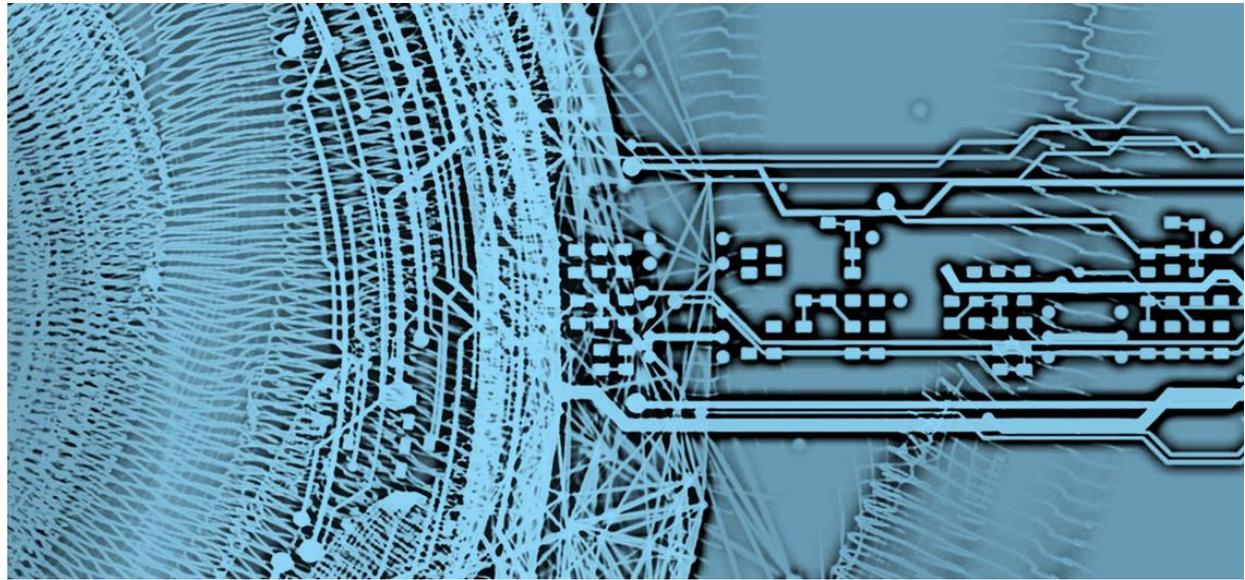


TT Electronics

Half Year 2019 Results

7 August 2019

Engineering smarter solutions together



HY 2019 overview

- **Strong growth; 8% organic**

- New customer wins
- Growth with existing customers
- Increased cross-selling opportunities
- Significant customer wins for recurring multi-million pound revenues

- **Business quality enhanced**

- Aerospace, defence and medical up 27% organically; now 45% of revenues
- Operational efficiency improvements from footprint action underway
- Operating margin now 8.1%, up 50bps

Strong first half and order momentum - further progress in 2019 and beyond

Financial review

Mark Hoad, CFO



HY 2019 financial overview

8%

Organic revenue
growth

8.1%

Underlying
operating margins,
up 50 bps

22%

Increase in EPS

28%

Cash conversion

11.3%

ROIC, LFL 20 bps
improvement

8%

Increase in the
dividend to 2.1p

Group financial performance

Strong revenue growth and profit improvement

£m (except where stated)	HY 2019	HY 2018	Change	Change constant fx
Revenue	238.2	194.2	23%	20%
Operating profit*	19.2	14.6	32%	27%
Operating profit margin*	8.1%	7.5%	60bps	50bps
Profit before tax*	17.4	14.0	24%	20%
EPS* (pence)	8.8p	6.9p	28%	22%
Exceptionals & one-offs	(12.3)	(6.9)	(78)%	(78)%
Dividend (pence)	2.1p	1.95p	8%	
Cash conversion‡ (%)	28%	105%		
Net debt (FY 2018)	(82.4)	(41.2)		
Leverage ⁺ (times)	1.2	0.8		
ROIC (%)	11.3%	11.5%^	(20)bps	
ROIC pre IFRS 16 (%)	11.7%	11.5%^	20bps	

- Revenue up 8% organically
- Operating profit up 27%
- Operating margins improved by 50bps
- Effective tax rate 17.2%
- Exceptionals: P&L £12.3m, cash £3.2m
- Increased dividend by 8% to 2.1p
- Cash conversion reflects growth and seasonality
- Net debt includes £19.9m relating to leases (IFRS 16)
- ROIC 11.3%, up 20 bps like-for-like

* Underlying, before exceptional and one-off costs

‡ See appendix

† Bank covenant - pre-IFRS 16, proforma for acquisitions

^ Full year 2018

Sensors and Specialist Components



Market softening after two years of strong demand

	HY 2019	HY 2018[^]	Change	Change constant fx
Revenue (£m)	64.1	62.4	3%	(2)%
Underlying operating profit (£m)	7.5	8.6	(13)%	(15)%
Underlying operating margin	11.7%	13.8%	(210)bps	(180)bps

- Revenue down 2% organically
 - Softer demand follows very strong financial performance over last two years
 - Inventory de-stocking across the market impacting demand
- Operating profit down 15%
 - Drop through from lower revenues and cost headwinds including Mexican minimum wage
 - Actions to address cost base underway; optimising footprint and fixed labour costs
- Cross-selling win with US defence prime

[^] Re-stated for transfer of Malaysian Magnetics business

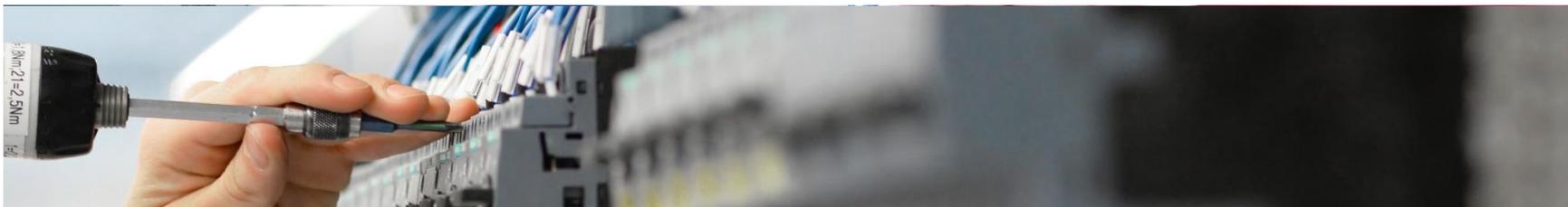


Good growth and strong margin progression

	HY 2019	HY 2018 [^]	Change	Change constant fx
Revenue (£m)	67.6	47.6	42%	40%
Underlying operating profit (£m)	7.2	3.8	89%	80%
Underlying operating margin	10.7%	8.0%	270bps	240bps

[^] Re-stated for transfer of Malaysian Magnetics business

- Organic revenue up 4%
 - Good growth from defence and civil programmes, satellite and space
 - Sales wins in medical market
- Operating profit up 80%
 - Drop through from revenue growth and previous investment in process and efficiency
 - 240bps margin improvement to 10.7%
- Contract win for satellite navigation solutions; Honeywell quality award
- Enhanced synergy plan on track



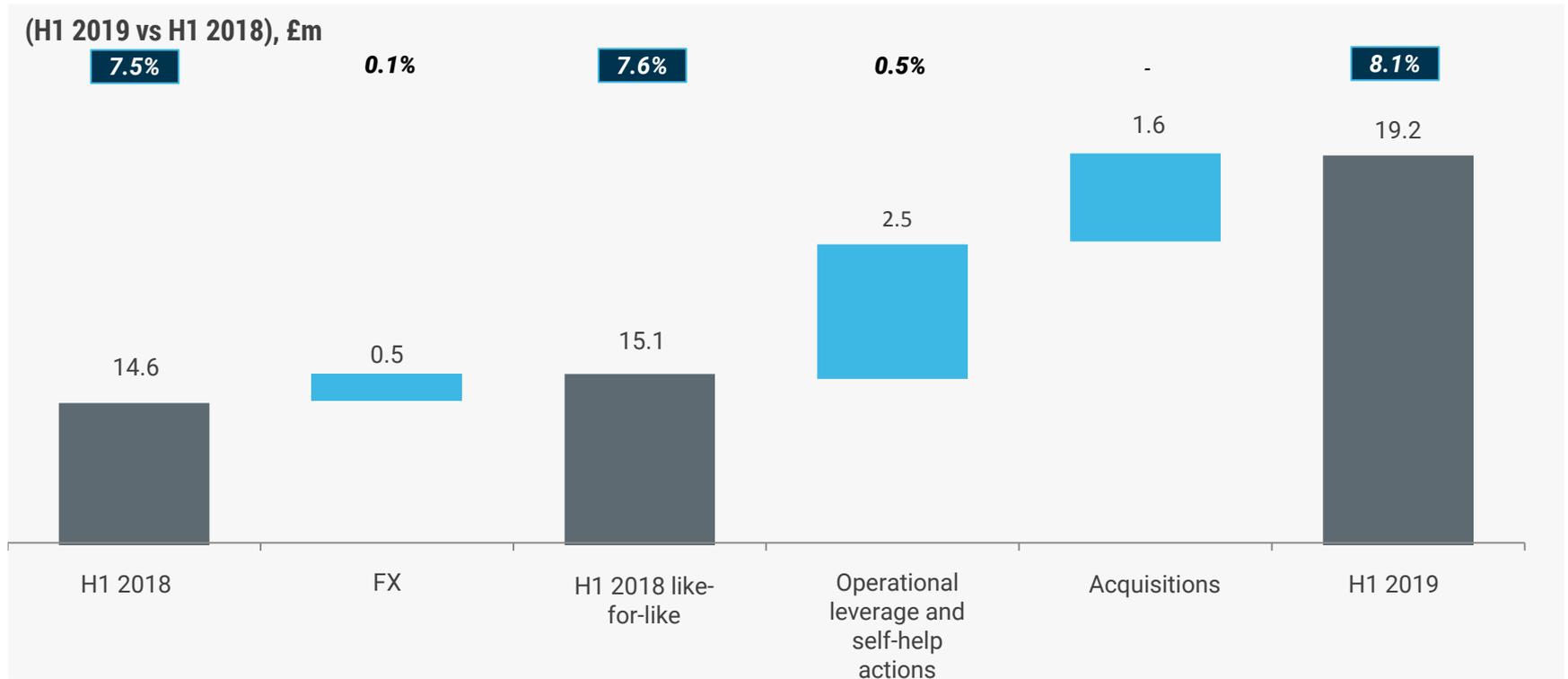
Strong growth from higher value-added revenues

	HY 2019	HY 2018	Change	Change constant fx
Revenue (£m)	106.5	84.2	26%	25%
Underlying operating profit (£m)	8.0	5.9	36%	33%
Underlying operating margin	7.5%	7.0%	50bps	50bps

- Revenue up 17% organically
 - Growth in all regions
 - Record order book; increased 2020 visibility
- Operating profit up 33%
 - Operational leverage and efficiency improvements
 - Increasingly engineering led revenues following investment in engineering teams
- Strong growth with existing medical customers; 4 new customers won

Group financial performance

Driving improvement in operating profit



Free cash flow and net debt

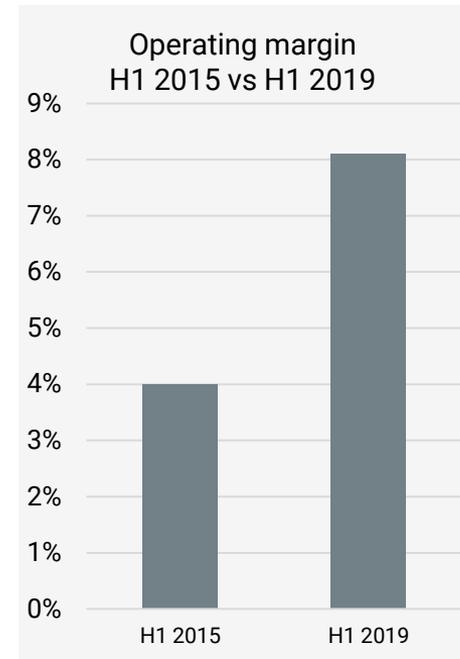
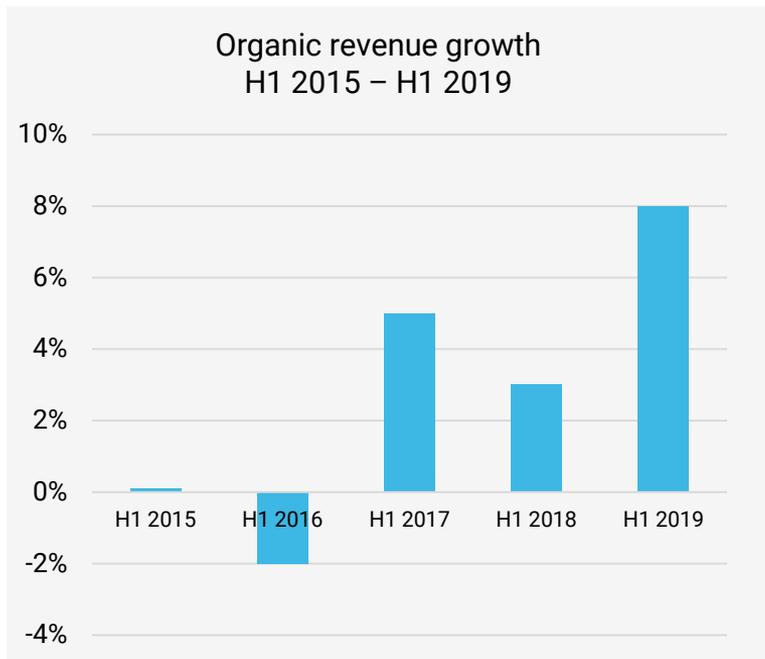
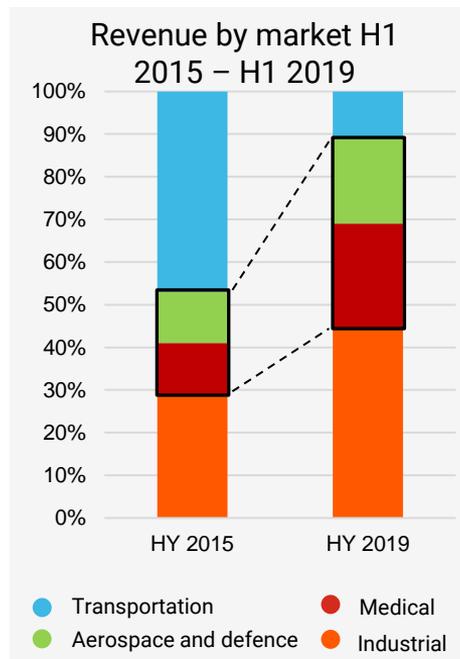
£m	HY 2019	HY 2018
Underlying EBITDA	28.2	21.0
Net capital expenditure & capitalised development	(9.3)	(6.7)
Working capital	(15.1)	(0.5)
Exceptional items	(3.2)	(4.7)
Net interest and tax	(3.4)	(4.0)
Pensions & other	(4.4)	(1.0)
Lease liability repayments	(2.0)	-
Free Cash Flow	(9.2)	4.1
Dividends	(7.4)	(6.6)
Acquisitions & disposals	(2.3)	(78.0)
Other	0.1	(7.7)
Net Cash Flow	(18.8)	(88.0)
Cash Conversion	28%	105%
	H1 2019	YE 2018
Net Debt	(82.4)	(41.2)
Net Debt to EBITDA[†]	1.2	0.8

- Working capital outflow reflects strong revenue and order book growth
- Seasonality impact will normalise in H2
- Capex spend increased as planned to support growth, upgrade of Bedlington facility, R&D investment
- Cash conversion of 28% - back to target levels for full year
- Exceptional items include acquisition related footprint consolidation
- Acquisition of Power Partners (£1.2m initial consideration); Precision earnout (£0.9m)
- Net debt includes £19.9m of IFRS16 lease liabilities (2018: nil)

[†] Bank covenant - pre-IFRS 16, proforma for acquisitions

Our record

Growing revenue and profit – transforming the quality of the business



Strategy and outlook

Richard Tyson, CEO



Driving organic growth and future margin improvement

Our strategy...

Positioned in structural growth markets

Create differentiated capabilities

Work with our customers to solve their toughest electronic challenges

...delivered through...

Targeted business development

R&D investment

Operational excellence

Value-enhancing acquisitions

Talent development

More to come – opportunity for the future

Why we're winning - our business development approach

New multi-million pound customer win



Initial growth phase with a customer primed to ramp up



Growth with customer in structural growth market



US aerospace and defence prime

- Identified a number of potentially large customers, securing initial projects
- Proved capabilities and developed relationships
- Contract awarded by L3 Aviation Products to support a substantial electronics manufacturing program for a key military program

UK aerospace and defence Tier 1

- Won contract in 2017; contributed strongly to growth in H1 2019
- Number of strategic electronic suppliers reduced to just two
- Key electronics platform supporting a major commercial aerospace program
- Contract in initial growth phase – volume ramp up in 2020-2023

Chinese rail infrastructure

- Working with Chinese rail infrastructure customer since 2010
- Providing complex assembly solutions for rail signalling equipment
- Strong double-digit % growth
- Chinese government has approved \$125bn of rail projects*

R&D to fuel future growth – positioned with primes on multiple technology demonstrator programmes

£7.1m (5.4% of revenues) invested in R&D

- Core focus areas:
 - Power solutions for aerospace and medical applications
 - Connectivity for the industrial Internet of Things
 - Specialist sensing capabilities

Project ENCASE for starter generators on engines

- Co-funded by Innovate UK and aerospace engine OEM
- Selected as leading electromagnetics expert; new technology for next-generation engines



New power conversion unit

- New prototype launched at Paris Air Show following investment in 2018



(Auto Transformer Rectifier Unit)

Next-generation platform technology projects

- Technology to remove mechanical switches and create a more pure power supply to
 - Eliminate sparking of current, and
 - Better manage high power



Self-help actions as a driver of margin enhancement

The opportunity

2019-2022+

HY 2018
7.5%



HY 2019
8.1%



10%+

- **Operational excellence**
 - 2018 focus on South Wales and North Devon facility drove margin improvement
 - Customer recognition awards
- **Footprint rationalisation**
 - Closure of five facilities underway
- **Further self-help opportunities available**

Adding value through successful acquisitions

Integration

- All completed on or ahead of plan
- Management discipline
- Process, controls and systems
- Back-office efficiency

Synergy

- Overhead reduction
- Footprint rationalisation
- Scale in procurement and supply chain

Enhanced capabilities

- Extending our technology offering
- Investment for growth
- Leveraging wider group capabilities
- Talent

Growth

- Organic growth
- Cross-selling opportunities
- Improved market access

Aero Stanrew (2015, £42.2m) – UK, Aerospace & defence

Cletronics (2017, \$1.6m) – US, Aerospace & defence

Stadium (2018, £59.7m) – UK and Asia, Industrial IoT and medical

Precision (2018, \$23.7m) – US, Medical and aerospace & defence

Power Partners (2019, \$1.5m) – US, Medical

Strong **8% organic** revenue growth;
ahead of market

Better **quality business**; 45% of
revenues in aerospace, defence and
medical

Another period of **strong profit growth**,
up 27%; margins 8.1%

Acquisition **integration success**;
synergy and **revenue opportunities**

***Our first half performance and order momentum position us well to make
further progress in 2019 and beyond.***

Appendix



Restructuring costs

- c. £5-6m on footprint changes to deliver synergy plans and operational efficiency

Capital and development expenditure

- Capex and devex circa £21m (1.4x owned DA)

Working capital

- Brexit inventory buffer build in H2
- FY modest outflow

Pensions

- Stadium scheme merger completed
- Triennial valuation underway

M&A

- Investment in joint venture c. \$4m
- Precision earn-out payment \$1.1m

Tax

- Effective rate for year 17.2%
- Cash payments broadly in line with P&L charge

Foreign exchange

- USD 1 cent = circa £160k operating profit impact
- RMB 0.1 = circa £160k operating profit impact

Appendix: The TT Electronics business

Revenue (HY19)

- **Sensors and Specialist Components** 27%
- **Power and Connectivity** 28%
- **Global Manufacturing Solutions** 45%



Underlying operating profit (HY19)

- **Sensors and Specialist Components** 39%
- **Power and Connectivity** 38%
- **Global Manufacturing Solutions** 41%
- **Central costs** (18)%



Revenue by market (HY19)

- **Industrial** 44%
- **Medical** 25%
- **Aerospace and defence** 20%
- **Transportation** 11%



Revenue by geography (HY19)

- **UK** 30%
- **North America** 28%
- **Asia and Rest of World** 23%
- **Rest of Europe** 19%



Appendix: Impact of FX

	Sensors and Specialist Components	Power and Connectivity	Global Manufacturing Solutions	Corporate	Group
Sales (£m)					
HY 2019	64.1	67.6	106.5	-	238.2
HY 2018 at 2019 rates	65.1	48.2	85.4	-	198.7
FX impact	2.7	0.6	1.2	-	4.5
HY 2018 as published*	62.4	47.6	84.2	-	194.2
Operating Profit (£m)					
HY 2019	7.5	7.2	8.0	(3.5)	19.2
HY 2018 at 2019 rates	8.8	4.0	6.0	(3.7)	15.1
FX impact	0.2	0.2	0.1	-	0.5
HY 2018 as published*	8.6	3.8	5.9	(3.7)	14.6

*restated for change to reporting segments

Appendix: Change to reporting segments

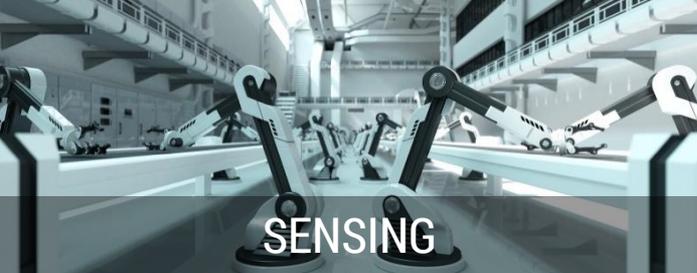
Six months ended 30 June 2018 (£m)	Sensors and		Global		Group
	Specialist Components	Power and Connectivity	Manufacturing Solutions	Corporate	
Revenue	62.4	47.6	84.2	-	194.2
Underlying operating profit	8.6	3.8	5.9	(3.7)	14.6
Margin	13.8%	8.0%	7.0%	-	7.5%
Year ended 31 December 2018 (£m)					
Revenue	132.2	115.5	181.8	-	429.5
Underlying operating profit	18.5	11.2	11.3	(7.6)	33.4
Margin	14.0%	9.7%	6.2%	-	7.8%

Appendix: Cash conversion

Cash Conversion (£m)	HY 2019	HY 2018
Underlying EBITDA (continuing operations)	28.2	21.0
Net capital expenditure	(7.4)	(5.1)
Capitalised development expenditure	(1.9)	(1.6)
Working capital	(15.1)	(0.5)
Other	1.6	1.5
Underlying Operating Cash Flow	5.4	15.3
Underlying operating profit - continuing operations	19.2	14.6
<i>Cash conversion – continuing operations</i>	28%	105%

Appendix: IFRS 16

- New accounting standard for leases effective 1 January 2019
- Requires operating leases to be recognised as finance leases on the balance sheet
- No restatement of comparatives
- No net cash flow or bank covenant impact – bank covenants continue to be calculated according to the prior standard
- Summary accounting impacts (full year effect):
 - £18 million increase to reported assets and £21 million increase to net debt as at 1 January 2019
 - £5 million operating lease expense replaced with £4 million depreciation charge
 - £1 million increase to operating profit and interest; PBT impact de-minimus
 - £5 million movement from cash flow from operating activities to cash flow from financing activities



SENSING



POWER



CONNECTIVITY



MANUFACTURING

OUR PURPOSE

To solve our customers' toughest electronics challenges by engineering smarter solutions together.

We design and manufacture electronics that **sense**, manage **power** and **connect** to other things.

Our products are:

- Mission-critical
- Highly-engineered
- IP rich proprietary technology

Our solutions operate in **harsh environments** in structural growth markets where there are **"electronics everywhere"**.

TT touch points across our world

We help solve our customers' toughest electronic challenges



Supporting growth of the aviation sector by increasing flight safety and environmental efficiency.



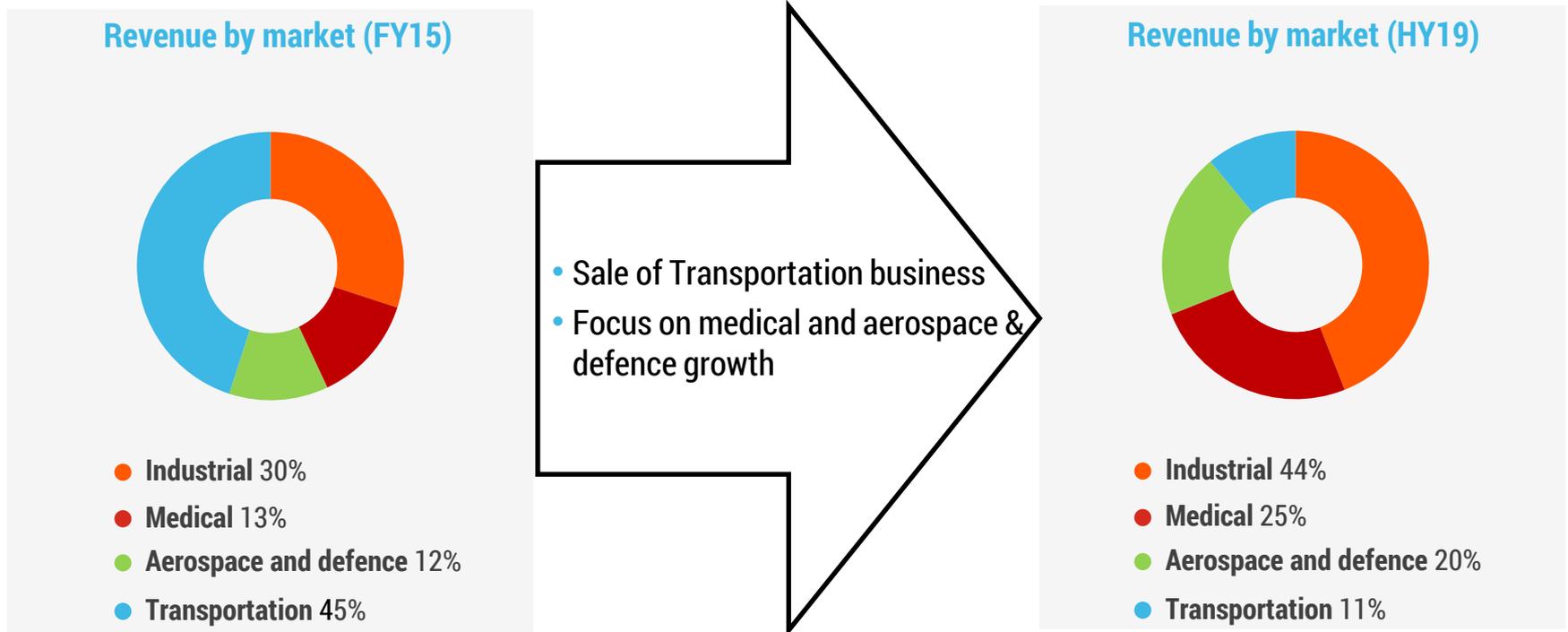
Bringing tomorrow's medical technologies to life, for advanced disease detection and treatment.



Improving factory efficiency and automation for a more productive world.

We provide solutions for the drive towards “**electronics everywhere**” across our markets

Focusing on markets with structural growth drivers



Materially reduced automotive exposure to c.4% total sales

Geographic balance with increased exposure to growing Asian markets

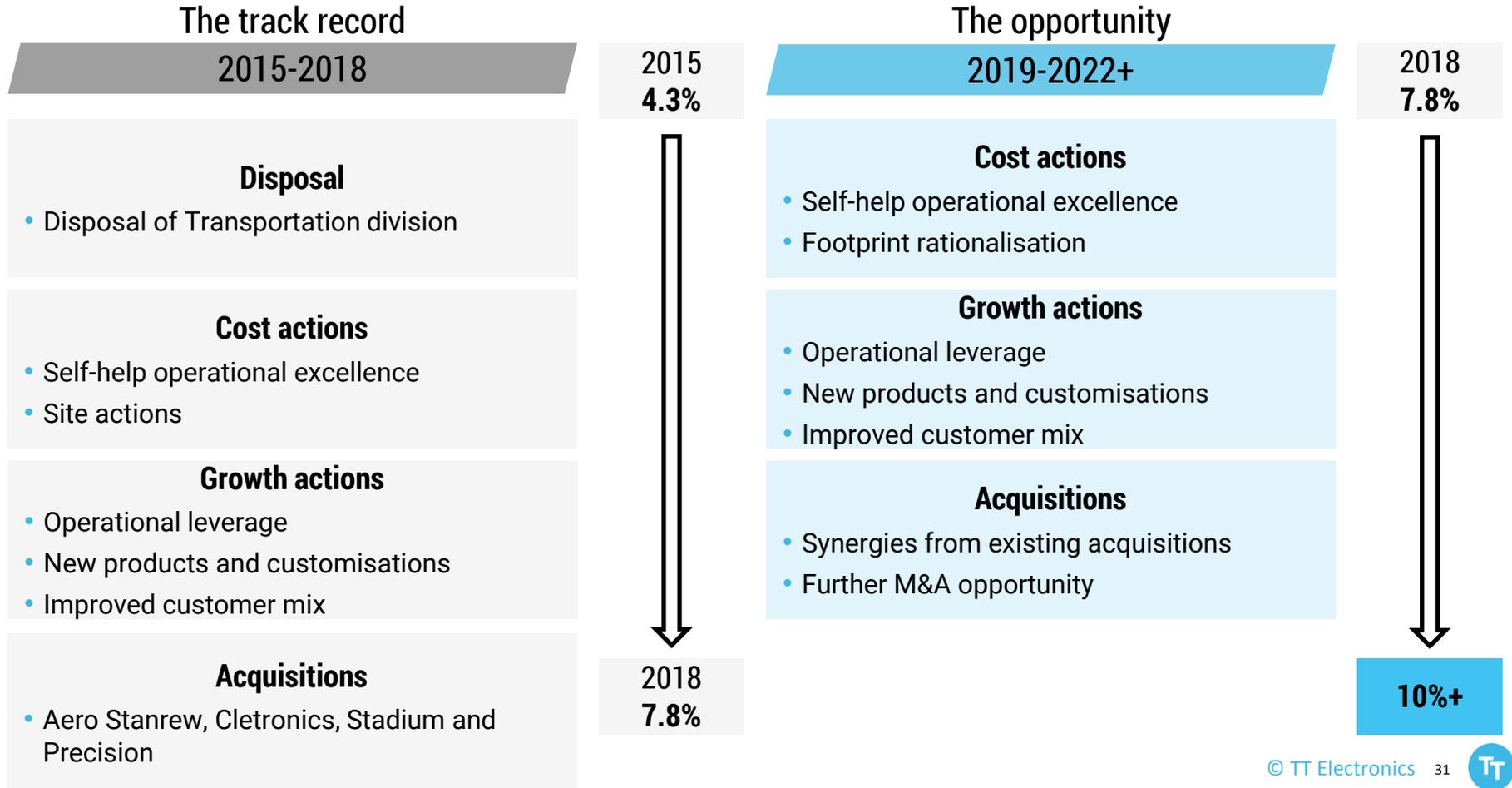


Asia now c.£100m of annualised revenue

Significant financial transformation over 3 years

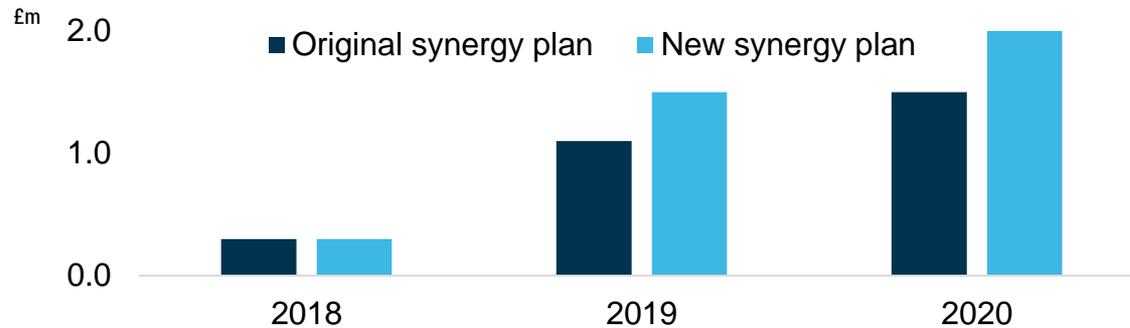
	2015	2018	
Organic revenue growth	(3)%	6%	<ul style="list-style-type: none">• Good growth
Operating profit	£21.7m	£33.4m	<ul style="list-style-type: none">• Improved profitability
Underlying operating profit margin	4.3%	7.8%	<ul style="list-style-type: none">• Margin strongly ahead
ROIC	9.0%	11.5%	<ul style="list-style-type: none">• Value-creative return on invested capital
Leverage	1.3x	0.9x	<ul style="list-style-type: none">• Stronger balance sheet with higher investment capacity

Drivers of margin enhancement



Stadium acquisition performing well

- Business performance ahead of expectations; 10.0% margin
- Integration complete
- Synergy a year ahead and site rationalisation underway



- Investing for growth with exciting opportunity pipeline

Appendix: Market growth driving demand for our solutions

Structural growth drivers leading to increasing sales for our sensing, power management and connectivity capabilities

	% revenues as at HY19	Example end application	Key macro trend
 Industrial	44%	<ul style="list-style-type: none">Automation and controlEnergy and smart devicesInfrastructure	<ul style="list-style-type: none">Robotics and industrial automationMore efficient energy usageConnectivity
 Medical	25%	<ul style="list-style-type: none">Advanced surgical devicesImaging and direct patient careLaboratory automation and diagnostics	<ul style="list-style-type: none">Population growth and ageingInnovation in diagnostics and direct patient careMedical device connectivity
 Aerospace and Defence	20%	<ul style="list-style-type: none">Commercial and military aircraftSpace and satelliteDefence systems and vehicles	<ul style="list-style-type: none">Growing passenger numbersElectrification of aircraft to reduce size, weight and power consumptionIncreased defence spending
 Transportation	11%	<ul style="list-style-type: none">Electric and hybrid electric vehiclesRail infrastructure and equipment	<ul style="list-style-type: none">High-speed rail infrastructureGlobal asset and logistics trackingShift away from fossil fuels

Appendix: What we do by division

Potential across all our divisions



Sensors and Specialist Components



Power and Connectivity



Global Manufacturing Solutions

Capability



Sensing



Power



Power



Connectivity



Manufacturing

Offering

Components and higher level assemblies

Components, higher level assemblies and products

Engineering services and manufacturing solutions for products

Nature of sell

Direct through OEM and through broadline and specialist distributors

Engineering solution sell; some power products through distribution

Strategic manufacturing partnership

Market focus



75% industrial



54% aerospace, defence and medical



58% aerospace, defence and medical

Financials (HY 2019)

Revenue: £64.1m
OP: £7.5m
Margin: 11.7%

Revenue: £67.6m
OP: £7.2m
Margin: 10.7%

Revenue: £106.5m
OP: £8.0m
Margin: 7.5%

Margin potential

Margin enhancement through operational excellence; improved gross margin on new products launched

Margin enhancement through moving up the value chain; operational excellence

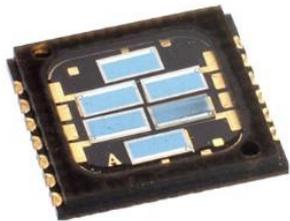
Margin enhancement by increasing percentage of value-added engineering services; operational excellence



Market: Industrial



Application: Robotic arm in automated production



TT product: Sensor – optoelectronic encoder

Appendix: Aligning R&D to structural growth markets

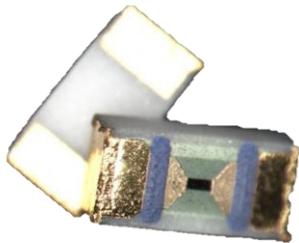
- c.6% CAGR in automation and control to 2023
- Over 20 years experience in industrial automation; over 10 million units shipped
- High resolution sensor optimises robot performance
- Next platform development underway; 2019 launch schedule



Market: Industrial



Application: Detonators for demolition and mining

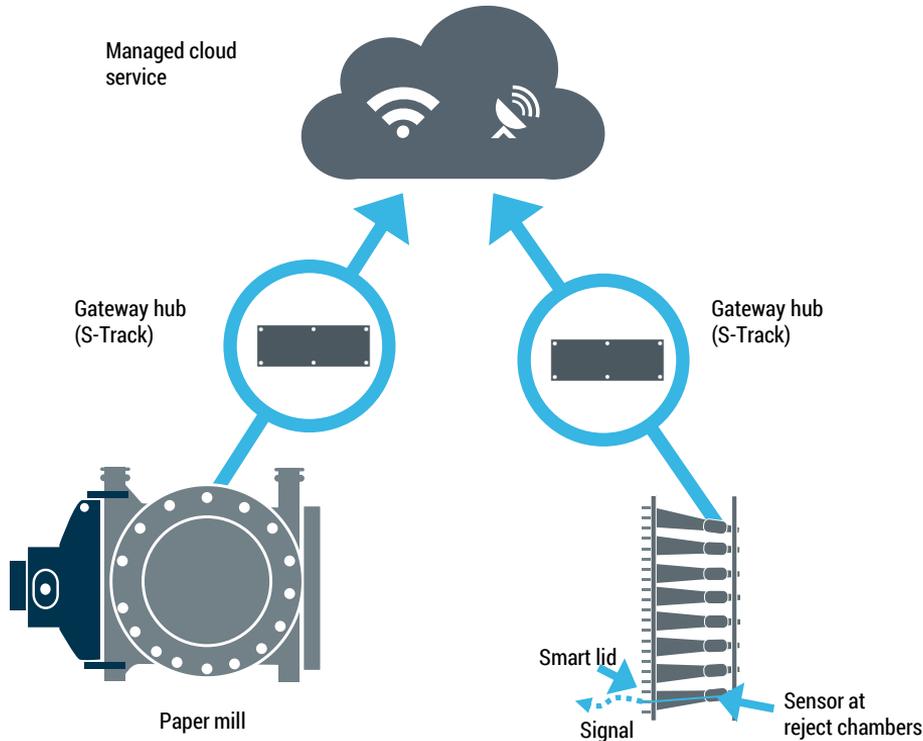


TT product: Power management - signal conditioning

Appendix: Scalable platform approach for revenue growth across multiple markets

- Launched a major new platform for signal conditioning in 2015 following 2 years of development
- New technology delivering
 - Extreme precision
 - Leading moisture resilience
- Technology for aerospace and defence applied to industrial applications

Appendix: Industrial connectivity in action



Example: Paper mill

What

- Developing a connectivity solution for preventative maintenance in a paper mill
- Ability to monitor filtration cylinders for blockages

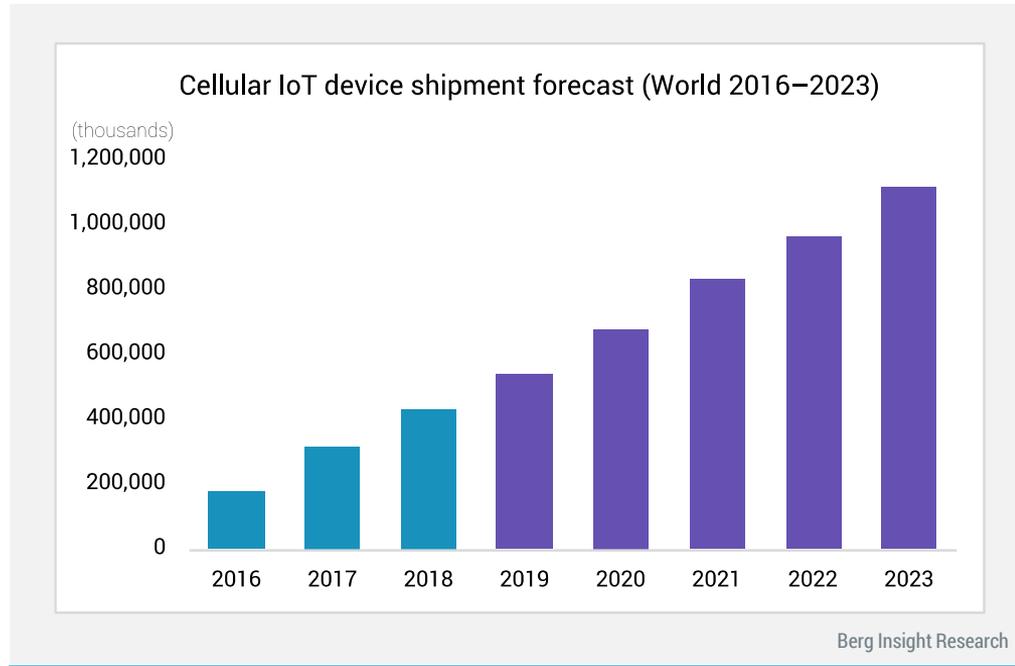
How

- Custom connectivity device can be linked to pressure sensor from Sensors division

Value to customer

- Reduced downtime
- Improved yields
- Optimised preventative maintenance

Appendix: Positive market fundamentals in industrial IoT



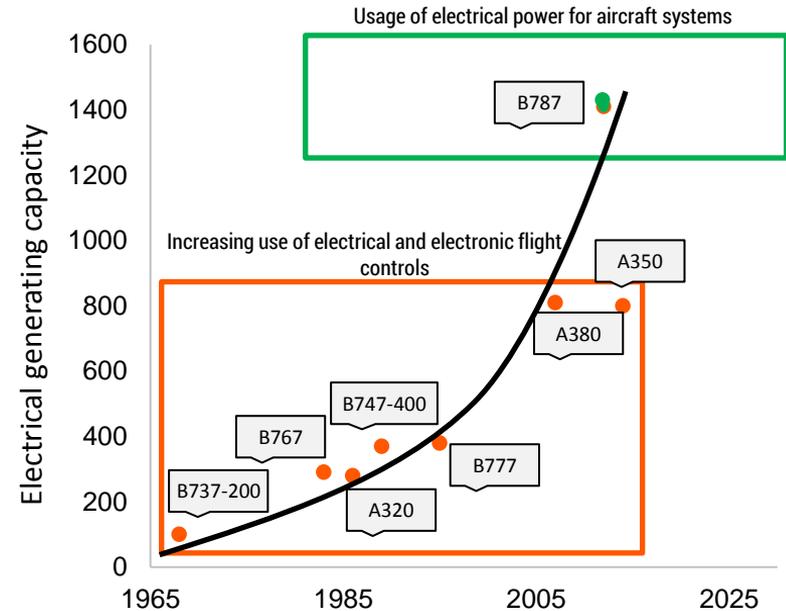
- Large, established market; adoption underway and accelerating
- Exponential growth; appetite to monitor and manage data to improve efficiency



Appendix: Electrification of aircraft means growing demand

- Hydraulics and pneumatics replaced with electrical systems
- Electrification increasing exponentially
- 1% weight decrease results in c.10% increase in profits
- Aviation electronics expected to grow at c.7% CAGR to 2022

Step change in electronic generating capacity in successive platforms



Source: TT Electronics and Roland Berger