclosures in respect of transactions with wholly-owned subsidiaries.

– Disclosures in respect of capital management.

– The effects of new but not yet effective IFRSs.

– Disclosures in respect of the compensation of key management personnel.

As the consolidated financial statements of the Company include the equivalent disclosures, the Company has also taken the exemptions under FRS 101 available in respect of certain disclosures required by IFRS 13 'Fair value measurement' and the disclosures required by IFRS 7 'Financial instruments disclosures'.

The Company identified a number of prior year adjustments during the year, resulting in a restatement of the comparative year in the 2017 financial statements, as detailed in note C.40.

The financial statements have been prepared on the historical cost basis, except for the revaluation of financial instruments. Historical cost is based on the fair value of the consideration given in exchange for the assets. The principal accounting policies are set out below.

Under section 408 of the Companies Act 2006 the Company is exempt from the requirement to present its own profit and loss account.

Investments

Investments in subsidiary and associated undertakings are stated at cost less any provision for permanent impairment losses.

Property, plant and equipment, and depreciation

Property, plant and equipment assets are stated at cost less accumulated depreciation. Depreciation is provided to write off the cost of assets less their estimated residual value on a straight-line basis over their estimated useful economic lives as follows:

Freehold buildings – 50 years
Plant and equipment – 3 to 25 years
Motor vehicles – 3 to 4 years
No depreciation is provided on freehold land.

Inventories

Inventories are valued at the lower of cost and net realisable value. Cost comprises direct materials and labour plus overheads applicable to the stage of manufacture reached.

Research and development

Expenditure on research activities is recognised in the income statement as an expense as incurred. Expenditure on development activities is capitalised if the product or process is technically and commercially feasible and the Company intends and has the technical ability and sufficient resources to complete development, future economic benefits are probable and the Company can measure reliably the expenditure attributable to the intangible asset during its development.

Notes to the Company financial statements continued

C.26. Accounting policies (continued)

Taxation

The charge for taxation is based on the Company's profit for the year. Deferred tax is provided on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes.

Deferred tax assets are recognised to the extent that it is regarded as probable that they will be recovered.

Employee benefits

The Company operated a contributory pension scheme, of the defined benefit type up to 5th April 2007, after which this scheme was closed for future accruals to existing members and was closed to new members. Since 5th April 2007, the Company has operated a defined contribution scheme.

The scheme is administered by trustees who are independent of the Company finances.

Pension scheme assets in the defined benefit scheme are measured using market value. Pension scheme liabilities are measured using a projected unit method and discounted at the current rate of return on a high-quality corporate bond of equivalent term and currency to the liability. The expected return on the scheme's assets and the interest on the scheme's liabilities arising from the passage of time are included in other finance income.

The pension scheme's surplus, to the extent that it is considered recoverable, or deficit is recognised in full and presented on the face of the balance sheet.

Accruals are made for holiday pay, based on a calculation of the number of days' holiday earned during the year, but not yet taken and also for the annual performance bonus.

Warranty on the sale of products

The Company provides a warranty from the date of purchase, except for those products that are installed by the Company where the warranty starts from the date of completion of the installation. This is typically for a 12-month period, although up to three years is given for a small number of products. A warranty provision is included in the accounts, which is calculated on the basis of historical returns and internal quality reports.

Derivative financial instruments

In accordance with its treasury policy, the Company does not hold or issue derivative financial instruments for trading purposes.

The Company uses forward exchange contracts to hedge its exposure to foreign exchange risk arising from operational and financing activities. Forward exchange contracts are recognised initially at cost and then subsequently remeasured at fair value. Where a forward contract is designated as a hedge of the variability in future cash inflows, the effective part of any gain or loss on the forward contract is recognised directly in equity. Any effective cumulative gain or loss is removed from equity and recognised in the income statement at the same time as the hedged transaction. The ineffective part of any gain or loss is recognised in the income statement immediately.

Foreign currencies

Transactions in foreign currencies are translated at the rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated into Sterling at the foreign exchange rate ruling at that date. Foreign exchange differences arising on such translation are recognised in the income statement.

Going concern

The Company's business activities, together with the factors likely to affect its future development, performance and position are set out in the Strategic report, where also given are details of the financial and liquidity positions. In addition, note 20 in the financial statements includes the Company's objectives and policies for managing its capital, details of its financial instruments and hedging activities and its exposures to credit risk and liquidity risk.

The Company has considerable financial resources at its disposal and the directors have considered the current financial projections. As a consequence, the directors believe that the Company is well placed to manage its business risks successfully.

After making enquiries, the directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for a period of at least 12 months from the date of approval of the financial statements. Accordingly, they continue to adopt the going concern basis in preparing the Annual report and accounts.

C.27. Property, plant and equipment

Year ended 30th June 2017	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1st July 2016	**82,177**	**148,679**	**4,432**	**6,346**	**241,634**
Additions	**107**	**7,256**	**546**	**6,055**	**13,964**
Transfers	**4,622**	**5,524**	**–**	**(10,146)**	**–**
Disposals	**–**	**(1,321)**	**(429)**	**–**	**(1,750)**
At 30th June 2017	**86,906**	**160,138**	**4,549**	**2,255**	**253,848**
Depreciation					
At 1st July 2016	**13,722**	**87,482**	**2,753**	**–**	**103,957**
Charge for the year	**1,520**	**13,099**	**693**	**–**	**15,312**
Released on disposals	**-**	**(1,086)**	**(417)**	**–**	**(1,503)**
At 30th June 2017	**15,242**	**99,495**	**3,029**	**–**	**117,766**
Net book value					
At 30th June 2017	**71,664**	**60,643**	**1,520**	**2,255**	**136,082**
At 30th June 2016	68,455	61,197	1,679	6,346	137,677

At 30th June 2017, properties with a net book value of £66,606,000 (2016: £66,485,000) were subject to a fixed charge to secure the UK defined benefit pension scheme liabilities. See note 14 for additional information.

Additions to assets in the course of construction comprise:

	2017 £'000	2016 £'000
Freehold land and buildings	**2,117**	4,398
Plant and equipment	**3,938**	10,305
	6,055	14,703

C.28. Intangible assets

Year ended 30th June 2017	Goodwill £'000	Internally generated development costs £'000	Software licences and intellectual property £'000	Total £'000
Cost				
At 1st July 2016	**9,305**	**101,463**	**16,920**	**127,688**
Additions	–	**15,886**	**743**	**16,629**
At 30th June 2017	**9,305**	**117,349**	**17,663**	**144,317**
Depreciation				
At 1st July 2016	–	**67,682**	**13,220**	**80,902**
Charge for the year	**9,305**	**13,645**	**978**	**23,928**
At 30th June 2017	**9,305**	**81,327**	**14,198**	**104,830**
Net book value				
At 30th June 2017	–	**36,022**	**3,465**	**39,487**
At 30th June 2016	9,305	33,781	3,700	46,786

Notes to the Company financial statements continued

C.29. Investments in subsidiaries

	2017 £'000	Restated 2016 £'000
Balance at the beginning of the year	**304,353**	305,282
Impairment	**(9,996)**	(929)
Balance at the end of the year	**294,357**	304,353

Details of the Company's subsidiaries are given in note C.41.

C.30. Investments in associates and joint ventures

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**1,468**	1,184
Additions	**–**	284
Balance at the end of the year	**1,468**	1,468

Details of the Company's associates are given in note C.42.

C.31. Deferred tax

Balances at the end of the year were:

	2017			2016		
	Assets £'000	Liabilities £'000	Net £'000	Assets £'000	Liabilities £'000	Net £'000
Property, plant and equipment	**-**	**(8,186)**	**(8,186)**	–	(5,633)	(5,633)
Intangible assets	**-**	**(3,923)**	**(3,923)**	–	(6,418)	(6,418)
Pension scheme	**10,686**	**-**	**10,686**	11,803	–	11,803
Derivatives	**10,219**	**-**	**10,219**	13,299	–	13,299
Balance at the end of the year	**20,905**	**(12,109)**	**8,796**	25,102	(12,051)	13,051

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**13,051**	(5,839)
Movements during the year	**(4,255)**	18,890
Balance at the end of the year	**8,796**	13,051

C.32. Inventory

An analysis of inventory at the end of the year was:

	2017 £'000	2016 £'000
Raw materials	**21,750**	24,079
Work in progress	**18,672**	21,801
Finished goods	**11,284**	14,171
Balance at the end of the year	**51,706**	60,051

C.33. Trade receivables

An analysis of trade receivables at the end of the year was:

	2017 £'000	2016 £'000
Trade receivables	**14,186**	10,959
Amounts owed by group undertakings	**155,103**	131,405
Amounts owed by associated undertakings	**2,106**	4,630
Balance at the end of the year	**171,395**	146,994

C.34. Provisions

Provisions comprised:

	2017 £'000	2016 £'000
Warranty provision	**2,390**	1,787

Movements during the year were:

	2017 £'000	2016 £'000
Balance at the beginning of the year	**1,787**	1,294
Created in the year	**2,180**	1,338
Utilised in the year	**(1,577)**	(845)
	603	493
Balance at the end of the year	**2,390**	1,787

The warranty provision has been calculated on the basis of historical return-in-warranty information and other quality reports. It is expected that most of this expenditure will be incurred in the next financial year and all expenditure will be incurred within three years of the balance sheet date.

C.35. Other payables

An analysis of other payables due within one year at the end of the year was:

	2017 £'000	2016 £'000
Amounts owed to group undertakings	**118,934**	77,621
Amounts owed to associated undertakings	**92**	209
Other taxes and social security	**3,020**	2,736
Other creditors	**14,957**	836
Balance at the end of the year	**137,003**	81,402

C.36. Employee benefits

The Company operated a defined benefit pension scheme, which, in April 2007, ceased any future accrual for current members and was closed to new members. Employees of the Company are now covered by a defined contribution scheme. See note 14 regarding details of charges relating to the UK defined benefit pension scheme liabilities.

The total pension cost of the Company for the year was £13,644,000 (2016: £12,915,000), of which £165,000 (2016: £184,000) related to directors. The latest full actuarial valuation of the scheme was carried out at September 2015 and updated to 30th June 2017 by a qualified independent actuary.

The major assumptions used by the actuary for the scheme were:

	30th June 2017	30th June 2016	30th June 2015
Rate of increase in pension payments	**3.3%**	3.2%	3.4%
Discount rate	**2.7%**	3.2%	4.0%
Inflation rate (RPI)	**3.4%**	3.3%	3.6%
Inflation rate (CPI)	**2.4%**	2.3%	2.6%
Retirement age	**64**	64	64

The mortality assumption adopted for 2017 is S2PMA and S2PFA tables, CMI (core) 2016 model with long-term improvements of 1% per annum.

Notes to the Company financial statements continued

C.36. Employee benefits (continued)

The assets and liabilities in the scheme were:

	30th June 2017 £'000	% of total assets	30th June 2016 £'000	% of total assets	30th June 2015 £'000	% of total assets	30th June 2014 £'000	% of total assets	30th June 2013 £'000	% of total assets
Market value of assets:										
Equities	**150,193**	**100**	131,107	100	125,769	100	116,805	100	106,117	100
Bonds and cash	**129**	**–**	474	–	320	–	198	–	301	–
	150,322	**100**	131,581	100	126,089	100	117,003	100	106,418	100
Actuarial value of liabilities	**(213,183)**	**–**	(193,702)	–	(171,949)	–	(154,279)	–	(132,685)	–
Deficit in the scheme	**(62,861)**	**–**	(62,121)	–	(45,860)	–	(37,276)	–	(26,267)	–
Deferred tax thereon	**10,686**	**–**	11,803	–	9,172	–	7,455	–	6,041	–

The movements in the scheme were:

Year ended 30th June 2017	Assets £'000	Liabilities £'000	Total £'000
Deficit in scheme at the beginning of the year	**131,581**	**(193,702)**	**(62,121)**
Contributions	**3,261**	**–**	**3,261**
Interest on pension scheme	**4,163**	**(5,606)**	**(1,443)**
Remeasurement gain/(loss)	**17,557**	**(20,115)**	**(2,558)**
Benefits paid	**(6,240)**	**6,240**	**–**
Deficit in scheme at the end of the year	**150,322**	**(213,183)**	**(62,861)**

Year ended 30th June 2016	Assets £'000	Liabilities £'000	Total £'000
Deficit in scheme at the beginning of the year	126,089	(171,949)	(45,860)
Contributions	1,796	–	1,796
Interest on pension scheme	5,030	(6,421)	(1,391)
Remeasurement gain/(loss)	1,137	(17,803)	(16,666)
Benefits paid	(2,471)	2,471	–
Deficit in scheme at the end of the year	131,581	(193,702)	(62,121)

All equities have quoted prices in active markets in the UK, North America, Europe, Asia-Pacific, Japan and emerging markets.

The weighted average duration of the defined benefit scheme obligation is around 24 years.

The analysis of the amount recognised in the statement of comprehensive income and expense was:

	2017 £'000	2016 £'000
Actuarial (loss)/gain arising from:		
– Changes in demographic assumptions	**1,579**	1,411
– Changes in financial assumptions	**(25,021)**	(20,623)
– Experience adjustment	**4,127**	6,609
Return on plan assets excluding interest income	**17,557**	1,137
Adjustment to liabilities for IFRIC 14	**(800)**	(5,200)
Total recognised in the statement of comprehensive income and expense	**(2,558)**	(16,666)

C.37. Share capital

	2017 £'000	2016 £'000
Allotted, called-up and fully paid 72,788,543 ordinary shares of 20p each	**14,558**	14,558

The ordinary shares are the only class of share in the Company. Holders of ordinary shares are entitled to vote at general meetings of the Company and receive dividends as declared. The Articles of Association of the Company do not contain any restrictions on the transfer of shares nor on voting rights.

C.38. Related parties

During the year, related parties, these being Renishaw Diagnostics Limited and the Group's associates and joint ventures (see note 11), had the following transactions and balances with the Company:

	2017 £'000	2016 £'000
Purchased goods and services from the Company during the year	**852**	1,049
Sold goods and services to the Company during the year	**2,958**	3,963
Paid dividends to the Company during the year	**160**	160
Amounts owed to the Company at the year end	**220**	264
Amounts owed by the Company at the year end	**92**	689
Loans owed to the Company at the year end	**4,966**	16,932

All transactions were on an arm's length basis. There were no bad debts written off during the year (2016: £nil).

C.39. Capital commitments

Capital commitments at the end of the year, for which no provision has been made in the financial statements, were:

	2017 £'000	2016 £'000
Authorised and committed	**1,129**	1,620

C.40. Restatement of previous year

The previous year's results have been restated for the following:

(a) Certain foreign currency forward contracts used as hedging instruments did not qualify for hedge accounting. To ensure technical compliance with IAS 39 - 'Financial Instruments: Recognition and Measurement' it has been deemed necessary to restate the 2016 financial statements resulting in a £25.8m reduction to the profit before tax for that year and a corresponding increase in other comprehensive income.

The changes to reserves were:

	Currency hedging reserve £'000	Retained reserves £'000
Balance at 1st July 2015 as reported	17,171	573,212
Restatement of opening cash flow hedging reserve	(2,386)	2,386
Profit for the year as reported in 2016	–	8,616
Adjustments to the fair value of financial instruments	20,875	(20,875)
Changes in fair value of financial instruments as reported in 2016	(73,631)	–
Remeasurement of defined benefit pension liability as reported in 2016	–	(13,954)
Dividends paid as reported in 2016	–	(33,847)
Restated balance at 30th June 2016	(37,971)	515,538

(b) The opening balance at 1st July 2015 for investments in subsidiaries has been decreased by £4.7m to correct an investment in a subsidiary which should have been an investment in that subsidiary by Renishaw International Limited instead of Renishaw plc. The corresponding adjustment is to intercompany creditors within other payables. The opening balance has also decreased by £9.3m reflecting goodwill on a hive up of the spatial measurement business of Measurement Devices Limited that was not recognised at the point of hive up in 2013. There is no effect on reserves.

Notes to the Company financial statements continued

C.41. Subsidiary undertakings

The following are the subsidiary undertakings of Renishaw plc as at 30th June 2017, all of which are wholly-owned and held by a subsidiary undertaking, unless otherwise stated. The country in which each subsidiary has its registered/principal office is its domicile and country of incorporation. The accounting year end for each subsidiary undertaking is 30th June unless otherwise stated.
The shareholdings in all the subsidiary undertakings are in the ordinary share capital of those undertakings. The principal activities for all the subsidiary undertakings are those of the Company, as set out in the Other statutory and regulatory disclosures on page 94, except as indicated below:

[D] Dormant company
[H] Holding company
[T] Travel agency
* 31st March year-end
^ 31st December year-end
† Ordinary-A shares
‡ Ordinary-C shares

Company	Registered Office
Owned by Renishaw plc	
MTT Investments Limited[H]	New Mills, Wotton-under-Edge, Gloucestershire, GL12 8JR United Kingdom
Renishaw Advanced Materials Limited[D]	
Renishaw International Limited[H]	
Renishaw Neuro Solutions Limited[D]	
Renishaw PT Limited[D]	
Renishaw Software Limited	
Renishaw Transducer Systems Limited[D]	
Renishaw UK Sales Limited	
Wotton Travel Limited[T]	
Measurement Devices Limited[D]	Renishaw plc Research Park North, Riccarton, Edinburgh, Scotland, EH14 4AP United Kingdom
Renishaw Diagnostics Limited[†‡] (92.4%)	
Renishaw Tehnicni Inženiring d.o.o.	4th Floor, Faculty of Electrical Engineering, University of Ljubljana, Tržaška cesta 25, Ljubljana, 1000 Slovenia
Owned by Measurement Devices Limited	
Thomas Engineering and Construction Limited[^D]	5612 Hope Drive, Ottawa, Ontario, K4M 1J2 Canada
Owned by MTT Investments Limited	
MTT Technologies Limited[D]	New Mills, Wotton-under-Edge, Gloucestershire, GL12 8JR United Kingdom
Owned by MTT Technologies Limited	
MTT Technologies srl[D]	Piazza Virgilio, 4, 20123 Milano Italy
MTT Technologies, Inc.[D]	Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware, 19808 United States

C.41. Subsidiary undertakings (continued)

Company	Registered Office
Owned by Renishaw International Limited	
itp GmbH	Rathausstraße 75-79, 66333, Völklingen Germany
OOO Renishaw^	Kantemirovskaya ul., 58, Moskva, 115477 Russia
Renishaw (Austria) GmbH	Industriestraße 9, Top 4.5, 2353, Guntramsdorf Austria
Renishaw (Canada) Limited	2196 Dunwin Drive, Mississauga, Ontario, L5L 1C7 Canada
Renishaw (Hong Kong) Limited	Ever Gain Plaza Tower 2, 28/F, 88 Container Port Road, Kwai Chung Hong Kong
Renishaw (Ireland) Designated Activity Company	Swords Business Park, Mountgorry, Swords, County Dublin, K67 FX67 Ireland
Renishaw (Israel) Limited	HaTnufa Street 3, Kraytek Building, PO Box 4, Yokne'am Illit, 2069204 Israel
Renishaw (Korea) Limited	RM#1314, Woolim e-Biz Center, 28 Digital-ro 33-gil, Guro-gu, Seoul, South Korea
Renishaw AB	Biskop Henriks väg 2, 176 76, Järfälla Sweden
Renishaw AG	Stachelhofstrasse 2, 8854, Siebnen, Schübelbach Switzerland
Renishaw ApS	Lyskær 3CD, Lyskær 3, 2730, Herlev Denmark
Renishaw Benelux BV	Nikkelstraat 3, 4823 AE, Breda Netherlands
Renishaw GmbH	Karl-Benz Straße 12, 72124, Pliezhausen Germany
Renishaw Healthcare, Inc.	1001 Wesemann Drive, West Dundee, Illinois, 60118 United States
Renishaw Hungary Kft	Gyár utca 2, Budaörs, 2040 Hungary
Renishaw Ibérica S.A.U.	Gavà Park, Carrer de la Recerca, 7, Gavà, 08850, Barcelona Spain
Renishaw KK	4 Chome-29-8 Yotsuya, Shinjuku-ku, Tokyo, 160-0004 Japan
Renishaw Latino Americana Ltda.^	Calçada dos Cravos, 141, Alphaville Comercial, Barueri, São Paulo, 06453-053 Brazil
Renishaw Metrology Systems Limited*	S.No.283, Hissa no.2, S.No.284, Hissa no.2 & 3A, Raisoni Industrial Estate,Village Mann, Taluka Mulshi, Pune, 411057 India
Renishaw México, S. de R.L. de C.V.	Pedro Ramírez Vázquez 200-2, Parque Corporativo Ucaly, San Pedro Garza García, Nuevo León, 66269 Mexico

Notes to the Company financial statements continued

C.41. Subsidiary undertakings (continued)

Company	Registered Office
Renishaw Oceania Pty Limited	KPMG, Tower Two, Collins Square, 727 Collins Street, Docklands VIC 3008 Australia
Renishaw Oy	WaBuCo Oy, Energiakuja 3, Helsinki, 00180 Finland
Renishaw R&R, Inc.[H]	Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware, 19801 United States
Renishaw S.A.S.	15 Rue Albert Einstein, 77420, Champs-sur-Marne France
Renishaw S.p.A.	Via dei Prati 5, 10044 Pianezza, Torino Italy
Renishaw s.r.o.	Olomoucká 1164/85, Brno-Černovice, Brno, 627 00 Czech Republic
Renishaw Sp. z.o.o.	ul. Osmańska 12, 02-823, Warszawa Poland
Renishaw Teknoloji Çözümleri LŞ	Sedef Caddesi 3 B, Ataşehir Atatürk Mahallesi, Ataşehir İstanbul, 34758 Turkey
Renishaw, Inc.	1001 Wesemann Drive, West Dundee, Illinois, 60118 United States
Owned by Renishaw (Hong Kong) Limited	
Renishaw (Shanghai) Management Company Limited[^]	288 Jiang Chang San Lu, Zhabei Qu, Shanghai, 20436 China
Renishaw (Shanghai) Trading Company Limited[^]	286 Jiang Chang San Lu, Zhabei Qu, Shanghai, 20436 China
Renishaw (Singapore) Pte Limited	988 Toa Payoh North, #06-07/08, 319002 Singapore
Renishaw (Taiwan) Inc.	2F. No. 2, Jingke 7th Road, Nantun District, Taichung, 40852 Taiwan
Owned by Renishaw, Inc.	
Renishaw Advanced Consulting & Engineering, Inc.	1962 Star-Batt Drive, Rochester Hills, Michigan, 48309 United States
Owned by Renishaw R&R, Inc.	
R&R Fixtures, LLC[^]	1809 Industrial Drive, Grand Haven, Michigan, 49417 United States
Owned by Renishaw (Ireland) Designated Activity Company	
Renishaw Mayfield S.A.	Rue des Vignerons 1A, 1110, Morges Switzerland
Owned by Renishaw Mayfield S.A.	
Renishaw Mayfield SARL	31 Rue Ampère, 69680, Chassieu France

C.42. Associated undertakings

The following are the associated undertakings of Renishaw plc at 30th June 2017. The country in which each subsidiary has its registered/principal office is its domicile and country of incorporation. The accounting year end for each associate undertaking is 30th June unless otherwise stated. The shareholdings in all the associated undertakings are in the ordinary share capital of those undertakings unless otherwise stated. The principal activities for all the associate undertakings are those of the Company, as set out in the Other statutory and regulatory disclosures on page 94.

†Ordinary-A shares

Company	Registered Office
Owned by Renishaw plc	
HiETA Technologies Limited† (24.9%)	Bristol & Bath Science Park, Dirac Crescent, Emersons Green Bristol, BS16 7FR United Kingdom
Metrology Software Products Limited (50%)	6J Greensfield Court, Alnwick, Northumberland, NE66 2DE United Kingdom
Owned by Renishaw International Limited	
RLS Merilna tehnika d.o.o. (50%)	Poslovna cona Žeje pri Komendi, Pod vrbami 2, Komenda 1218 Slovenia

10 year financial record

Results	note 2017 £'000	2016 £'000	2015 £'000	note 2014 £'000	note 2013 £'000	2012 £'000	note 2011 £'000	note 2010 £'000	note 2009 £'000	note 2008 £'000
Overseas revenue	**509,212**	404,472	469,221	331,682	326,213	313,007	273,989	170,957	159,988	189,137
UK and Ireland revenue	**27,595**	22,752	25,499	23,816	20,668	18,885	14,761	10,650	11,259	12,020
Total revenue	**536,807**	427,224	494,720	355,498	346,881	331,892	288,750	181,607	171,247	201,157
Operating profit	**108,733**	86,952	143,924	70,388	79,071	83,188	79,286	28,095	5,991	37,335
Profit before tax	**109,079**	87,475	144,196	70,106	79,193	86,046	80,410	28,725	8,843	41,715
Taxation	**12,819**	14,880	22,850	10,720	15,046	17,008	16,345	5,745	2,105	8,309
Profit for the year	**96,260**	72,595	121,346	59,386	64,147	69,038	64,065	22,980	6,738	33,406

Capital employed	2017 £'000	2016 £'000	2015 £'000	2014 £'000	2013 £'000	2012 £'000	2011 £'000	2010 £'000	2009 £'000	2008 £'000
Share capital	**14,558**	14,558	14,558	14,558	14,558	14,558	14,558	14,558	14,558	14,558
Share premium	**42**	42	42	42	42	42	42	42	42	42
Reserves	**429,214**	366,785	413,918	336,163	262,119	227,799	187,118	144,021	129,162	151,725
Total equity	**443,814**	381,385	428,518	350,763	276,719	242,399	201,718	158,621	143,762	166,325

Statistics	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Overseas revenue as a percentage of total revenue	**94.9%**	94.7%	94.8%	93.3%	94.0%	94.3%	94.9%	94.1%	93.4%	94.0%
Adjusted earnings per share	**132.4p**	100.4p	167.5p	82.3p	88.9p	95.6p	88.5p	32.3p	9.6p	45.9p
Proposed dividend	**52.0p**	48.0p	46.5p	41.2p	40.0p	38.5p	35.0p	17.6p	7.76p	25.39p

Note

The results and adjusted earnings per share for the years 2008 to 2011, 2013, 2014, 2016 and 2017 exclude the exceptional items. These were: 2008 – pension curtailment credit (£1.3m); 2009 – redundancy costs (£4.1m); 2010 – impairment write-down (£1.7m); 2011 – reversal of impairment write-down (£1.7m); 2013 – gain on deferred consideration settlement (£2.9m); 2014 – profit on disposal of shareholding in Delcam plc (£26.3m); and 2016 (£25.8m pre tax loss) and 2017 (£8.0m pre tax gain) - gains and losses from financial instruments not effective for cash flow hedging. No years prior to 2016 have been adjusted for gains and/or losses from financial instruments not effective for cash flow hedging.

Shareholder information

Ordinary shares

The Company has one class of ordinary 20p shares listed on the London Stock Exchange under code RSW, ISIN number GB0007323586.

Registrars

For all enquiries about shareholders' holdings, transfer and registration of shares and changes of name and address, contact the Company's registrars, Equiniti Limited, or use www.shareview.co.uk:

Equiniti
Aspect House
Spencer Road
Lancing
West Sussex
BN99 6DA

Telephone: 0371 384 2030 (UK callers)
+44 121 415 7047 (international callers)

Website: www.shareview.co.uk

Calls are charged at the standard geographic rate. Calls outside the UK will be charged at the applicable international rate. Lines open 8:30am to 5:30pm (UK time), Monday to Friday (excluding English and Welsh public holidays).

AGM

The AGM is held at the Company's offices and is open for attendance by all shareholders. The 2017 AGM will be held on Friday 20th October 2017 at the Company's headquarters at New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR at 12 noon. The Notice of meeting is set out in a separate circular to shareholders. Shareholders holding shares in the Company through a nominee service should arrange to be appointed as a corporate representative or a proxy in respect of their shareholding in order to attend and vote at the meeting.

Financial reports

The Annual report and copies of previous financial reports are available at www.renishaw.com. The interim results and the preliminary announcement of the full year's results are published on our website promptly after they have been released through a Regulatory Information Service.

Financial calendar

Annual general meeting

20th October 2017

Half year

31st December 2017

Half year results

January 2018

Trading update

May 2018

Final dividend

Ex-div date 21st September 2017

Record date 22nd September 2017

Payment date 25th October 2017

Interim dividend (provisional)

Ex-div date 8th March 2018

Record date 9th March 2018

Payment date 9th April 2018

Shareholder information continued

Registration details and Company Secretary

Company secretary:
Norma Tang

Registered office:
New Mills
Wotton-under-Edge
Gloucestershire
GL12 8JR
Registered number: 1106260
England and Wales

Telephone: +44 (0)1453 524524
Facsimile: +44 (0)1453 524401
email:
companysecretary@renishaw.com

For the latest investor information and news, visit www.renishaw.com/investor

Auditor and corporate advisors

Auditor

Ernst & Young LLP

Solicitors

Norton Rose Fulbright LLP
Burges Salmon LLP

Stockbrokers

UBS

Principal bankers

Lloyds Bank plc

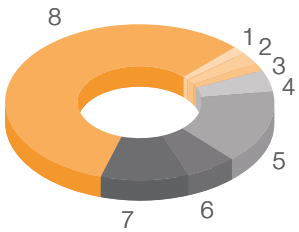
Share fraud

Renishaw has received reports that our shareholders have received unsolicited calls from overseas firms offering to purchase their shares for a price in excess of the current market price in order to mount a hostile takeover bid. Please be aware that this is likely to be a scam, with the intention of obtaining payment from shareholders of a bond or legal fee in order to secure the share transaction, which never materialises, or obtaining an option to purchase shares with no fixed transfer date. There are other types of share fraud or "boiler room scams" and therefore if you receive any unsolicited investment advice the Financial Conduct Authority (FCA) advises the following:

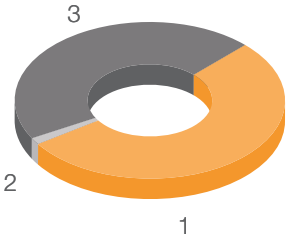
- make sure you get the correct name of the person and organisation and make a record of any other information they give;
- check that they are properly authorised by the FCA before getting involved by visiting www.fca.org.uk/register and contacting the firm using the details on the register;
- the FCA also maintains a list of unauthorised overseas firms who are targeting or have targeted UK investors and any approach from such firms should be reported to the FCA so that the information can be kept updated;
- report the matter to the FCA on their consumer helpline 0800 111 6768 or using the share fraud reporting form available at www.the-fca.org.uk/consumers/report-scam-unauthorised-firm; and
- you could also contact the police via the national fraud reporting centre Action Fraud on 0300 123 2040 or email@actionfraud.org.uk. Action Fraud will be particularly interested if you sent money to a bank account or other type of money transfer.

Shareholder profile

Shareholdings		%
1	1 – 5,000	1.7
2	5,001 – 25,000	2.5
3	25,001 – 50,000	1.8
4	50,001 – 100,000	4.4
5	100,001 – 500,000	15.3
6	500,001 – 1,000,000	6.2
7	1,000,001 – 3,000,000	10.5
8	more than 3,000,000	57.7



Shareholdings		%
1	Directors	53.1
2	Individuals	1.4
3	Institutions	45.5



Shareholder notes

Shareholder notes continued

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RENISHAW

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