

Renishaw plc – 2019 interim results

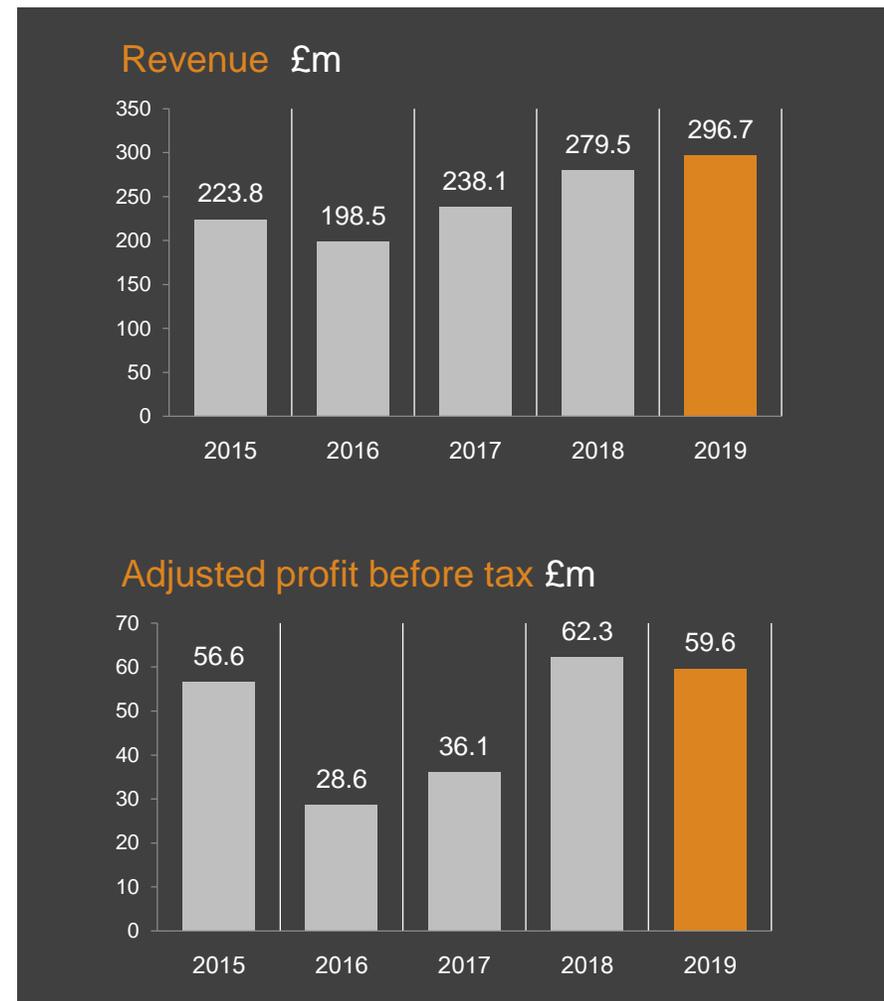
31st January 2019

Interim statement highlights

- Revenue of £296.7m (2018: £279.5m).
- Revenue growth of 6%; 4% at constant exchange rates.
- Metrology revenue increase of 5% – strong growth in additive manufacturing and measurement and automation product lines; slow down in demand for encoder products and from large end-user manufacturers of consumer electronic products.
- Healthcare revenue increase of 25% – strong growth in spectroscopy product line.
- Adjusted profit before tax of £59.6m (2018: £62.3m).
- Statutory profit before tax of £61.6m (2018: £66.2m).
- Strong balance sheet, with net cash of £100.5m at the end of the period (June 2018: £103.8m)
- Dividend of 14.0 pence per share (2018: 14.0p).

Financial highlights (continuing operations)

	2019 £m	2018 £m	Change %
Revenue	296.7	279.5	6
Adjusted profit before tax	59.6	62.3	-4
Statutory profit before tax	61.6	66.2	-7
Tax	(9.6)	(10.1)	5
Profit after tax	52.0	56.1	-7
Adjusted earnings per share (p)	69.3	72.7	-5
Statutory earnings per share (p)	71.5	77.0	-7
Dividend per share in respect of period (p)	14.0	14.0	



Group revenue analysis

Changes in geographic area

	Change at actual fx %	Change at constant fx %
Far East	1%	-1%
Europe	7%	7%
Americas	11%	9%
UK & Ireland	20%	20%
Total	6%	4%

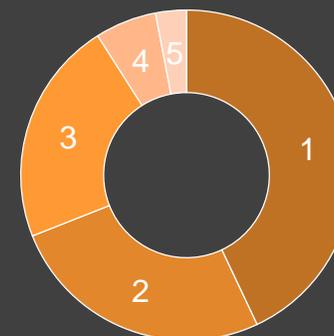
Revenue by major countries

	2019 £m	2018 £m
China	65.2	68.1
USA	55.0	49.9
Japan	33.2	28.8
Germany	31.5	29.0

Average exchange rates

	2019	2018
GBP : USD	1.29	1.33
GBP : EUR	1.12	1.12
GBP : JPY	145	149

Revenue by region £m



	2019 £m	2019 %	2018 £m
1 Far East	126.4	43	125.2
2 Continental Europe	76.8	26	71.8
3 Americas	65.4	22	58.8
4 UK	17.7	6	14.7
5 Other regions	10.4	3	9.0
Total	296.7	100	279.5

Business sector performance

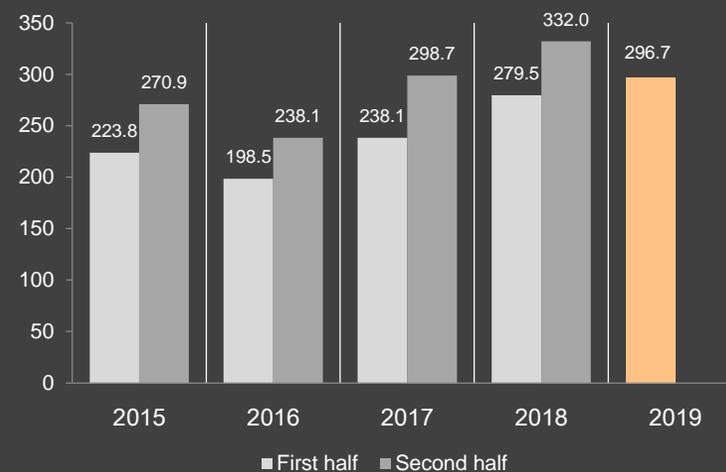
Revenue

	2019 £m	2018 £m	Change %
Metrology	277.7	264.3	5
Healthcare	19.0	15.2	25
Total	296.7	279.5	6

Adjusted operating profit

	2019 £m	2018 £m	Change %
Metrology	52.2	63.2	-18
Healthcare	0.0	(1.9)	
Total	52.2	61.3	-15

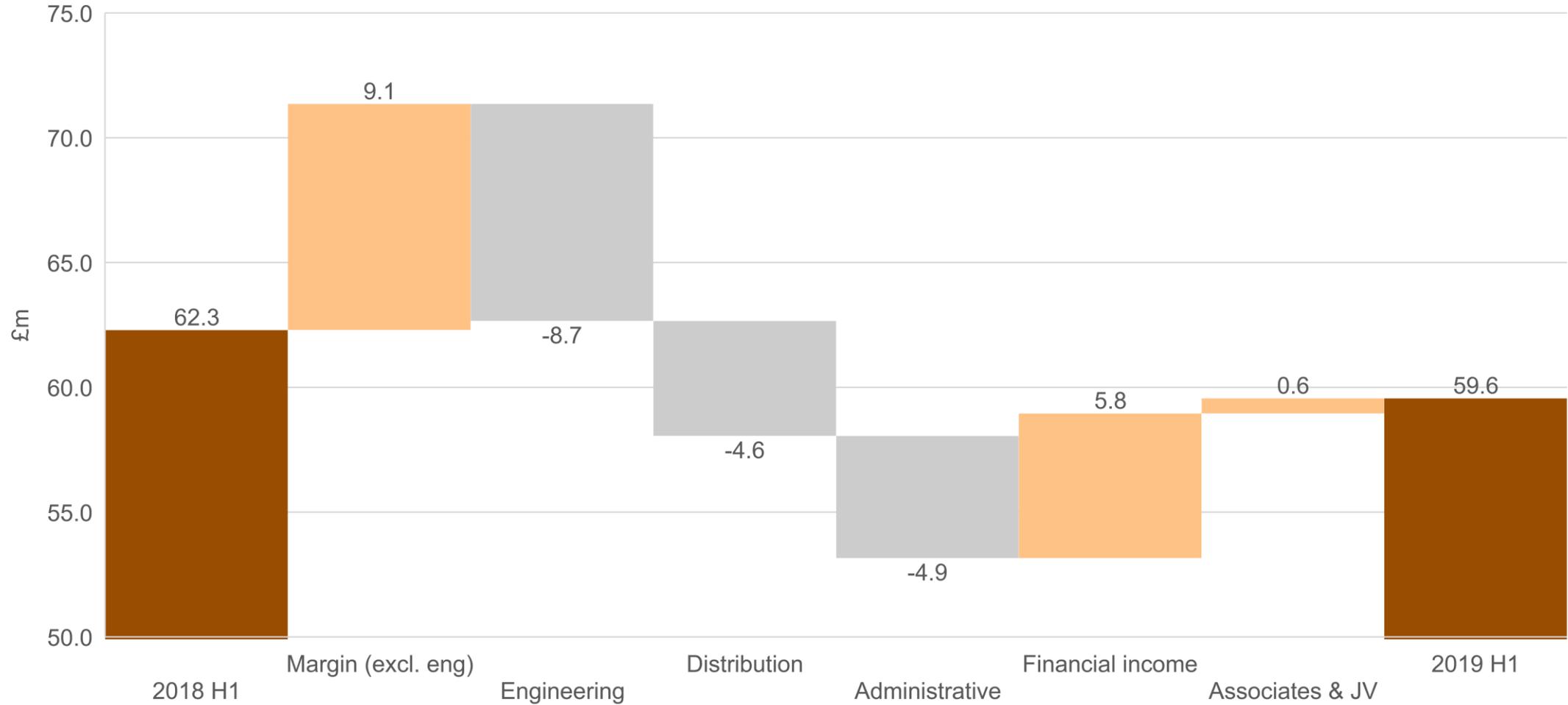
Revenue – 1st & 2nd half £m



Year-on-year changes:

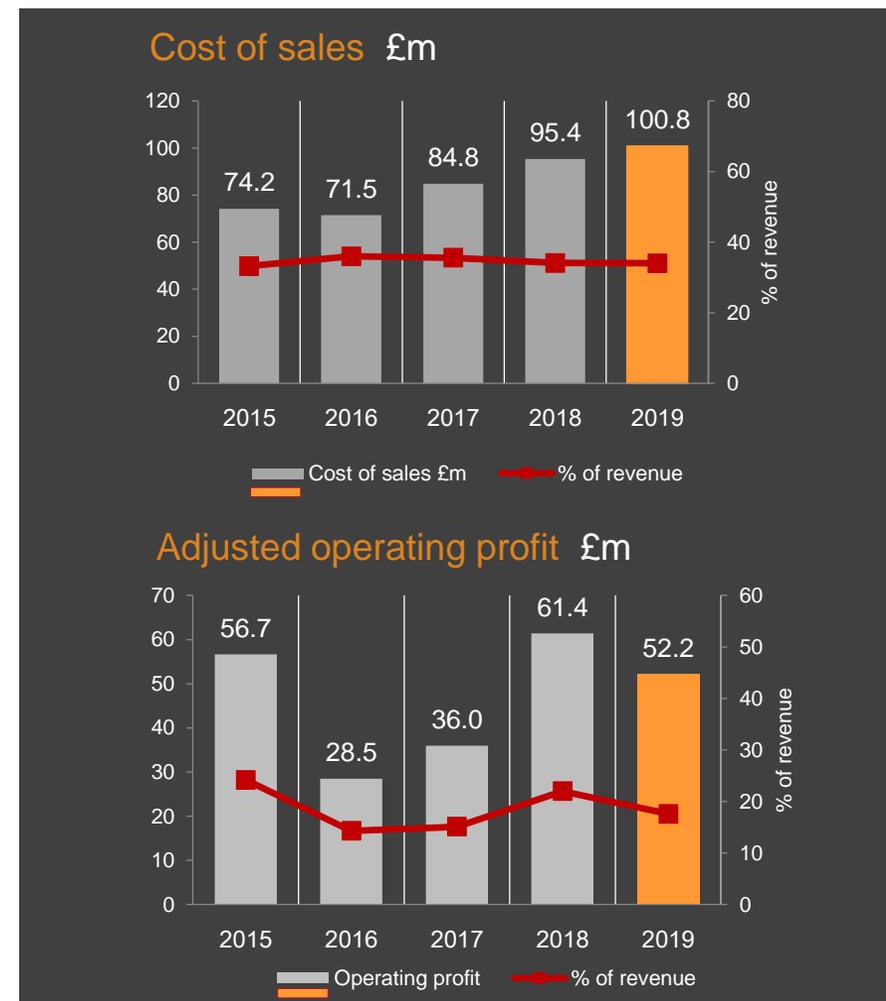
First half	-11%	20%	17%	6%
Second half	-12%	25%	11%	

Adjusted profit before tax bridge



Income statement

	2019 £m	%	2018 £m	%	Change
Revenue	296.7	100	279.5	100	6
Cost of sales	(100.8)	(34)	(95.4)	(34)	6
Engineering (inc. R&D)	(47.8)	(16)	(39.1)	(14)	22
Gross profit	148.1	50	145.0	52	2
Distribution costs	(63.8)	(22)	(59.2)	(21)	8
Administrative costs	(29.0)	(10)	(24.1)	(9)	20
Fair value gains/(losses) on financial instruments	(1.2)	(0)	3.5	1	
Financial income/(expense) (net)	5.2	2	(0.6)	(0)	
Share of profits of associates and joint ventures	2.2	1	1.6	1	38
Statutory profit before tax	61.6	21	66.2	23	-7
FV gains and losses on instruments not eligible for hedge accounting					
-reported in revenue	(3.2)	(1)	(0.3)	(0)	
-reporting in fair value gains/(losses) on financial instruments	1.2	0	(3.5)	(1)	
Adjusted profit before tax	59.6	20	62.3	22	-4



Income statement – Engineering and Distribution costs

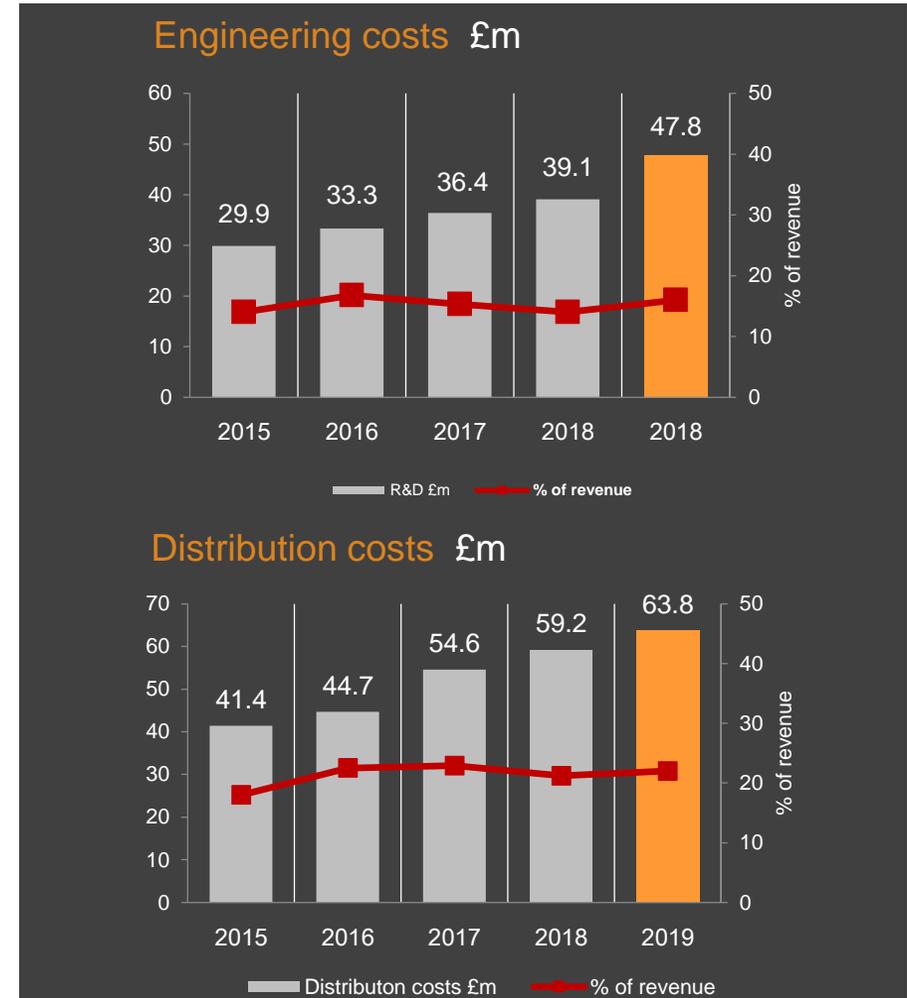
Engineering costs

	2019 £m	2018 £m	Change %
Total spend	51.0	41.7	22
Less capitalised net	1.2	1.5	-20
Less R&D tax credit	2.0	1.1	82
Net R&D	47.8	39.1	22

- Continued investment in R&D. Net increase of 134 R&D employees from Dec 2017.

Distribution costs

- Continued expansion of global marketing and distribution infrastructure to support new and existing products.
- Distribution costs 22% of revenue (2018: 21%).
- Up 8% (9% at PY exchange rates) from last year.



Income statement – Administrative costs and Group employees

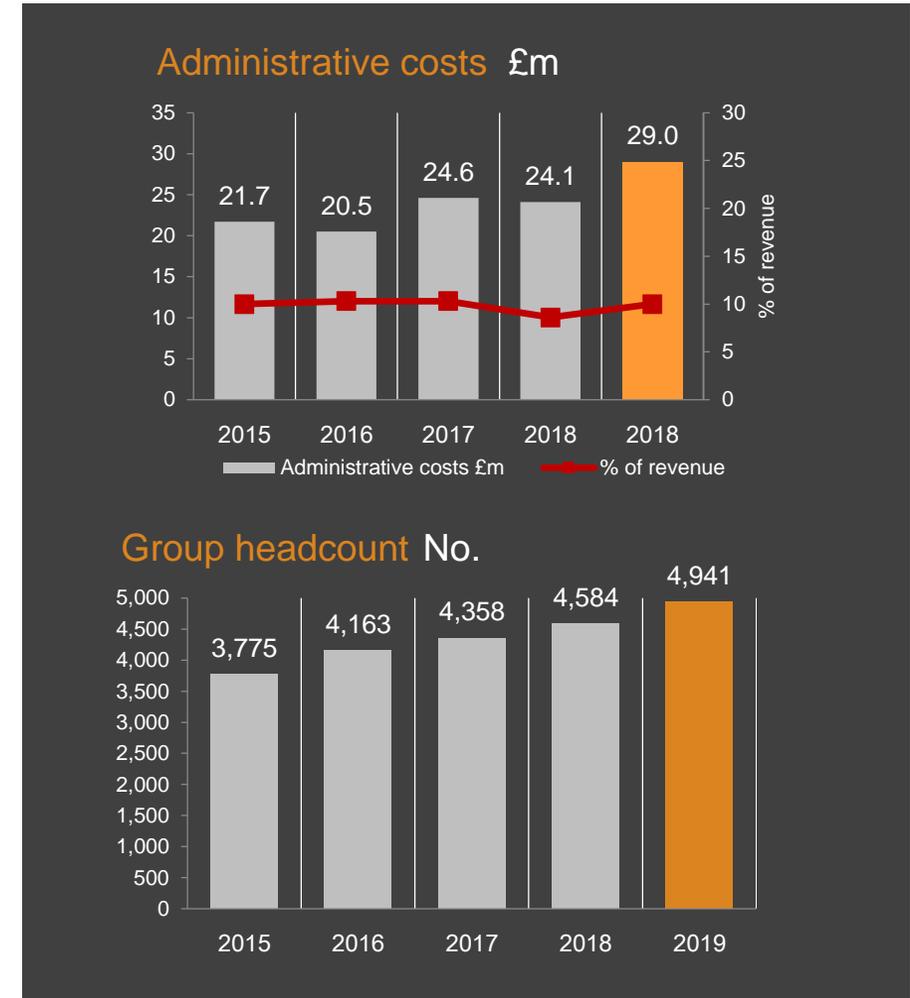
Administrative costs

- Inflationary increases
- Headcount increase to support business growth and increasing complexity.
- GMP equalisation - £0.8m

Group headcount

	Dec 2018 No.	Jun 2018 No.	Dec 2017 No.	Change from Jun No.	Change from Dec No.
UK	3,147	3,045	2,888	102	259
Overseas	1,794	1,817	1,696	-23	98
Total	4,941	4,862	4,584	79	357

- Total Group headcount up 79 from June 2018.
- Increase in employees includes 96 apprentices and graduates.
- Reduction in overseas fixed term manufacturing headcount.



Balance sheet

£m	Dec 2018	Dec 2017	Jun 2018
Property, plant & equipment	240.0	228.3	232.6
Intangible assets & investments	68.0	63.3	64.3
Deferred tax assets (net)	29.0	19.6	27.2
Long-term loans to ass. & joint vent.	3.3	3.9	4.2
Derivatives	2.0	11.2	9.6
Total non-current assets	342.3	326.3	337.9
Inventory	122.5	99.1	110.6
Debtors	155.8	137.0	177.4
Pension fund cash escrow	10.4	12.9	10.4
Cash	100.5	69.1	103.8
Derivatives	(27.1)	(18.5)	(21.1)
Creditors (current)	(68.0)	(53.3)	(85.7)
Net current assets	294.1	246.3	295.4
Pension scheme deficit	(52.7)	(67.8)	(67.3)
Derivatives	(24.9)	(14.1)	(17.4)
Net assets, equal to Total equity	558.8	490.7	548.6



Defined benefit pension schemes

UK defined benefit pension scheme - new funding plan

Current funding plan

Company pays all monthly pension payments and lump sum payments, and transfer payments to a limit of £1.0m in each year, until 30th June 2031. Currently circa £4.0m per annum.

New funding plan

£8.7m per annum for five years effective from 1st October 2018. At 30th June 2031 the Company is obliged to pay any remaining deficit.

IFRIC 14

The present value of guaranteed payments under the new plan is lower than the IAS 19 pension scheme deficit at 31st December 2018, such that no adjustment to the scheme's liabilities in accordance with IFRIC 14 are required.

GMP equalisation

26th Oct 2018 High Court judgement in relation to Lloyds Banking Group's defined benefit pension scheme concluded that schemes should be amended to equalise pension benefits for men and women as regards minimum pension benefits.

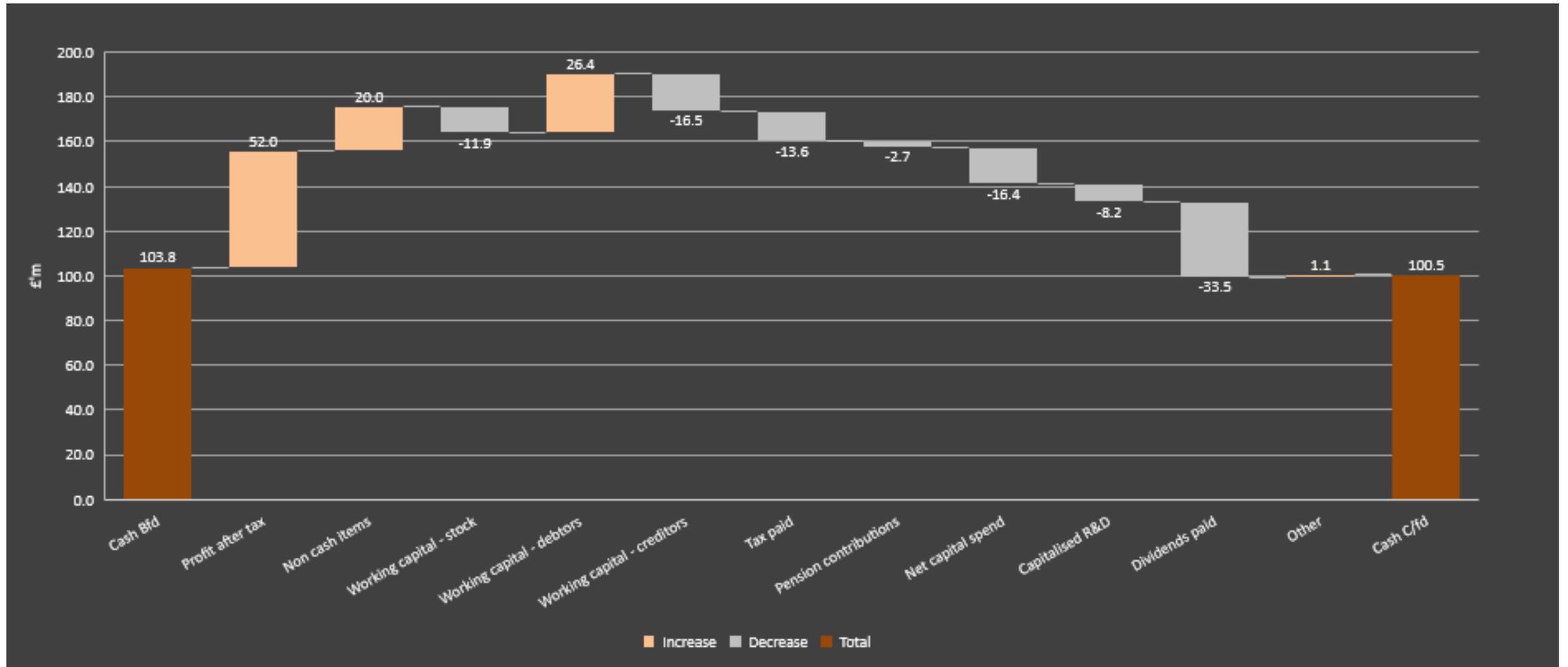
Estimated impact on the Company's liabilities of £751,000, being 0.4% of scheme liabilities, using the C2 method.

	6 months to 31st December 2018 £'000
Balance at the beginning of the period	(67,378)
Contributions paid	2,747
Interest on pension schemes ¹	(438)
Remeasurement loss from GMP equalisation ²	(751)
Remeasurement loss under IAS 19 ³	(16,688)
Change in remeasurement gain under IFRIC 14 ³	29,943
Balance at the end of the period	(52,565)

¹Reported in Financial expenses. ²Reported in Administrative expenses.

³Reported in Other Comprehensive income and expense.

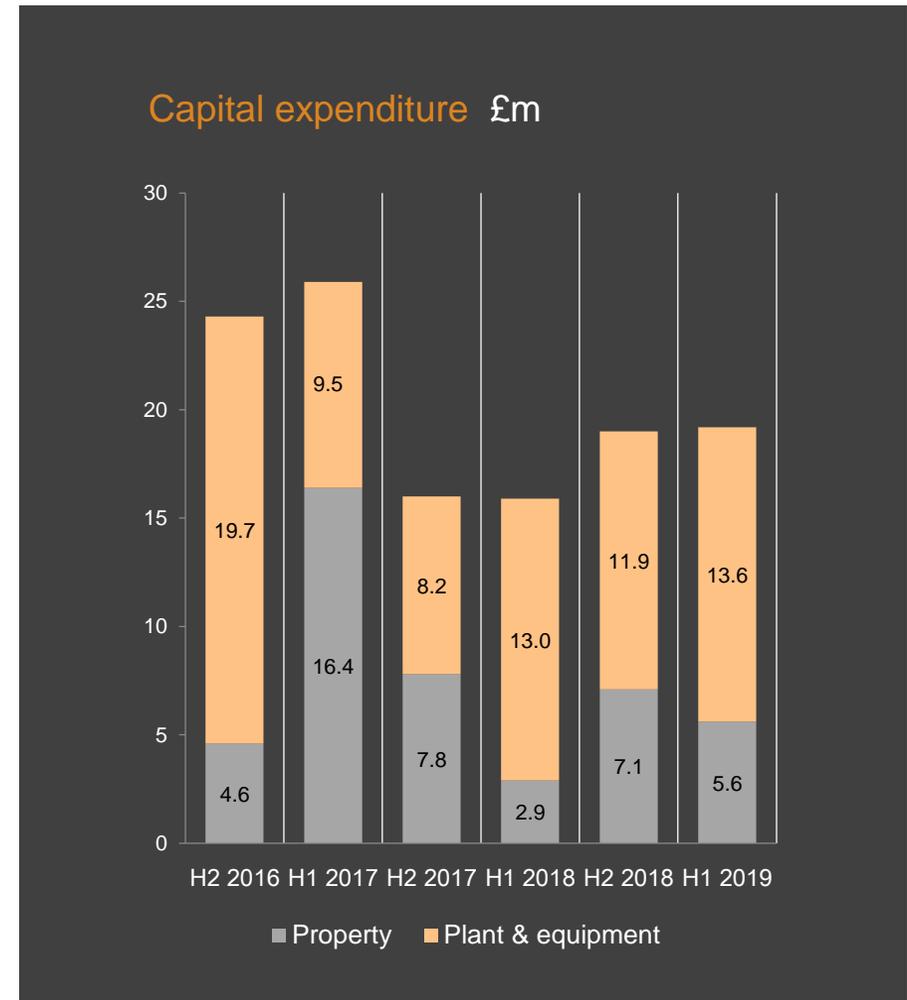
Cash flow



Capital expenditure

	2019 £m	2018 £m
Capital expenditure	19.6	16.1

- Property additions of £5.6m including:
 - in the UK, a 92,000 sq. ft. expansion of our Innovation Centre in Wotton-under-Edge, Gloucestershire.
 - in the Netherlands, purchase of previously rented premises.
 - in Ireland, establishment of our European distribution facility ahead of Brexit.
- Plant & equipment
 - £13.6m expenditure on plant and equipment in 2019 (2018: £13.0m), including IT infrastructure.



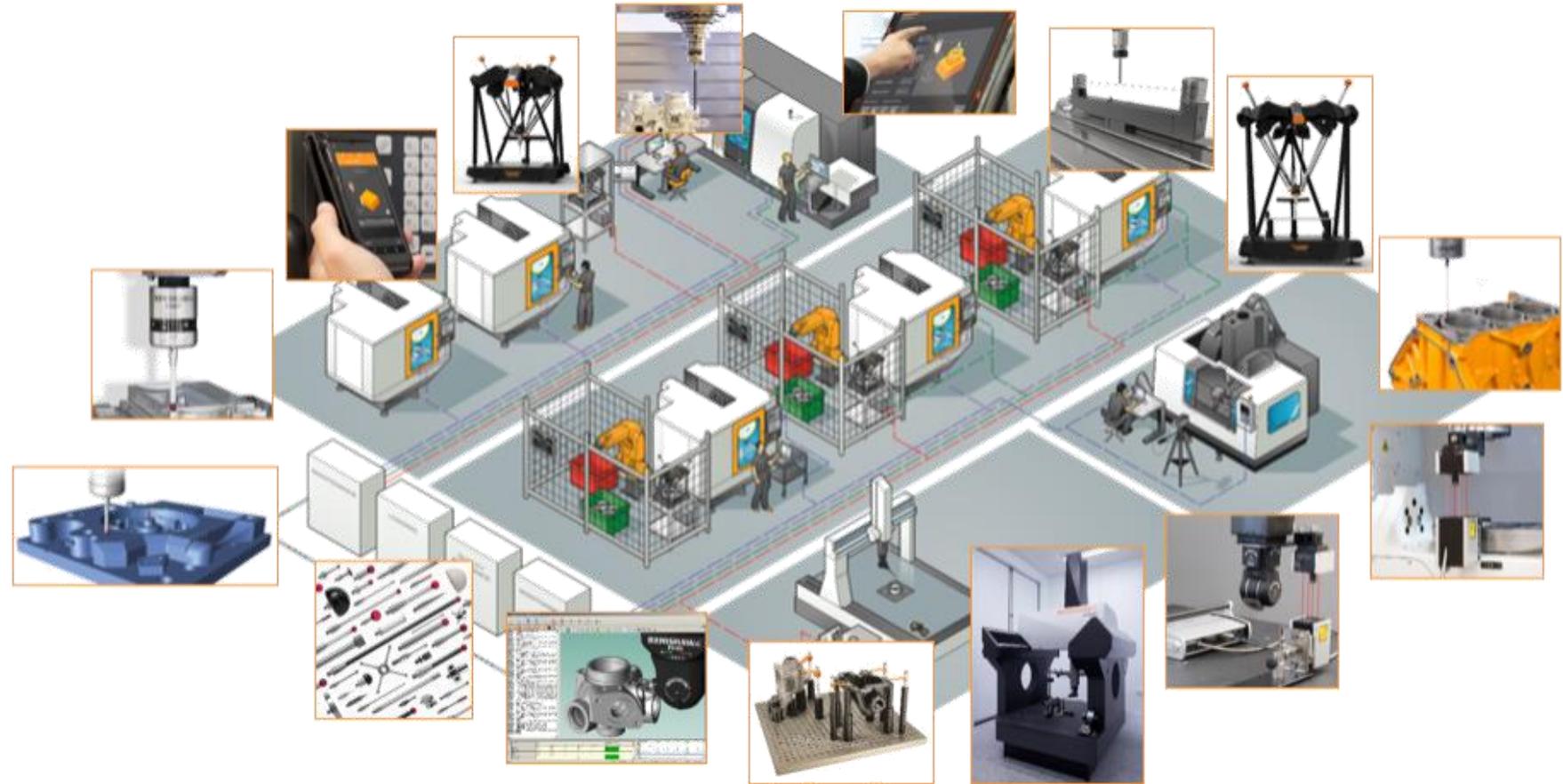
Property



Industrial metrology

Market drivers and dynamics

- Increasing component complexity and closer tolerances
- Global skills shortages require:
 - Easier to use solutions
 - More automation and robotics
- Common drivers across diverse markets



Renishaw's strength is breadth of products and applications knowledge

Industrial metrology

Shopfloor measurement

In-process measurement

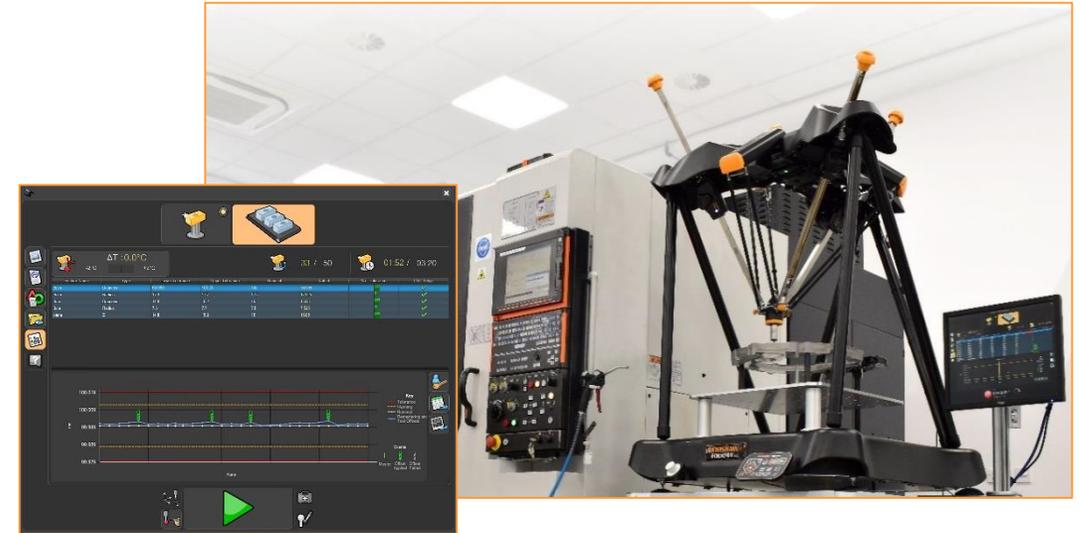
Components removed from the machine tool manually or using robot/automated system and inspected on standalone measurement device e.g. Equator 500 gauging system.

- Data used to update the manufacturing process.
- Have expanded range of machine tool controllers that support direct **IPC** (intelligent process control) connections for automated closed-loop feedback.

On-machine measurement

Components remain in situ on the machine tool and automatically checked using an inspection probe e.g. new **RMP400 probe**.

- Data used to automatically update the manufacturing process.



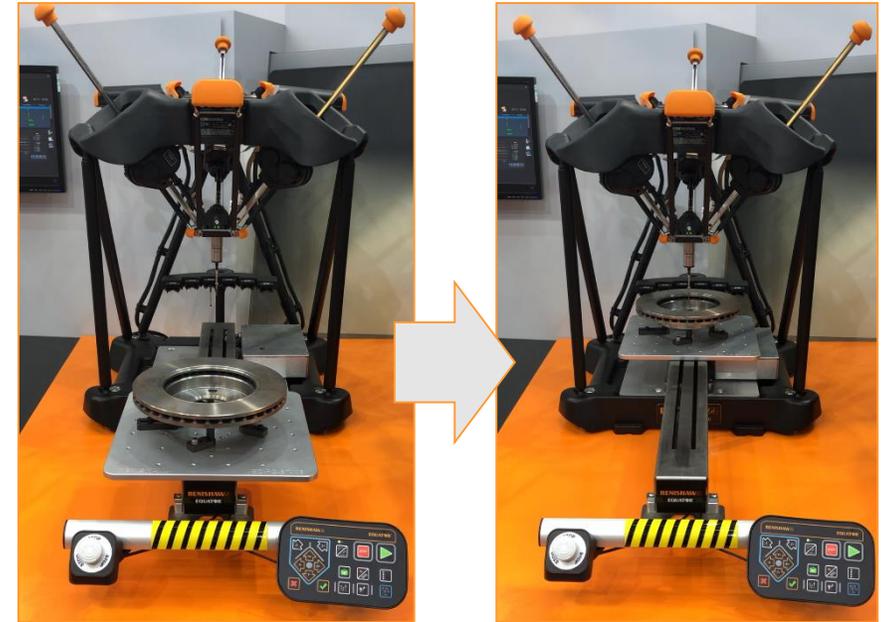
Industrial metrology

Automation

Increasing use of Equator gauging systems within automated manufacturing processes. Parts transferred from machine tools using robots or automatic transfer systems.

Increasing use of our transfer systems for Equator systems and CMMs. These allow parts to be loaded on to a fixture plate and transferred in and out of the measuring volume under automatic program control. They can be loaded manually or robot loaded in an automated cell.

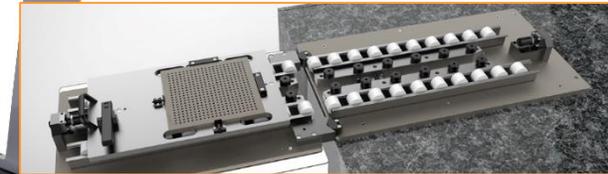
There is increasing use of automated changing between different sensor types for the REVO® measuring head (contact, optical and surface finish).



Equator transfer system



REVO changing rack



CMM shuttle system

Industrial metrology

Ease of use

User interfaces

Focus on software and apps for machine controls and smartphones which allow the use of Renishaw products by non-specialist operators.

New **GoProbe iHMI** is an on-machine probing application that provides users with a simple and intuitive method of using a Renishaw machine tool probe on a Fanuc ROBODRILL equipped with the new Fanuc iHMI control. Ideal for users with no or limited probing experience.

Fixturing set-ups

The new **QuickLoad™ rail and plate system** allows for faster throughput of inspected parts. The ability to quickly changeover fixturing plates increases CMM capacity and increases throughput - one machine can run several different inspections with minimal setup.



Position measurement

Growing market due to increased utilisation of our encoders and new application areas. Strong demand for magnetic encoders but some markets are cyclical, including semiconductor and electronics market.

Market drivers are size, accuracy, speed, ease of use.



Position measurement

QUANTiC™ rotary encoder system

- New rotary version of the QUANTiC encoder system family - a high performance, super-compact, digital all-in-one incremental open optical encoder.
- Offers machine builders ease-of-use for machine set-up due to exceptionally wide installation and operating tolerances – potentially significant time and cost savings for high-volume production lines.



Multi-axis periscope (RMAP)

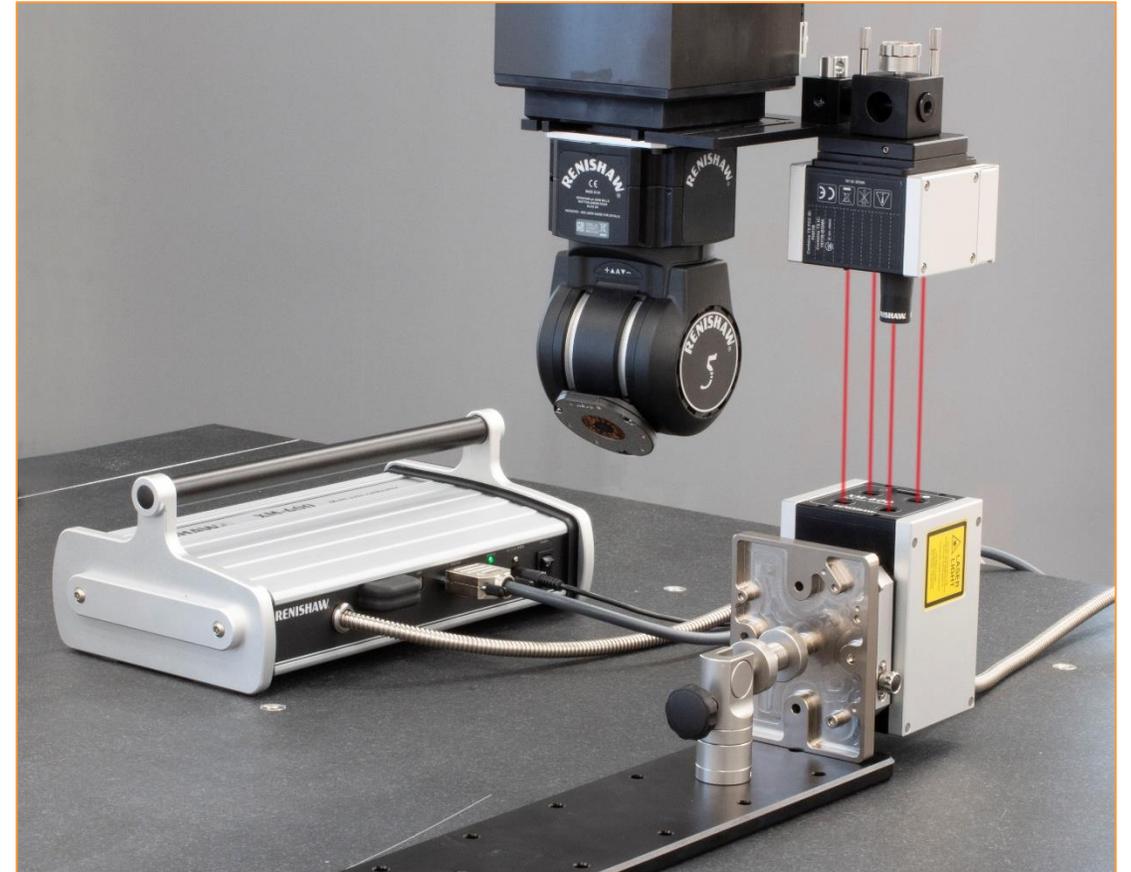
- Designed to enable accurate six degrees of freedom measurements in XY stage applications, utilising the performance from Renishaw's RLD10-X3-DI interferometer head.
- Higher machine performance requires multiple interferometer feedback axes



Position measurement

XM-600 laser measurement system for co-ordinate measuring machines (CMMs)

- Uses technology developed for the Renishaw XM-60 multi-axis calibrator to enable faster and easier error mapping of a CMM.
- Measures all six degrees of freedom from a single set-up, in any orientation for linear axes.
- Connects directly with Renishaw's range of UCC CMM controllers and easily communicates with the UCC software during the calibration routine to quickly build a complete error map of the CMM.
- Enables the complete error map of a CMM within half a day.



Additive manufacturing

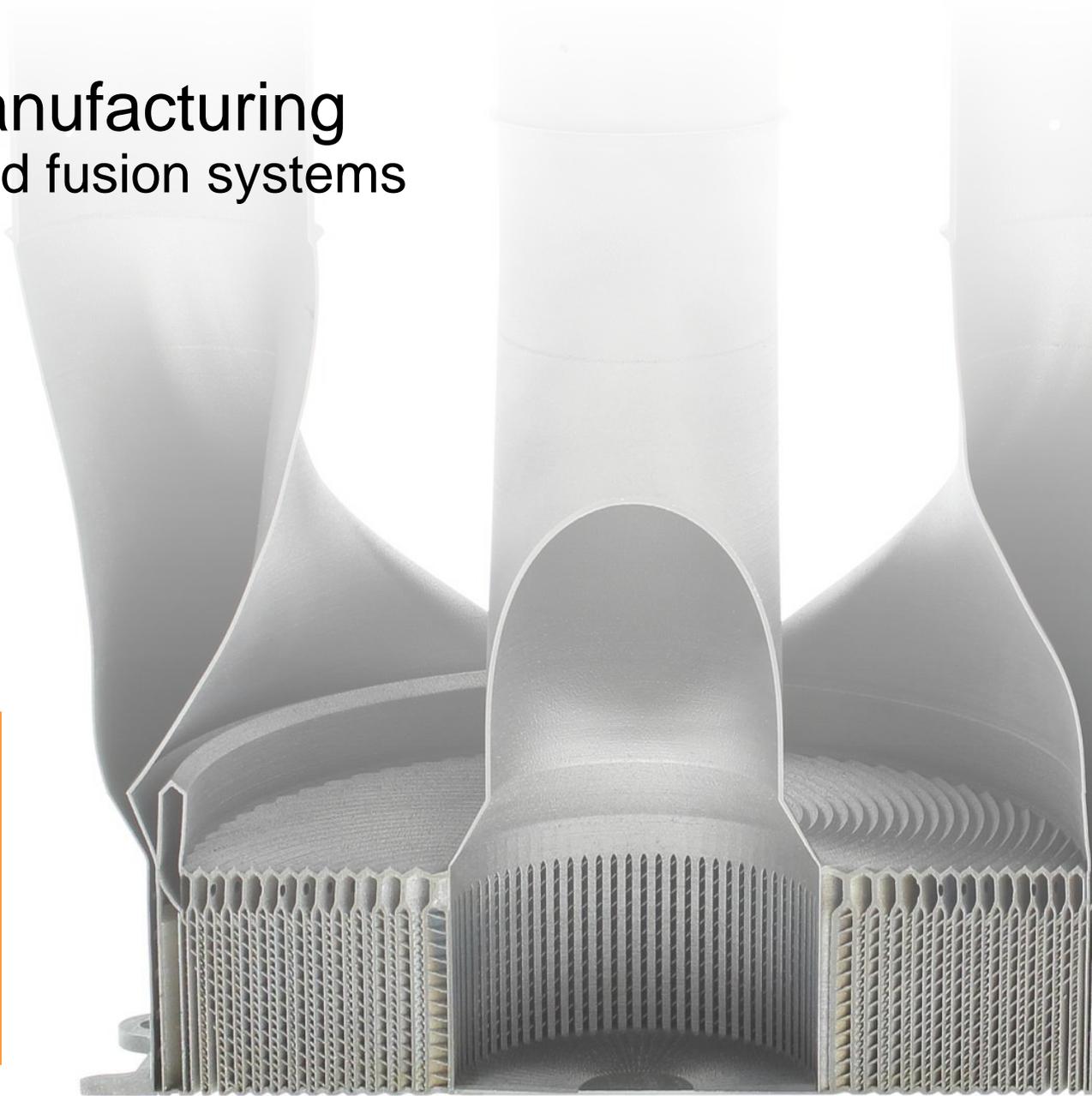
Laser powder bed fusion systems

High-value manufacturing

- Complex, high-performance products
- Difficult-to-process, expensive materials
- Where weight is critical
- Extensive quality assurance is acceptable
- Customised or low / medium volumes

Mature applications

- Aerospace
- Healthcare
- Tooling



Additive manufacturing

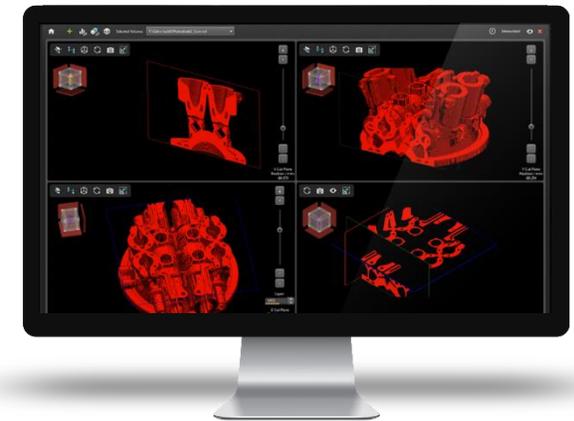
RenAM 500Q additive manufacturing (AM) system

- Four high-power 500 W lasers, with each able to access the whole powder bed surface simultaneously.
- Offers a substantial reduction in cost per part whilst maintaining the quality and precision offered by standard single laser systems.



InfiniAM Spectral

- Works with Renishaw's LaserVIEW and MeltVIEW hardware, to provide feedback on energy input and emissions from the AM build process.
- Process feedback is essential in understanding component quality throughout the build process, monitoring laser and melt-pool characteristics in high-temporal resolution to provide a 2D and 3D view of the build.



Additive manufacturing

Recent AM customers

- In the USA, **Knust-Godwin**, a supplier to the oil and gas sector, has purchased several RenAM 500Q systems to add to its existing single-laser AM capability. Mike Corliss, VP, Technology, says, “Additive manufacturing is a driving force for Industry 4.0. It has tremendous growth opportunities.”
- **Siemens** has also invested in multi-laser technology as part of a £27 million investment in a facility for its UK subsidiary Material Solutions.
- In the USA, California-based **PrinterPrezz** has invested in a RenAM 500M system as part of a one-stop 3D printing facility for the medical sector, including the manufacture of medical devices, surgical aids, and prosthetics.

Co-founder and CEO of PrinterPrezz, Shri Shetty, says, “3D printing has the potential to revolutionize how the world thinks about developing advanced medical devices.”



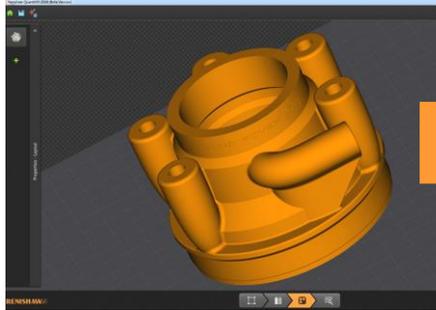
RenAM 500 series production facility (Miskin)

Additive manufacturing

Renishaw solutions across the process chain

Processes

Design for AM



AM build



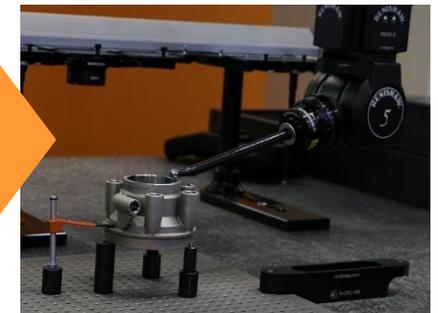
Gauging



Machining



Inspection



Tools



Raman spectroscopy

Market applications

Focus on new application areas to address in existing and new markets for our Raman systems. Current focus in the areas of healthcare (cancer diagnosis) and the environment (microplastics).

Several inVia Raman microscope systems supplied for research by academics and water companies into the identification of microplastics. Includes the Danish Technological Institute which is working with private companies and the Danish Environmental Protection Agency on technologies to remove plastic particles from the aqueous environment.

The new **RA816 Biological Analyser** is a compact benchtop Raman imaging system, designed exclusively for biological and clinical research. At the John Ratcliffe Hospital in Oxford, UK, a system is being used for brain tumour research.



inVia system at the Danish Technological Institute



R816 Biological Analyser

Neurosurgery

Clinical studies

During the period there has been significant progress in a drug delivery clinical study, taking place at three sites in Sweden and Finland, to treat patients with Parkinson's disease. The trial is using the neuroinfuse™ drug delivery system, a device currently only available for use in approved clinical trials, with implantation of the system carried out using the neuromate® stereotactic robot.

We are also preparing for the approval of a clinical study, using the neuroinfuse system, to treat DIPG, a brain tumour predominantly seen in children.

New 2D patient registration module

The new neurolocate™ 2D module, has obtained a CE mark and can be offered to hospitals across Europe. neurolocate 2D and 3D modules allow the surgeon to accurately determine the position of the patient relative to the neuromate robot.

The 2D module requires just two X-rays to register patient position against the robot, and is supported within the new neuroinspire™ version 6 planning software.



Brexit

Principal Brexit risks

- Economic conditions: increased uncertainty surrounding growth, inflation, interest and currency rates.
- Laws and regulations: potential changes to UK and EU-based law and regulation including product approvals, patents and import/export tariffs.
- Talent: mobility of the workforce and availability of talent.
- Short term supply chain disruption: potential changes in customer buying patterns, delays in customs and border clearances and uncertainty over UK and EU product approvals.

Mitigations

- Existing strong direct presence in the EU.
- Establishment of distribution warehouse in Ireland, to reduce number of direct shipments from the UK to the EU, is well advanced.
- Increase in inventory holdings located within the EU to mitigate risk of delays in customs and border clearances.
- Potential cost of World Trade Organisation tariffs coming into force for exports not expected to be material for the Group.

Outlook

Notwithstanding current economic uncertainties, the Board remains confident in the future prospects of the Group.

We expect full year revenue to be in the range of £635m to £665m and adjusted profit before tax to be in the range of £140m to £160m.

Statutory profit before tax is expected to be in the range of £146m to £166m.

Disclaimer

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These forward-looking statements are not guarantees of future performance. They have not been reviewed by the auditors of Renishaw plc. They involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of any such person to be materially different from any results, performance or achievements expressed or implied by such statements. They are based on numerous assumptions regarding the present and future business strategies of such persons and the environment in which each will operate in the future. All subsequent oral or written forward-looking statements attributable to Renishaw plc or any of its shareholders or any persons acting on its behalf are expressly qualified in their entirety by the cautionary statement above. All forward-looking statements included in this document speak only as of the date they were made and are based on information then available to Renishaw plc. Investors should not place undue reliance on such forward-looking statements, and Renishaw plc does not undertake any obligation to update publicly or revise any forward-looking statements.

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