



Delivering Excellence Through Innovation & Technology

Ricardo plc - Interim results presentation
February 2016



HIGHLIGHTS – for the half year ended 31 December 2015

- Strong order book at £201m (Jun 2015: £140m)
- Revenue up 31% to £157.8m (Dec 2014: £120.5m)
- Underlying⁽¹⁾ PBT up 43% to £14.4m (Dec 2014: £10.1m)
 - Organic⁽²⁾ underlying revenue up 9% to £130.8m (Dec 2014: £120.5m)
 - Organic⁽²⁾ underlying PBT up 10% to £11.1m (Dec 2014: £10.1m)
- Underlying⁽¹⁾ basic earnings per share up 31% to 20.8p (Dec 2014: 15.9p)
- Net debt of £32.2m after £41.5m net acquisition expenditure (Jun 2015 net funds: £14.3m)
- Interim dividend up 9% to 5.07p per share (Dec 2014: 4.65p)
- Acquisitions of LR Rail and Cascade completed in the period
- Outlook remains positive, strong platform for further growth

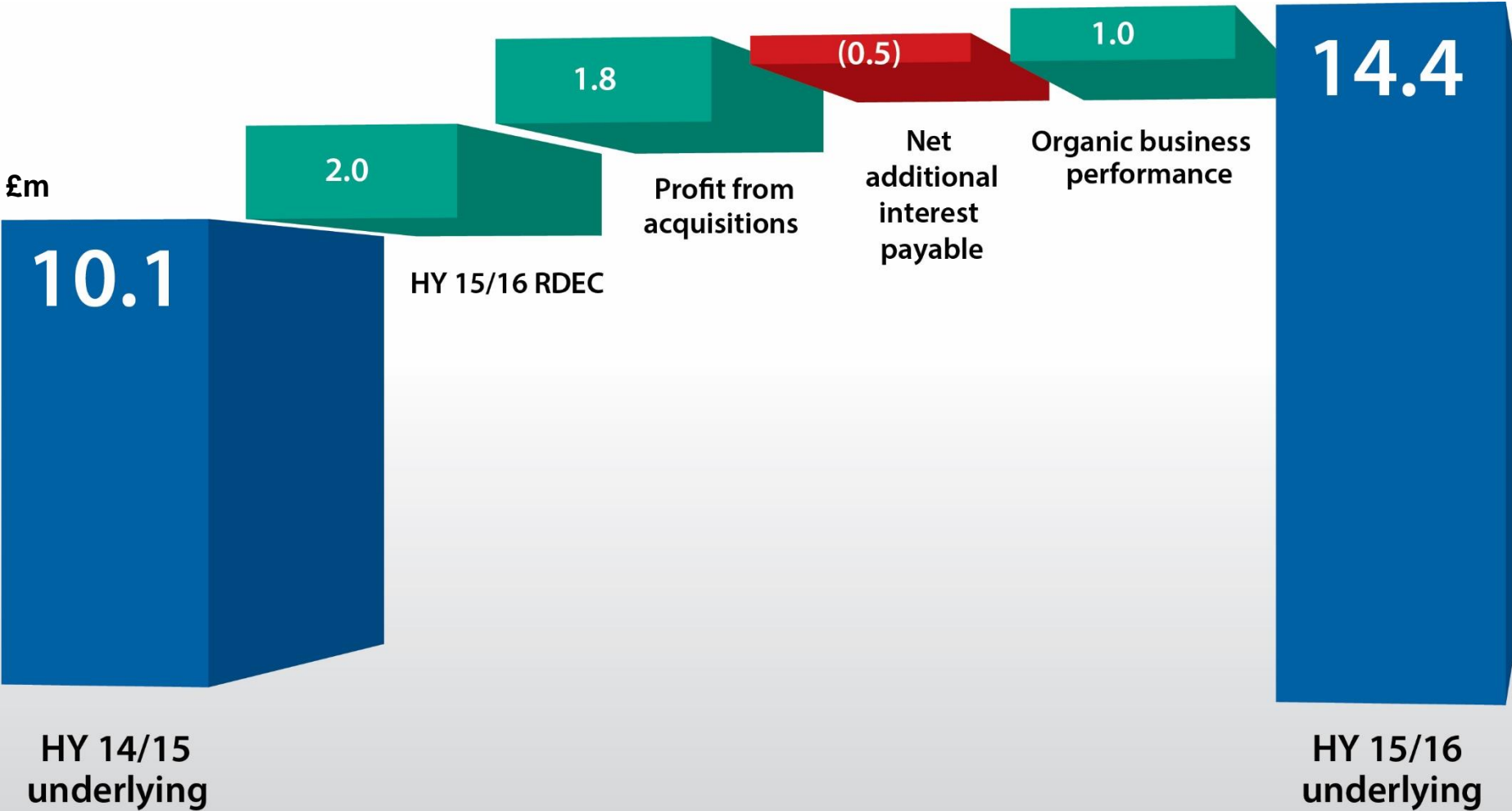
(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim

(2) excluding acquisitions and current year RDEC claim

	Half year ended 31 December		Year ended 30 June
	2015	2014	2015
Order book	£201m	£138m	£140m
Order intake	£163m	£113m	£252m
Operating profit % ⁽¹⁾	9.7%	8.8%	10.8%
Tax rate ⁽²⁾	23.5%	17.8%	18.8%
EPS (basic) ⁽¹⁾	20.8p	15.9p	42.4p
Dividend	5.07p	4.65p	16.60p
Net (debt)/funds	£(32.2)m	£11.0m	£14.3m
Pension deficit (pre-tax)	£18.5m	£19.4m	£20.7m
Closing headcount (including subcontractors)	2,897	2,235	2,308

(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim

(2) includes change in RDEC



£m	Half year ended 31 December		H1 2015/16 v H1 2014/15
	2015 Underlying ⁽¹⁾	2014 Underlying ⁽¹⁾	% change
Revenue	157.8	120.5	31%
Gross profit	62.0	45.3	37%
Administration costs	(46.7)	(34.7)	35%
Operating profit	15.3	10.6	44%
Net finance costs	(0.9)	(0.5)	80%
Profit before tax	14.4	10.1	43%
Taxation charge	(3.5)	(1.8)	94%
Profit for the period	10.9	8.3	31%

(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim
A full income statement including these items is included in the Appendix.

Income Statement – organic excluding impact of acquisitions and RDEC



£m	Half year ended 31 December		H1 2015/16 v H1 2014/15
	2015 Underlying ⁽¹⁾	2014 Underlying ⁽¹⁾	% change
Revenue	130.8	120.5	9%
Gross profit	50.9	45.3	12%
Administration costs	(39.4)	(34.7)	14%
Operating profit	11.5	10.6	8%
Net finance costs	(0.4)	(0.5)	(20)%
Profit before tax	11.1	10.1	10%

(1) excluding impact of acquisitions, current year RDEC claim and specific adjusting items; which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim

Revenue by customer location



External revenue £m	Half year ended 31 December		Year ended 30 June
	2015	2014	2015
UK	72.5	52.5	120.8
Germany	14.2	12.8	25.6
Rest of Europe	17.3	11.7	20.8
Europe total	104.0	77.0	167.2
North America	18.2	19.5	39.2
China	11.8	8.2	20.0
Japan	7.8	9.7	17.6
Rest of Asia	12.6	5.1	9.9
Asia total	32.2	23.0	47.5
Rest of the World	3.4	1.0	3.6
Total	157.8	120.5	257.5

Segmental results – RDEC pulled out separately



Half year ended 31 December

£m	Revenue earned		Underlying operating profit ⁽¹⁾		Underlying operating profit ⁽¹⁾ margin	
	2015	2014	2015	2014	2015	2014
Technical Consulting	130.1	90.1	10.5	6.9	8.1%	7.7%
Performance Products	27.7	30.4	2.8	3.7	10.1%	12.2%
RDEC	-	-	2.0	-	-	-
Total	157.8	120.5	15.3	10.6	9.7%	8.8%

(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim £1.5m

£m	Half year ended 31 December		Year ended 30 June
	2015	2014	2015
Underlying operating profit	15.3	10.6	27.7
Depreciation and amortisation	5.0	4.4	9.2
RDEC	(2.0)	-	-
Working capital (increase)/decrease	(6.1)	2.9	(3.3)
Dividends	(6.3)	(5.7)	(8.1)
Tax paid	(1.3)	(0.1)	(1.3)
Capital expenditure	(7.5)	(8.1)	(15.8)
Pension charge and funding	(2.2)	(2.2)	(4.4)
Net share related (costs)/credit	0.7	(1.0)	(0.4)
Forex movements/other (interest/FX)	(0.6)	(0.3)	1.7
Cash inflow excluding acquisition related payments	(5.0)	0.5	5.3
Acquisition related payments	(41.5)	(2.1)	(3.6)
Cash (outflow)/inflow	(46.5)	(1.6)	1.7
Opening Cash Balance	14.3	12.6	12.6
Closing Cash Balance	(32.2)	11.0	14.3

£m	31 December		30 June
	2015	2014	2015
Tangible assets	52.0	48.4	49.6
Intangible assets	79.4	45.5	44.9
Inventory and receivables	127.4	82.2	86.4
Net funds	(32.2)	11.0	14.3
Trade and other payables	(86.8)	(64.7)	(63.8)
Pension deficit (net of tax)	(14.8)	(15.5)	(16.6)
Other	(2.0)	2.2	1.2
Net assets	123.0	109.1	116.0

Supported by a team of 2,900, a strategy for growth focused on global technical consulting and longer cycle revenues



Megatrends driving focus for solutions:

- **Climate Change**
(emissions and waste)
- **Urbanisation**
(transport, energy, efficiency)
- **Resource Scarcity**
(oil/water usage)
- **Energy Security**
(renewables, bio-fuels)





- VW emissions scandal likely to lead to significant changes to homologation processes, with a greater emphasis on independent third party testing
- Reducing carbon dioxide emissions underpinned by the agreements reached in Paris in December 2015 at COP21
- Demand for new technology and product development continues in Asia with continuing interest in hybrid technologies
- Growth of California as a technology hub for the automotive industry, with new players
- New urban mobility products, electric scooters to electric vehicles under development
- Volatility in world markets but continued economic growth in Asia

COP21 – Commitment to a path to decarbonisation

- ~150 world leaders, 187 country climate action plans, left with an agreed global plan
- To keep warming “well below” 2°C temperature rise, with efforts to limit rise to 1.5° C
- To peak emissions “as soon as possible” with net zero by second half of the century
- To be achieved by a balance of emissions and sinks (e.g. forests)
- Pathway to zero means a need for decarbonisation in all economies over time
- 5 year country plans with bi-annual reports, 5 year global stocktake and new 5 year plans
- “Facilitative”, “peer pressure”, “transparency”, “face on world stage”
- Intended Nationally Determined Contributions (INDCs) submitted before Paris moving to NDCs
- Post-Paris is all about Implementation



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11



- 16 INDC submissions (more than any other company) and supported many more countries
- Side seminars, whitepaper on implementation
- ~150 business development opportunities from the COP



- Post-Paris activities
 - Client webinar for policy makers and donors with more than 500 registrations
 - Workshop in Brazil for Latin American countries
 - Developing proposal for Chile on how to set up and report next 5 year plan
 - Planning in-country missions to South East Asia and Kenya
 - Assisting donors on planning their support for INDCs implementation
- Cities leading the way on implementation
 - C40: developing long term decarbonisation pathways for 8 African Cities
 - In discussions with Indian and Chinese cities on emissions monitoring and pollution control

Impacts from “Diesel-gate” evolving and widespread – Expect wider opportunities in electrification



● Impacts from Defeat Device fitted to US VW diesels:

- Reputational damage to the Auto Industry – assumed to be “cheating” in emissions tests and not taking environmental responsibilities seriously
- Real world vs drive cycle tests now synonymous with “cheating”
- OEM internal audits of engine management software
- Re-evaluation of future powertrain strategies – less reliance on diesel for CO₂ reduction - planning more electrification/gasoline/hybrid & reducing diesel market share
- Governments and Regulators to be more pro-active in checking compliance

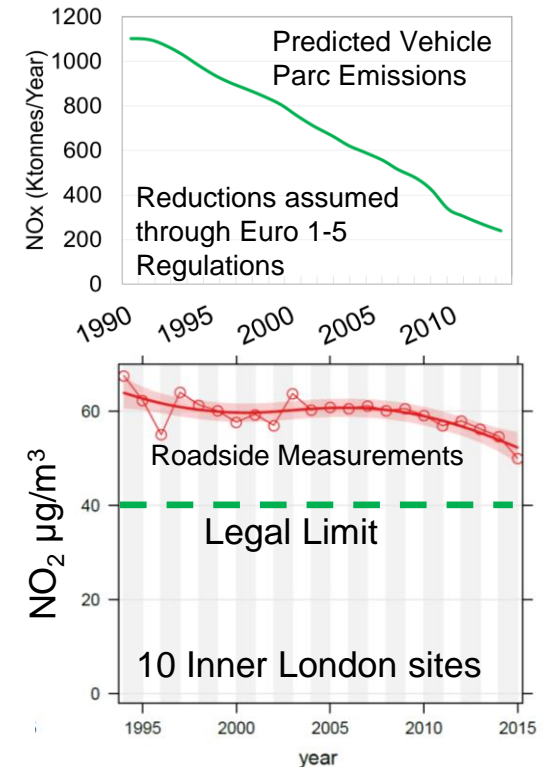
● Subsequent impacts for Ricardo business:



- Short term increase in demand for diesel vehicle emissions tests by legislators
- Increase in electrification/hybrid activity to meet new OEM product mix



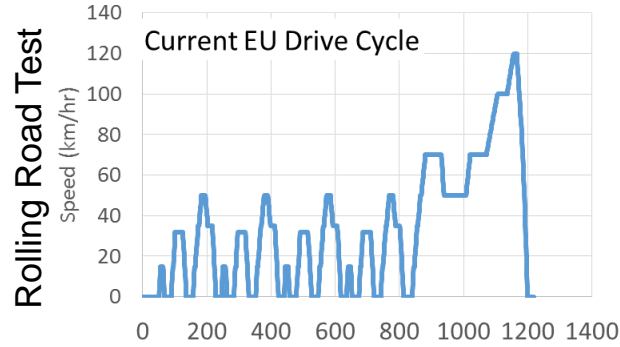
- Reduction in VW sales, penalties and lawsuits leading to cut backs in R&D expenditure and more competitive market in general?
- Potential reduction in demand for future diesel engine design/development supply



Future EU regulation will be based on a revised but repeatable drive cycle but supported by a longer, random (unrepeatable) road test



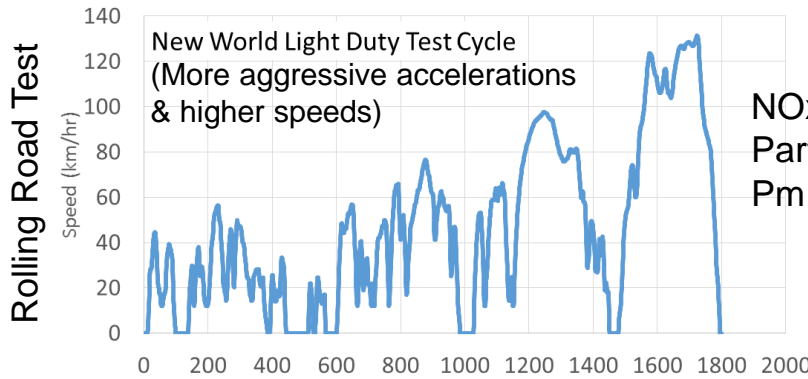
Current European Regulations



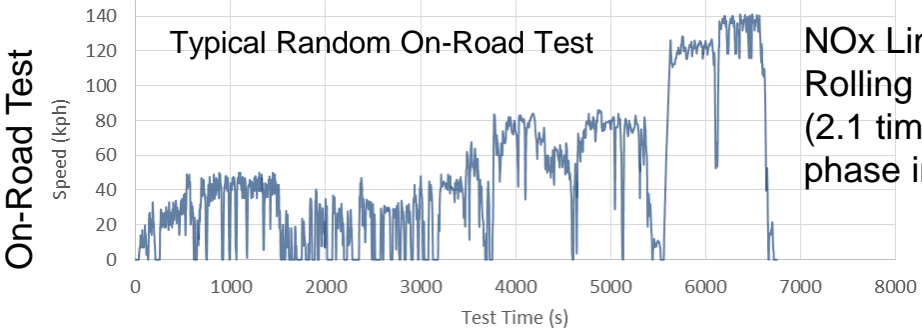
Diesel Emissions Limits:

NOx: 0.08 g/km
 Particulate: 4.5 mg/km
 Pm Number: $6 \times 10^{11}/m^3$

European Regulations from 2017+



NOx: 0.08 g/km
 Particulate: 4.5 mg/km
 Pm Number: $6 \times 10^{11}/m^3$



NOx Limit: 1.5 times Rolling Road Cycle
 (2.1 times during phase in period)

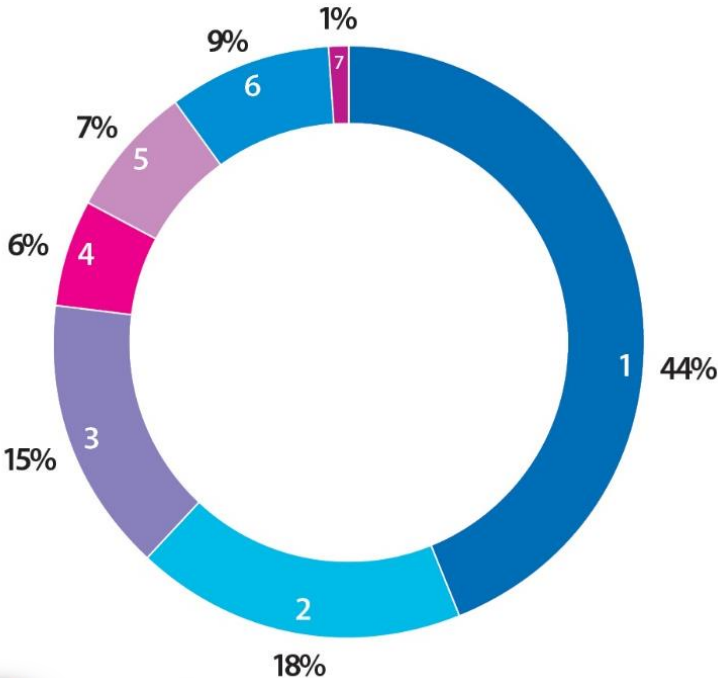


- Acquisition of Lloyd's Register Rail and Cascade, and performing to expectations
- Strong levels of order intake in our major automotive markets
- Ricardo Defense Systems established and busy
- Californian business winning large electric vehicle programs
- Extension to McLaren production line complete, double shift initiated
- Energy & Environment (formerly AEA) high profile support to COP21

A continued good balance of order intake and pipeline from across the globe

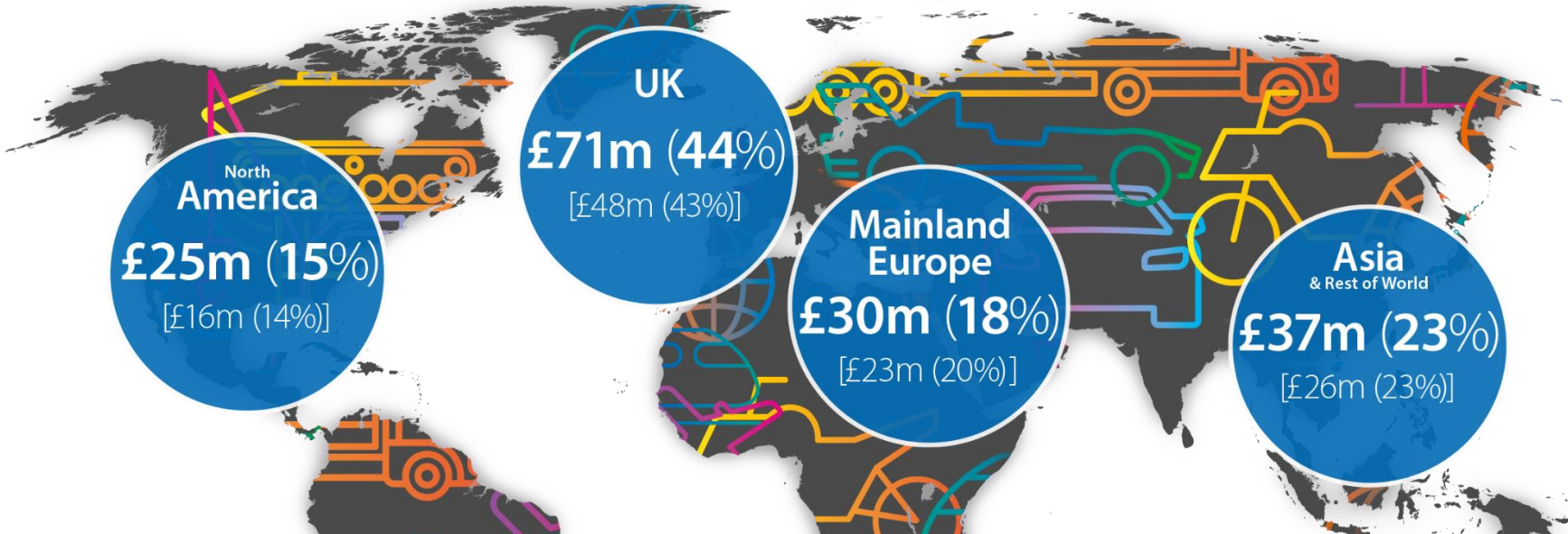


1. UK
2. Mainland Europe
3. North America
4. China
5. Japan
6. Rest of Asia
7. Rest of World



H1 2015/16
 Order Intake £163m

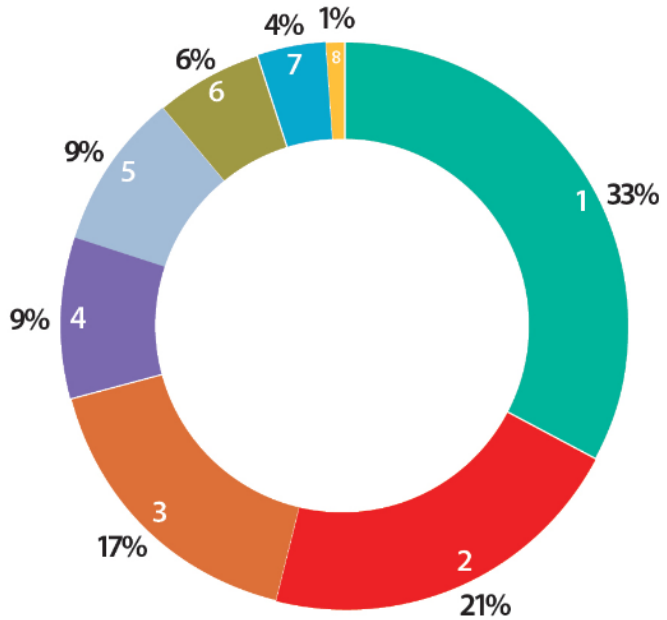
[H1 2014/15
 Order Intake £113m]



Well balanced market sector order intake with a strong growth in Rail and Automotive



1. Automotive
2. High Performance Vehicles & Motorsport
3. Rail
4. Commercial Vehicle
5. Energy & Environment
6. Defence
7. Motorcycle
8. Off-Highway



H1 2015/16
Order Intake £163m
 [H1 2014/15
 Order Intake £113m]

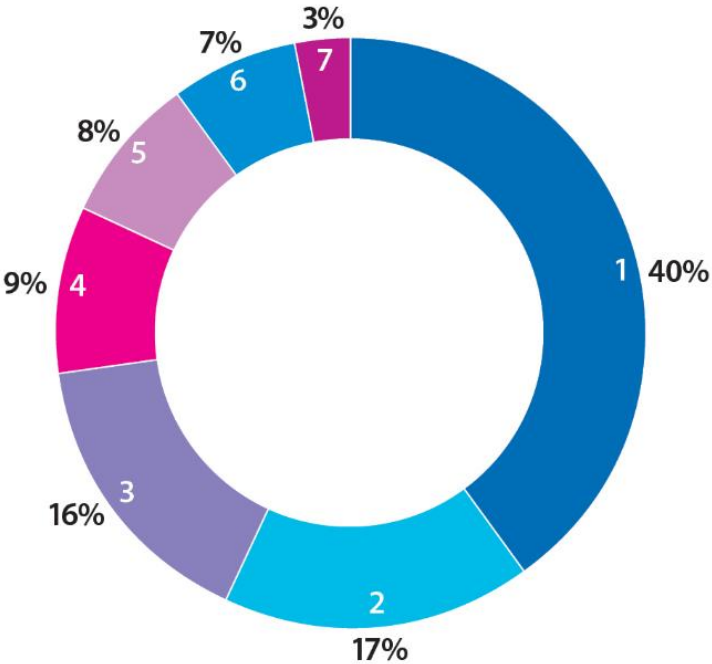
Rail	Automotive	HPV&M	Defence	Motorcycle	Off-Highway	CV	E&E*
							
£28m [£1m]	£54m [£39m]	£34m [£22m]	£10m [£3m]	£6m [£1m]	£1m [£3m]	£15m [£19m]	£15m [£25m]

*Includes order intake previously reported under clean energy and power generation

Orders and pipeline well balanced across product and service areas



- 1. Engines
- 2. Rail
- 3. Driveline & Transmission Systems
- 4. Vehicle Systems
- 5. Hybrid & Electric Systems
- 6. Energy & Environment
- 7. Strategic Consulting



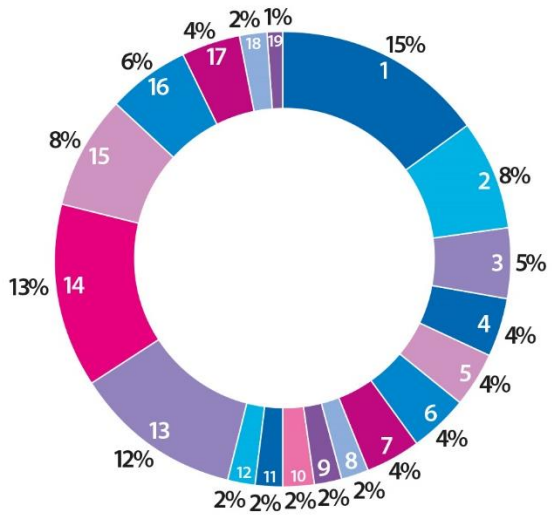
H1 2015/16
 Order Intake £163m
 [H1 2014/15
 Order Intake £113m]

Rail	Engines	HES	VS	DTS	E&E	RSC
						
£27m [n/a]	£65m [£50m]	£13m [£4m]	£15m [£10m]	£26m [£25m]	£12m [£15m]	£5m [£9m]

Diverse customer mix, with a good level of multi year business



Ricardo plc External Order Intake by Customer for the six months ended 31 December 2015



- 1. Key Client 1
- 2. Key Client 2
- 3. Key Client 3
- 4. Key Client 4
- 5. Key Client 5
- 6. Key Client 6
- 7. Key Client 7
- 8. Key Client 8
- 9. Key Client 9
- 10. Key Client 10
- 11. Key Client 11
- 12. Key Client 12
- 13. Rest of UK
- 14. Rest of Asia
- 15. Rest of Europe
- 16. Rest of North America
- 17. Rest of World
- 18. UK Government
- 19. US Defence



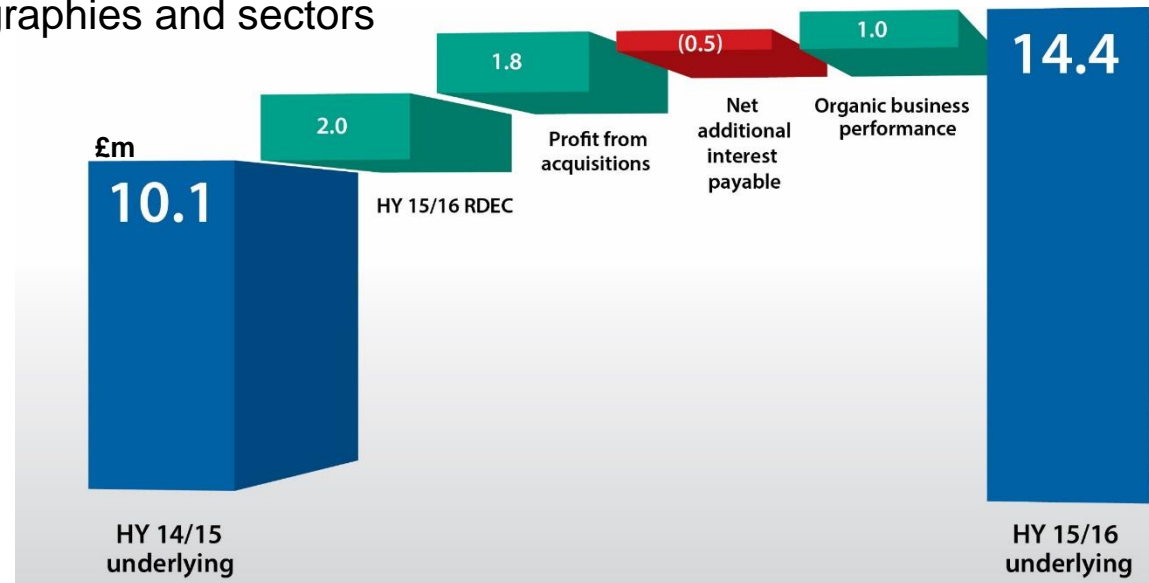
H1 2015/16
Order Intake £163m

[H1 2014/15
Order Intake £113m]

Summary for period and outlook



- Strong overall performance driven by acquisitions and organic growth
 - Orders up 44% to £163m (Dec 2014: £113m)
 - Revenue up 31% to £157.8m (Dec 2014: £120.5m)
 - Underlying⁽¹⁾ PBT up 43% to £14.4m (Dec 2014: £10.1m)
- Record period end order book of £201m at end of December 2015
- Markets remain very active across all geographies and sectors
- Business diversification continued
- A strong platform for future growth



(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition costs, and prior year RDEC claim



Income Statement – Underlying and total Group with current year RDEC split out



Half year ended 31 December

£m	2015			2014			Year on Year growth	
	Underlying	Specific adjusting items	Total	Underlying	Specific adjusting items	Total	Underlying	Total
Revenue	157.8	-	157.8	120.5	-	120.5	31%	31%
Gross profit	60.7	-	60.7	45.3	-	45.3	34%	34%
Administration costs excl. RDEC	(47.4)	(1.2)	(48.6)	(34.7)	(1.1)	(35.8)	37%	36%
Operating profit excl. RDEC	13.3	(1.2)	12.1	10.6	(1.1)	9.5	25%	27%
Current period RDEC claim	2.0	-	2.0	-	-	-	-	-
Operating profit	15.3	(1.2)	14.1	10.6	(1.1)	9.5	44%	48%
Net finance costs	(0.9)	-	(0.9)	(0.5)	-	(0.5)	80%	80%
Profit before tax	14.4	(1.2)	13.2	10.1	(1.1)	9.0	43%	47%
Taxation charge	(3.5)	0.4	(3.1)	(1.8)	0.2	(1.6)	94%	94%
Profit for the period	10.9	(0.8)	10.1	8.3	(0.9)	7.4	31%	36%

(1) Other specific adjusting items comprise acquisition costs, amortisation of acquired intangible assets and prior year RDEC claim

Specific adjusting items



£m	Half year ended 31 December		Year ended 30 June
	2015	2014	2015
Amortisation of acquisition related intangible assets	1.7	0.6	1.3
Acquisition-related costs associated with LR Rail	0.6	-	2.1
Other acquisition-related costs	0.4	0.5	0.5
Income for claims under the RDEC scheme in respect of prior years	(1.5)	-	-
Total specific adjusting items	1.2	1.1	3.9

Half Year ended 31 December 2015

£m	Underlying ⁽¹⁾	Current Year	Underlying ⁽¹⁾
	pre RDEC	RDEC	post RDEC
Revenue	157.8	-	157.8
Gross profit	60.7	1.3	62.0
Administration costs	(47.4)	0.7	(46.7)
Operating profit	13.3	2.0	15.3
Net finance costs	(0.9)	-	(0.9)
Profit before tax	12.4	2.0	14.4
Taxation charge	(1.9)	(1.6)	(3.5)
Profit for the period	10.5	0.4	10.9

(1) excluding specific adjusting items, which comprise amortisation of acquired intangible assets, acquisition-related costs and prior year RDEC claim

- LR Rail acquired on 1st July 2015 – 440 people Railway consultancy, assurance and engineering business
- Cascade acquired 18th August 2015 – 32 people UK water consultancy business, now an additional practice area of E&E

Company	Date Acquired	No. people	Net Cash Paid	Annualised	
				Revenue	Operating Profit
LR Rail	1 Jul 15	440	£40.6m ¹	c. £50m	c. £4m
Cascade	18 Aug 15	32	£3.2m	c. £3m	c. £0.4m

¹ LR Rail consideration £42.5m; £40.6m paid to date and £1.9m to pay on completion of J.V. subject to final working capital adjustments

Global tailpipe and CO₂ emissions legislation adherence are “must haves” in the development budget of many of our clients



	2010	2015	2020	2025	
Passenger car, LCV & HPV	Europe	Euro 5	Euro 6	Euro 7?	
		Pass Car 130 g/km		Pass Car 95 g/km	
	US (49 States)	Tier 2	Tier 3	54.5 mpg Fleet (combined cars & LCVs)	
		27.5/23.5 mpg Cars/LCVs	37.8/28.8 mpg Cars/LCVs		
	California	LEV II (2009)	LEV III	54.5 mpg Fleet (combined cars & LCVs)	
	27.6/20.3 mpg Fleet/LCVs	43.4/26.8 mpg Fleet/LCVs			
China	Euro 4	Euro 5	56 mpg fleet average		
	18-45 mpg	24-50 mpg weight classed			
Japan	Post New Long Term		57/63 mpg Gasoline/Diesel		
	39.5/35.8 mpg Cars/LCVs				
Motorcycles & personal transportation	Europe	Euro 3	Euro 4	Euro 5	
	US (49 States)	Classes I, II & III	Harmonisation with California		
	California	Tier 2			
	China	Stage III	WMTC to be adopted with new Stage IV emission limits		
	Japan	ISO 6460 Limits 0 - 125cc / > 125 cc	ISO 6460 and WMTC	Harmonised to EU	
	Taiwan	13.1-48.2 km/litre			
Commercial vehicles (medium & heavy duty truck)	Europe	Euro V	Euro VI	Euro VII?	
	US (49 States)	EPA 10	Phase 1	Phase 2	
				Federal CO ₂ standards	
	California	CARB 10	Phase 1	Phase 2	
				Federal CO ₂ standards	
China	Euro III	Euro IV	Euro V	Fuel economy standards in place	
Japan	Post New Long Term (decreasing NOx limits in stages)				
	World's first heavy duty fuel economy legislation				
Agricultural & industrial vehicles	Europe	Stage IIIA	Stage IIIB	Stage IV	
	US	Tier 4 Interim	Tier 4 Final	Stage V	
	China	Stage II	Stage III	Stage IV	
	Japan	S.I./Diesel standards	New standards similar to Euro IIIB		
Rail	Europe	Stage IIIA	Stage IIIB		
	US	Tier 2	Tier 3	Tier 4 switch & line haul locomotives	
	India	Planning adoption of US Tier 2 regulations			
	Australia	Not yet regulated			