



# PRELIM RESULTS FY22/23

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September 2023



## Disclaimer statement

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This presentation contains certain statements that are forward-looking. They appear in a number of places throughout this presentation and include statements regarding the intentions, beliefs and/or current expectations of Ricardo plc (the “Company”)

By their nature, these statements involve uncertainty since future events and circumstances can cause results and developments to differ materially from those anticipated. The forward-looking statements reflect knowledge and information available at the date of preparation of this presentation and, unless otherwise required by applicable law, the Company undertakes no obligation to update or revise these forward-looking statements. Nothing in this presentation should be construed as a profit forecast.

The Company and its Directors accept no liability to third parties.

# AGENDA

OPENING REMARKS

Graham Ritchie, CEO

FINANCIAL RESULTS

Judith Cottrell, CFO

STRATEGY UPDATE

Graham Ritchie, CEO

CLOSING REMARKS

Graham Ritchie, CEO

# A YEAR OF CONTINUED STRONG GROWTH AND TRANSFORMATION



## Delivering in line with the Board's expectations

Revenue from continuing operations increased by 17%

## Groupwide momentum in driving performance

Record order intake up 23% to £522m, delivering a record year end order book of £395m

## Advancing our transformation in line with our strategy

Two high growth, high margin acquisitions completed in FY22/23

## A&I structural changes implemented in H2

Initiatives support operating profit improvements in FY23/24

## Stronger execution by bringing us closer as 'One Ricardo'

Aligned value propositions to enable the Group to scale at pace



# FINANCIAL RESULTS

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Judith Cottrell

## JUDITH COTTRELL FIRST IMPRESSIONS

### Forming part of a refreshed leadership team

Strong leaders in our business units  
Functional talent and expertise

### Re-joining at an exciting time for the business

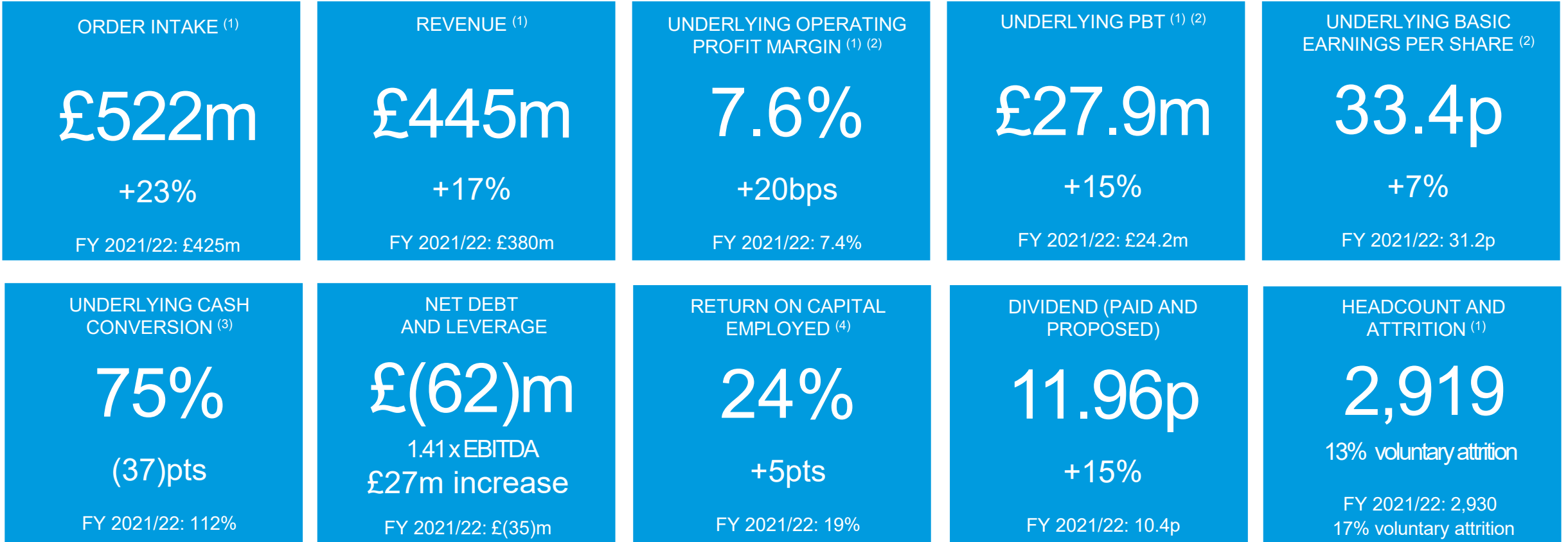
Opportunity to create value for all stakeholders through the portfolio transition  
At the forefront of environmental, energy and mobility sectors

### Unconstrained in our market growth potential

Operating in dynamic markets with significant growth opportunities  
Growing order book



## A STRONG FULL YEAR PERFORMANCE



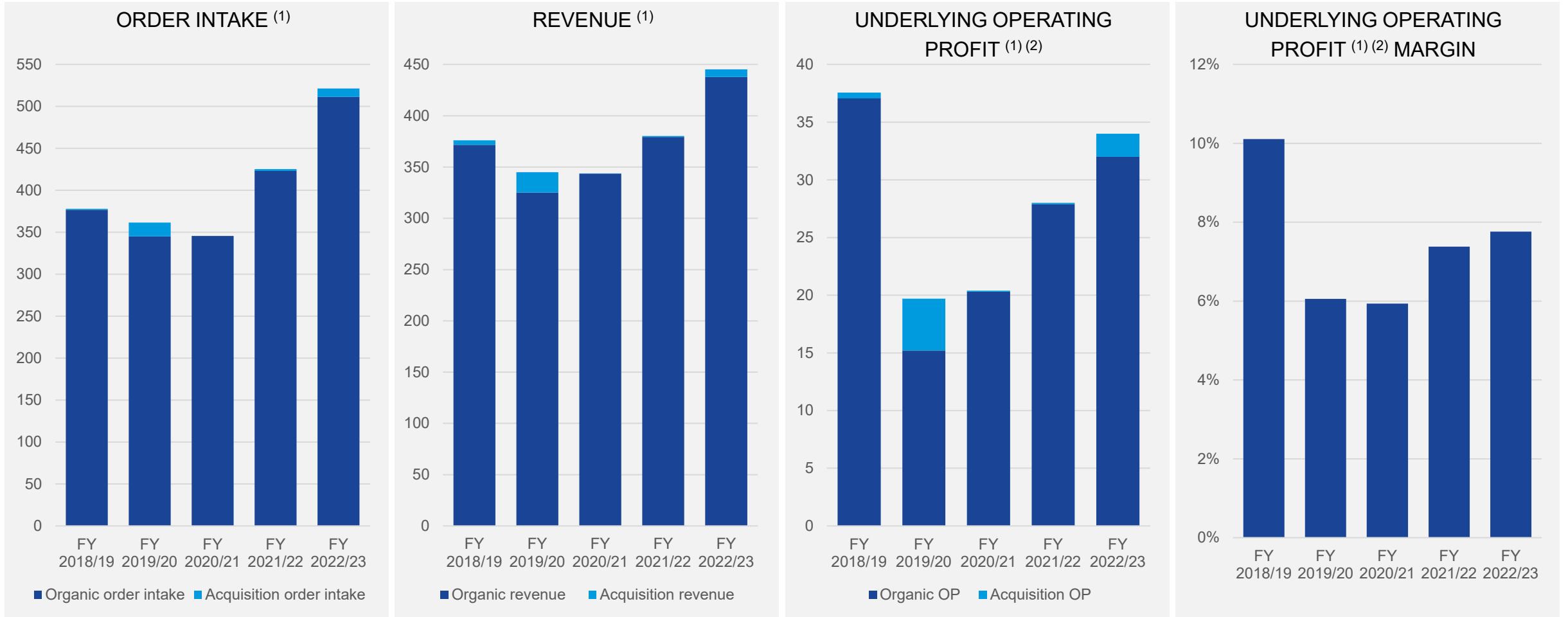
(1) Figures presented on a continuing operations basis.

(2) Excluding specific adjusting items, which comprise asset impairment, amortisation of acquired intangible assets, acquisition-related expenditure, ERP system implementation costs, reorganisation costs and non-recurring items.

(3) Cash from operations, adjusted for the cash impact of specific adjusting items, divided by EBITDA.

(4) Return on capital employed defined as underlying operating profit from continuing operations for the last 12 months, divided by net assets excluding goodwill, acquired intangible assets, net debt, lease receivables and liabilities, retirement benefit surplus, deferred and current tax, derivative financial assets and liabilities and long-term provisions. The prior year comparative has been restated to exclude lease receivables and liabilities in accordance with the current year.

# SUSTAINING OUR RETURN TO GROWTH ON ALL PERFORMANCE METRICS



(1) Figures presented on a continuing operations basis.

(2) Excluding specific adjusting items, which comprise asset impairment, amortisation of acquired intangible assets, acquisition-related expenditure, ERP system implementation costs, reorganisation costs and non-recurring items.



## REVENUE MATERIALLY AHEAD OF LAST YEAR

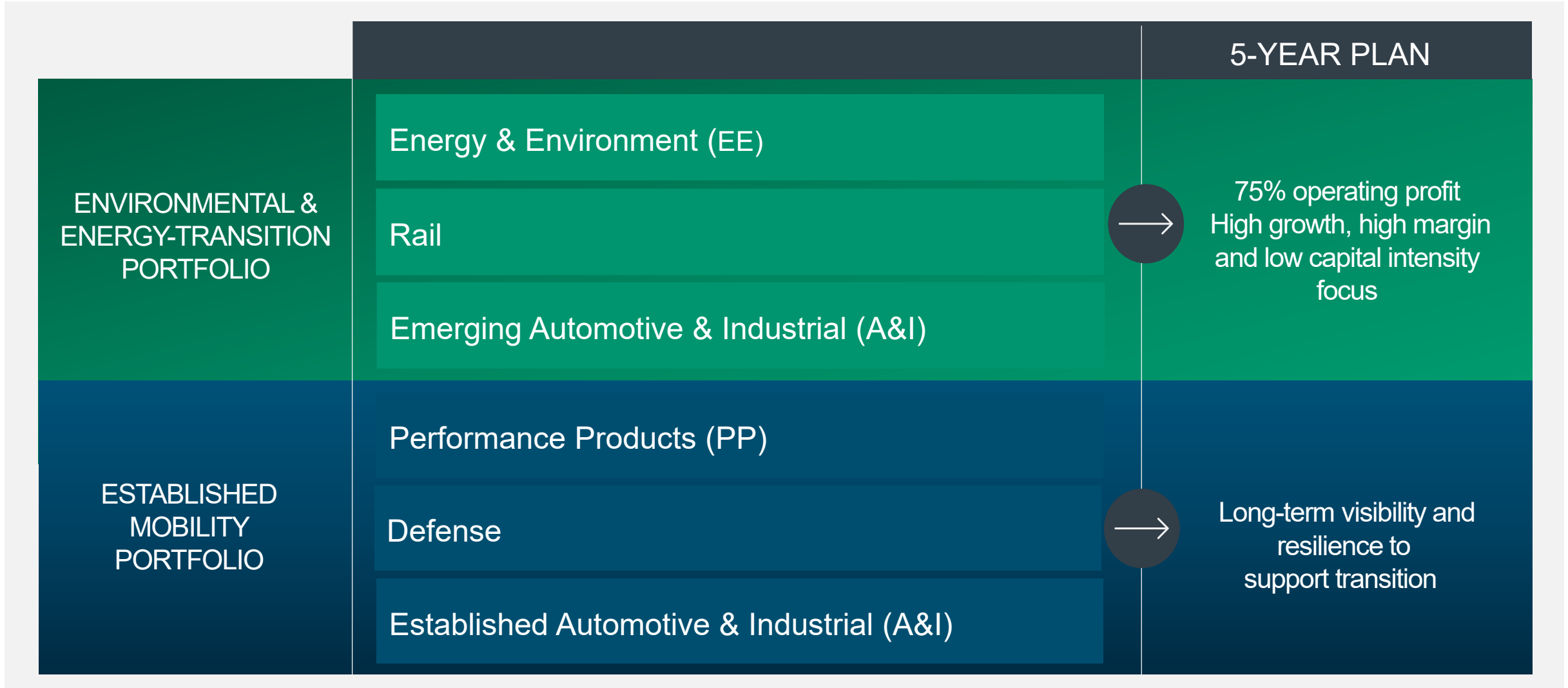
£m	Year ended 30 June		Year-on-year movement	
	2023 Underlying <sup>(1)</sup>	2022 Underlying <sup>(1) (2)</sup>	% change	% change constant currency <sup>(3)</sup>
Revenue	445.2	380.2	17%	14%
Gross profit	126.3	119.5	6%	3%
<i>Gross profit margin</i>	28.4%	31.4%	(300)bp	(280)bp
Indirect costs	(92.3)	(91.5)	1%	(1)%
<i>Indirect costs % of revenue</i>	(20.7)%	(24.1)%	(340)bp	(310)bp
Operating profit	34.0	28.0	21%	16%
<i>Operating profit margin</i>	7.6%	7.4%	20bp	20bp
Net finance costs	(6.1)	(3.8)	61%	56%
Profit before tax	27.9	24.2	15%	10%
Taxation charge	(7.3)	(6.5)	12%	12%
<b>Profit for the period</b>	<b>20.6</b>	<b>17.7</b>	<b>16%</b>	<b>9%</b>

(1) Excluding specific adjusting items, which comprise asset impairment, amortisation of acquired intangible assets, acquisition-related expenditure, ERP system implementation costs, reorganisation costs and non-recurring items. A full income statement, including specific adjusting items, is included in the Appendix.

(2) The prior period has been re-presented to reclassify certain costs, such as engineering software licenses and subscriptions and running costs related to testing and manufacturing facilities, from indirect costs to cost of sales in a manner that is consistent with their classification in the current period.

(3) The prior period results have been restated at current period FX rates.

# ON TRACK TO DELIVER OUR PORTFOLIO TRANSFORMATION



# ENVIRONMENTAL & ENERGY TRANSITION PORTFOLIO FINANCIAL RESULTS

Double digit revenue growth and strong margin accretion

Year ended 30 June												
£m	Order intake			Revenue			Underlying operating profit <sup>(2)</sup>			Underlying operating profit margin <sup>(2)</sup>		
	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>
Energy & Environment (EE)	111.5	74.4	50%	88.5	67.4	31%	16.0	11.0	45%	18.1%	16.3%	180bp
Rail	89.2	87.9	1%	73.5	76.7	(4)%	8.0	9.7	(18)%	10.9%	12.6%	(170)bp
Emerging Automotive & Industrial (A&I) <sup>(1)</sup>	84.3	104.6	(19)%	82.3	71.1	16%	10.6	2.8	279%	12.9%	3.9%	900bp
<b>Total</b>	<b>285.0</b>	<b>266.9</b>	<b>7%</b>	<b>244.3</b>	<b>215.2</b>	<b>14%</b>	<b>34.6</b>	<b>23.5</b>	<b>47%</b>	<b>14.2%</b>	<b>10.9%</b>	<b>330bp</b>

(1) The A&I Established and A&I Emerging operating segments were previously reported as the A&I operating segment. Comparative numbers have been restated.

(2) The prior period results have been restated at current period FX rates.

# ESTABLISHED MOBILITY PORTFOLIO FINANCIAL RESULTS

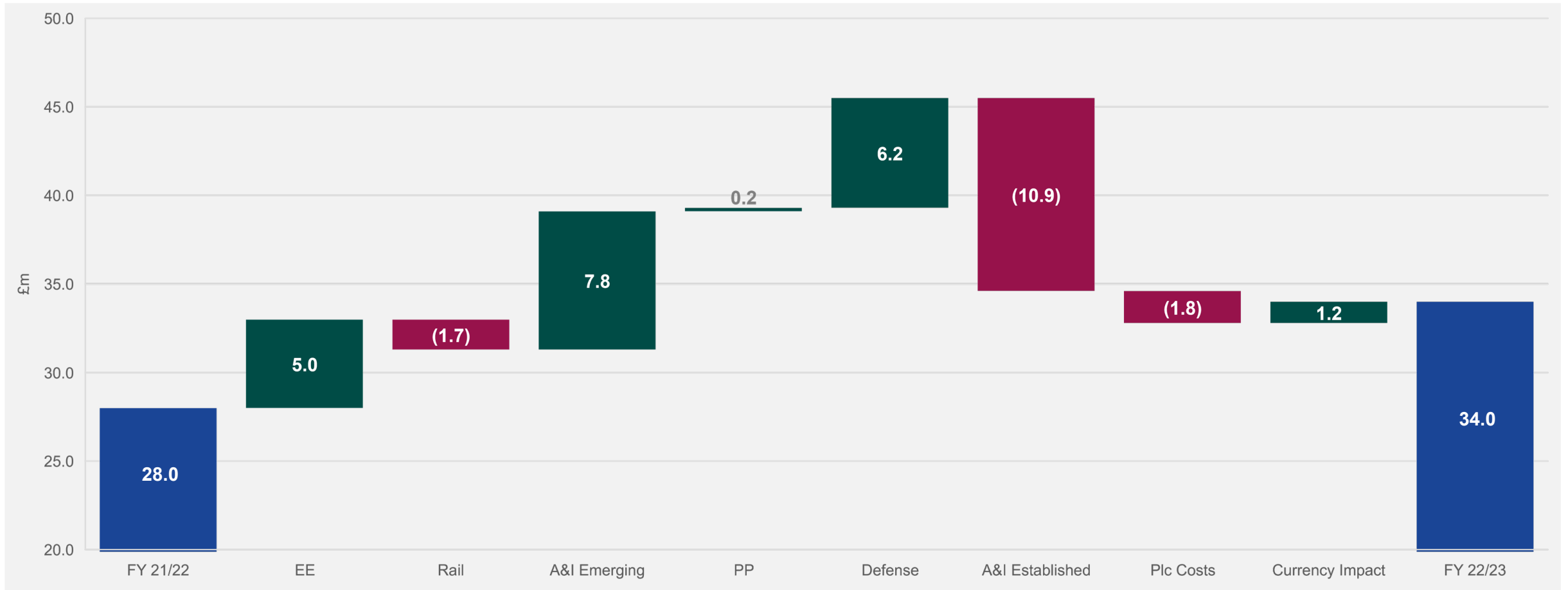
Continued to deliver order and revenue growth however operating profit declined due to A&I restructure

Year ended 30 June												
£m	Order intake			Revenue			Underlying operating profit <sup>(2)</sup>			Underlying operating profit margin <sup>(2)</sup>		
	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>	2023	2022 at constant currency <sup>(2)</sup>	% change constant currency <sup>(2)</sup>
Performance Products (PP)	115.3	75.1	54%	84.7	73.7	15%	9.0	8.8	2%	10.6%	11.9%	(130)bp
Defense	85.0	60.9	40%	88.6	49.8	78%	13.4	7.2	86%	15.1%	14.5%	60bp
Established Automotive & Industrial (A&I) <sup>(1)</sup>	36.2	37.0	(2)%	27.6	53.5	(48)%	(5.8)	5.1	(214)%	(21.0)%	9.5%	(3050)bp
<b>Total</b>	<b>236.5</b>	<b>173.0</b>	<b>37%</b>	<b>200.9</b>	<b>177.0</b>	<b>14%</b>	<b>16.6</b>	<b>21.1</b>	<b>(21)%</b>	<b>8.3%</b>	<b>11.9%</b>	<b>(360)bp</b>
<b>Total Group</b>	<b>521.5</b>	<b>439.9</b>	<b>19%</b>	<b>445.2</b>	<b>392.2</b>	<b>14%</b>	<b>34.0</b>	<b>29.2</b>	<b>16%</b>	<b>7.6%</b>	<b>7.4%</b>	<b>20bp</b>

(1) The A&I Established and A&I Emerging operating segments were previously reported as the A&I operating segment. Comparative numbers have been restated.

(2) The prior period results have been restated at current period FX rates.

# PORTFOLIO TRANSITION CLEAR IN OPERATING PROFIT BRIDGE



## SPECIFIC ADJUSTING ITEMS - CASH NEUTRAL IN THE YEAR

Specific adjusting items to support the transformation

- A&I restructuring charges include goodwill and asset impairments of £19.8m non-cash in relation to the Established Mobility business
- A&I restructuring costs reflect the business transitioning towards Emerging solutions
- Rail & EE restructuring costs are a result of the teams move towards working together as a combined Clean Energy and Environmental Services business
- Overall in FY23, the cash cost of restructuring activities are more than covered by asset disposal proceeds

£m	Year ended 30 June	
	Income statement	Cash flow
	2023	2023
<b>Continuing operations</b>		
Amortisation of acquisition-related intangible assets	(4.6)	-
Acquisition-related earn-out	(4.5)	-
Acquisition-related transaction & integration costs	(1.7)	(1.6)
A&I: restructuring costs	(3.6)	(6.0)
A&I: asset impairment and decommissioning	(19.8)	(0.2)
Rail/EE: restructuring costs	(1.5)	(2.0)
Central: restructuring costs	(0.2)	(0.2)
<b>Total from continuing operations before tax</b>	<b>(35.9)</b>	<b>(10.0)</b>
<b>Discontinued operation</b>		
Gain on disposal and external fees relating to the disposal	7.4	11.9
<b>Total Group before tax</b>	<b>(28.5)</b>	<b>1.9</b>
FY 2021/22 Total Group before tax	(13.1)	(3.6)

# CASH FLOW AND NET DEBT

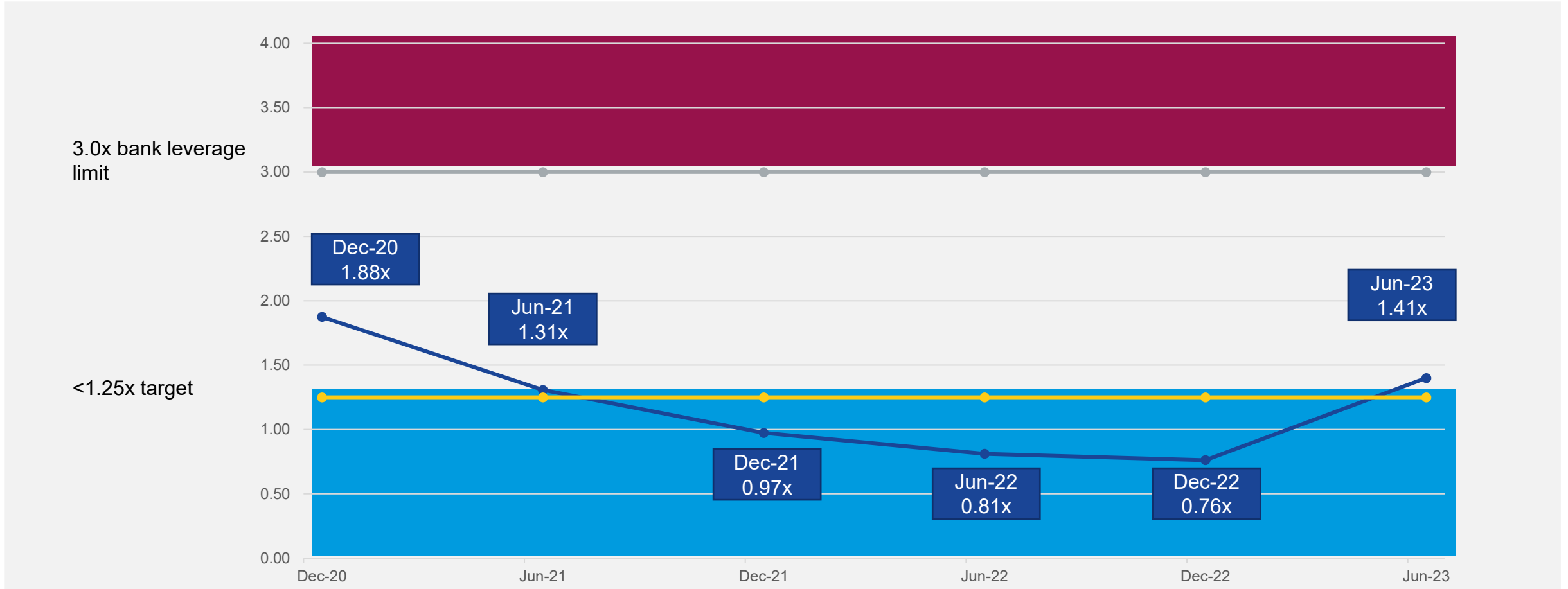
Two-year average cash conversion in line with 90% target

£m	Year ended 30 June		
	2023	2022	% change
EBITDA	48.6	48.7	-
Share based payments, Fair value losses on derivatives, Loss on disposal	2.6	0.7	271%
Working capital (increase)/decrease	(12.8)	8.2	(256)%
Pension charge and funding	(1.8)	(3.0)	(40)%
<b>Underlying cash from operations</b>	<b>36.6</b>	<b>54.6</b>	<b>(33)%</b>
<b>Underlying cash conversion %</b>	<b>75%</b>	<b>112%</b>	<b>(37)pts</b>
Net interest paid	(7.5)	(3.5)	114%
Tax paid	(4.6)	(2.8)	64%
Net capital expenditure	(10.6)	(14.2)	(25)%
Principal element of lease payments	(5.1)	(4.5)	13%
Dividends and return of capital	(6.7)	(5.0)	34%
Purchase of own shares, Cash flow hedges, FX, Financing fees	(6.2)	1.2	(617)%
<b>Movement in net debt before acquisition &amp; restructuring related costs</b>	<b>(4.1)</b>	<b>25.8</b>	<b>(116)%</b>
Proceeds from sale of discontinued operation, net of fees	11.9	(0.8)	(1588)%
Restructuring costs	(8.4)	(3.2)	163%
Acquisition related costs	(26.1)	(10.3)	153%
<b>Movement in net debt <sup>(1)</sup></b>	<b>(26.7)</b>	<b>11.5</b>	<b>(332)%</b>
Opening net debt	(35.4)	(46.9)	
Closing net debt	(62.1)	(35.4)	

(1) Cash outflow net of movement in borrowings.

# LOW LEVERAGE AND GOOD HEAD ROOM

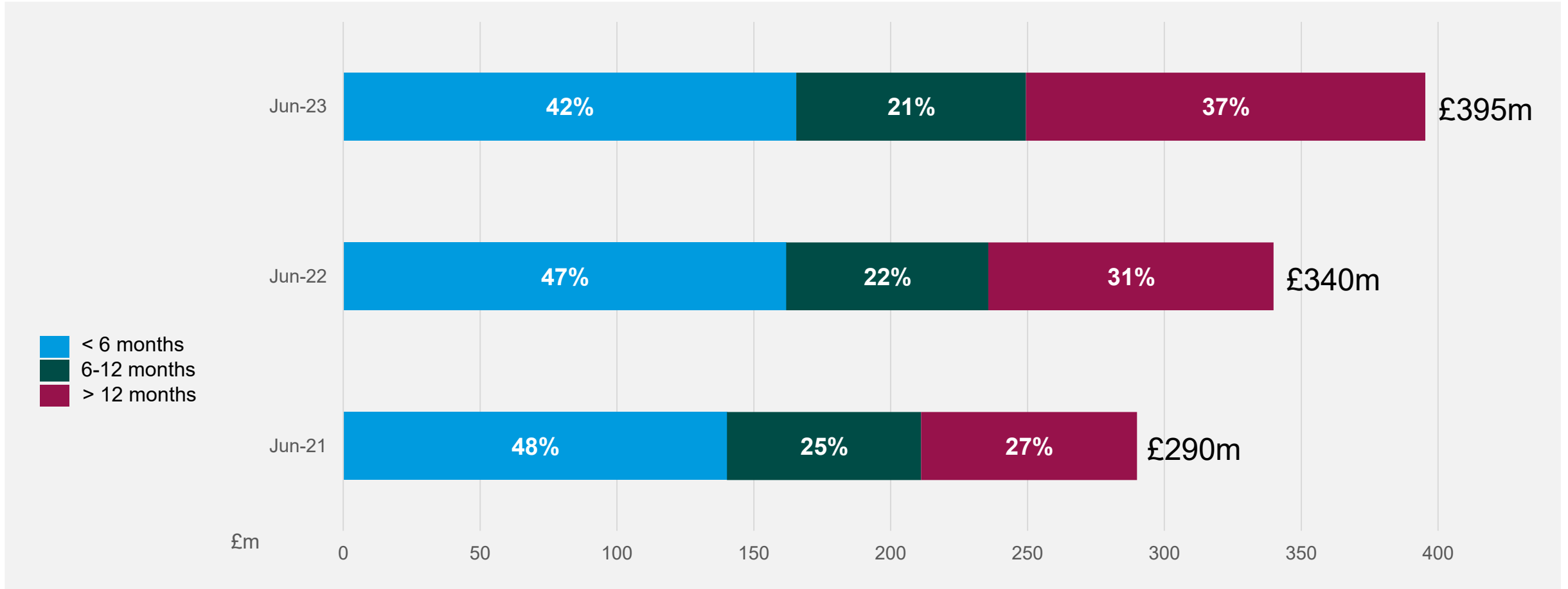
At 30 June 2023:  
£50m RCF undrawn  
£37m cash



Bank definition excludes the impact of IFRS 16.



## ORDER BOOK AT RECORD LEVEL FOR YEAR-END



Figures presented on a continuing operations basis.

# NEW ABS ORDER UNDERPINS FY23/24 PERFORMANCE IN DEFENSE

Base contract extension of \$385m awarded to continue production and delivery of ABS retrofit kits until 2027

1

Extended base contract awarded of \$385m taking the ceiling from \$89m to \$474m

Original 3-year base contract for the production and delivery of Antilock Brake System/Electronic System Control (ABS/ESC) was awarded in March 2021 for \$89m. A further two-year extension contract was awarded in August 2023

2

The base contract is subject to funding and is determined with each delivery order (DO)

First DO under the terms of the extended contract was awarded for \$92m. Deliveries for this order commenced in FY22/23 and will continue in FY23/24

3

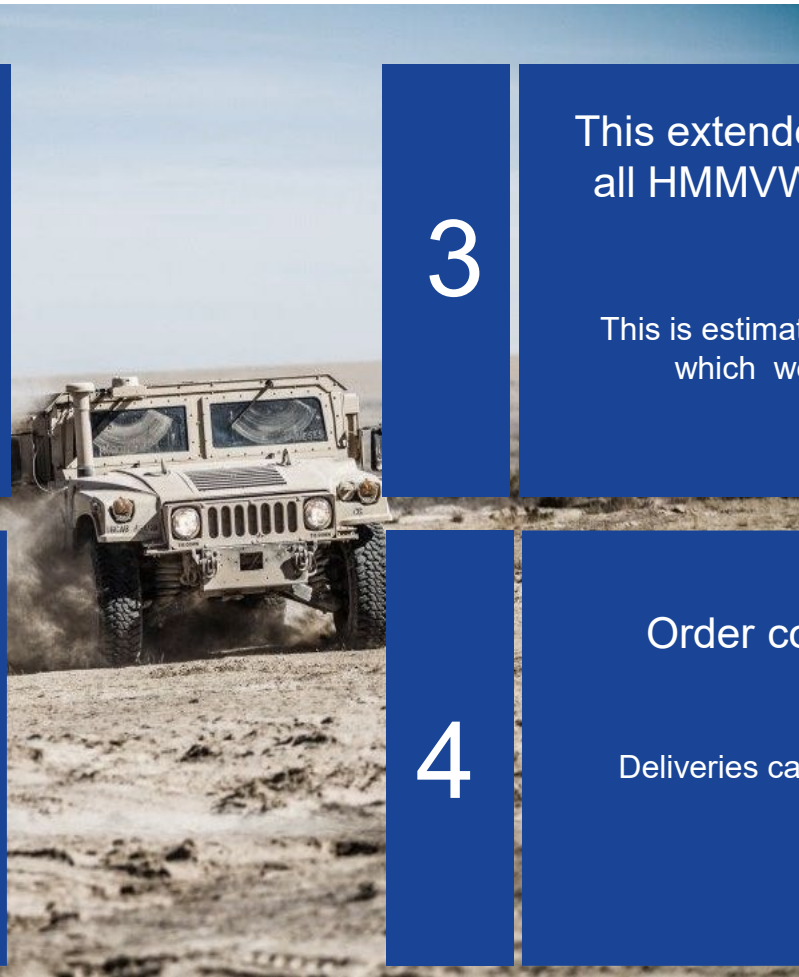
This extended contract allows for the fit of all HMMVWs in the US Army's enduring fleet

This is estimated between 50,000 and 60,000 kits of which we have delivered 10,500 to date

4

Order completion date is set for 15 March 2026

Deliveries can occur up to 18 months past the end date to September 2027



## FINANCIAL SUMMARY

Well positioned to deliver continued strong growth in the near and long term

**Record order intake up 23% to £522m, exceeds the £445m revenue**

Delivering a record year end order book of £395m, providing confidence for FY24 and increased visibility and resilience

**Underlying operating profit increase £6m**

On track for doubling operating profit in the five years from FY22 to FY27

**A&I restructuring in H2 FY22/23**

Established A&I operating profit significantly down in FY22/23, actions ensure performance improvements in FY23/24

**Leverage expected to return to 1.25x with good headroom on facilities**

Net debt increased due to acquisitions

**Future performance in line with market expectations**

Based on FY22/23 performance and record order book



# STRATEGY UPDATE

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Graham Ritchie

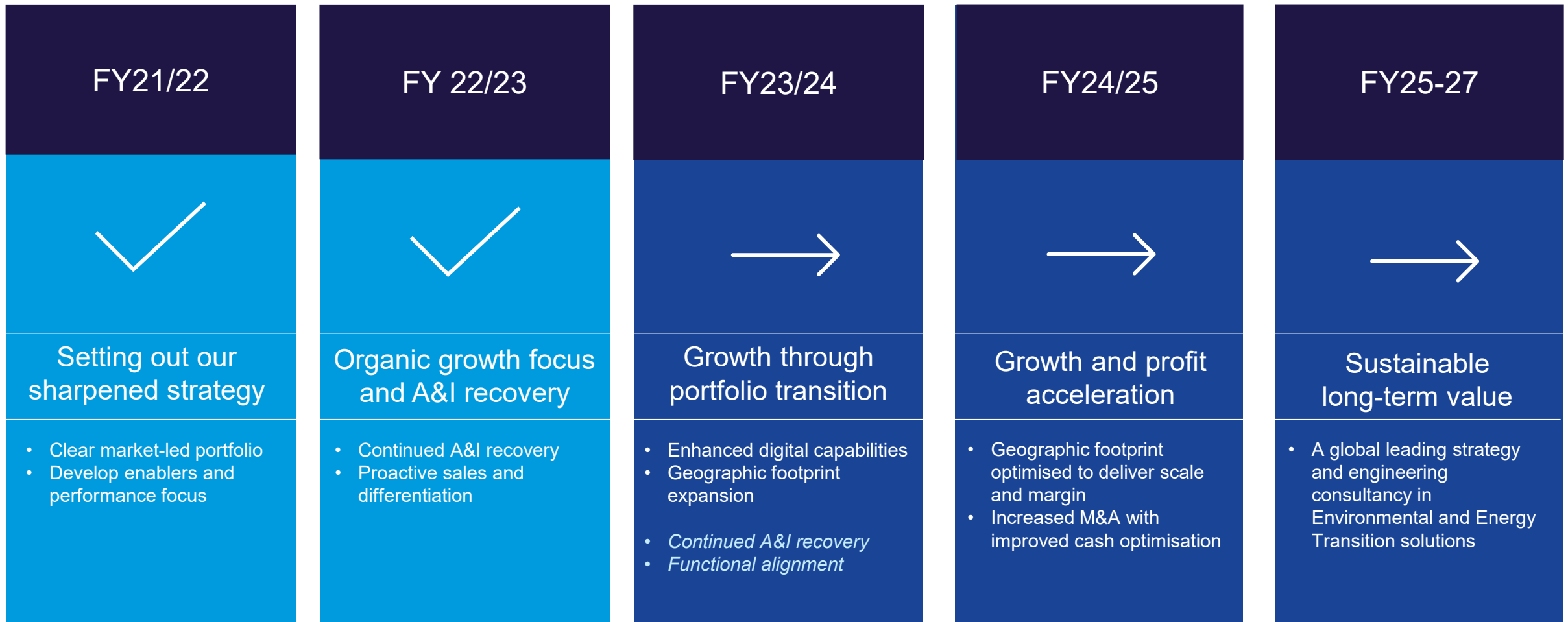
# PORTFOLIO TRANSITION IN LINE WITH LONG TERM EXPECTATION

Visibility of longer term projects important through economic conditions and energy transition



# TRANSFORMING TO DELIVER OUR STRATEGY

Portfolio prioritisation, market expansion and M&A acceleration underpins our 5-year growth strategy



# A&I PORTFOLIO AND MARKET FOCUS CREATING PLATFORM FOR GROWTH

Energy transition and economic uncertainty means deals are taking longer to convert

## FOCUSED ACTIONS

### Commercial

- Capital investment in hydrogen and electrification programmes
- Diversification into adjacent markets (Aerospace & Maritime)
- Improved pricing methodology introduced in key markets

### Operational

- Implemented restructuring activities
- Flexible resource model
- Cost discipline across the business

### People

- Investing in key A&I sales and operational roles
- Increased focus on engagement
- Key performance management and metrics

Initiatives support improvements in long-term performance

## MARKET DYNAMICS

- Energy transition programmes remain changeable due to market uncertainties
- Project timings uncertain resulting in reduced order intake in the near term
- Core Automotive market remains price sensitive

# SUPPORTING CLIENTS WITH THE COMPLEXITY OF ENERGY TRANSITION

Creating differentiation in our target markets for Mobility **AND** Environmental solutions

BUILDING MOMENTUM IN  
DEMONSTRATING OUR  
JOINT MOBILITY AND  
ENVIRONMENTAL  
EXPERTISE

Developed evidence base to inform negotiations which were used by the **International Maritime Organisation to reduce maritime GHG emissions**

Supporting Winnebago to develop its first **all Electric zero-emission recreational vehicle prototype**

**Supported the development of an Industry leading footprint concept for BMW** that will help to demonstrate sustainability standards of their vehicles

Determining the most appropriate traction power technologies to **enable the decarbonisation of Australian public transport systems**





# DIGITAL TOOLS TO MANAGE THE COMPLEXITY OF ENERGY TRANSITION

Introducing market modelling tools and predictive analytics through a subscription based digital platform

## SIMULATION OF WHOLESALE ENERGY MARKETS

### OUR CLIENTS REQUIREMENTS:

Government, corporates and financial institutions want to receive regular, reliable insights on the electricity market to support accurate forecasts and investment decisions.

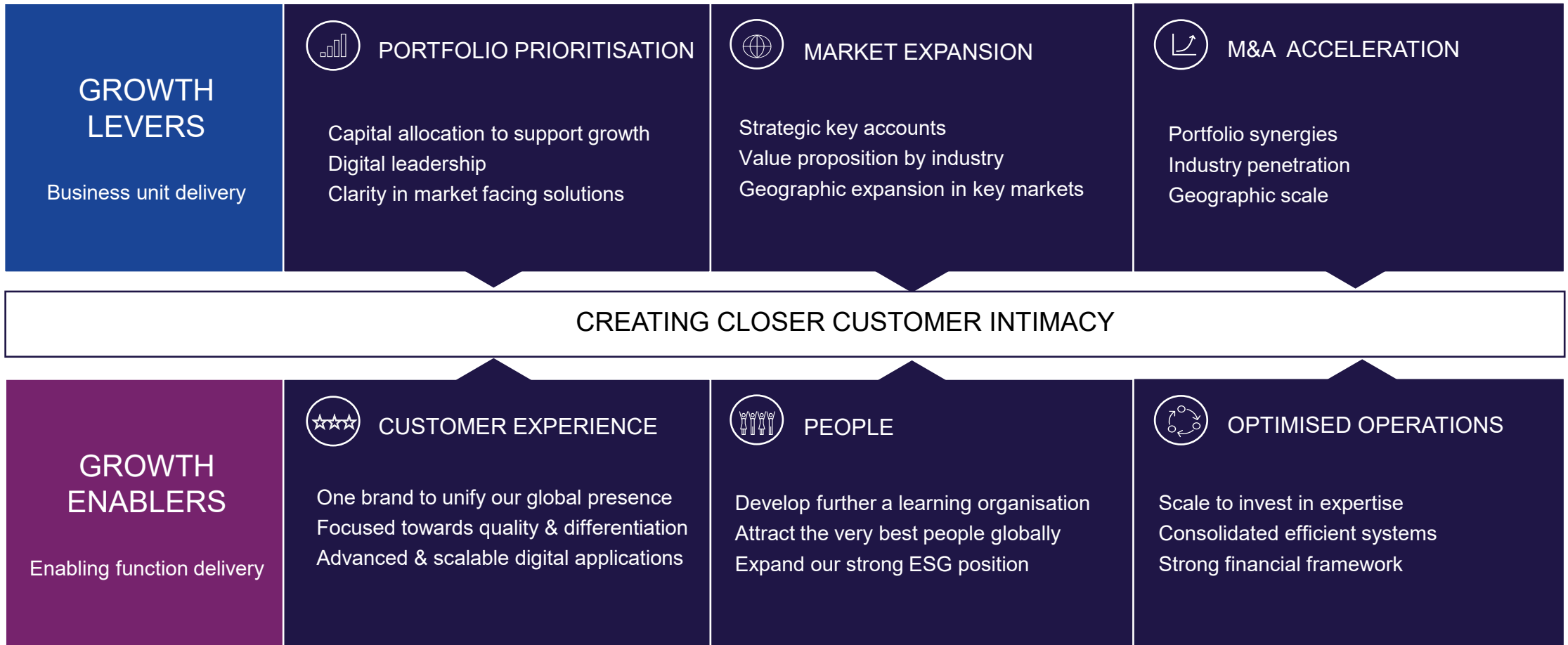
### OUR DIGITAL CAPABILITY:

Ricardo's modelling capability provides a detailed forecast of the European electricity markets. We provide yearly projections on cost, supply, and off take, including all impacts of EU policy up until 2040 covering all energy sources (renewables including hydrogen, coal/ignite, gas and nuclear).



# CREATING FUNCTIONAL ALIGNMENT TO SUPPORT OUT GROWTH

Organised to ensure commercial collaboration and better execution to transform the business



# DELIVERING OUR SUSTAINABILITY PLAN TO LEAD BY EXAMPLE

Making progress across all sustainability commitments to tackle climate change and create ever more social value

## ENVIRONMENTAL

Sustained SBTi targets for 2030 for Scope 1 & 2 with substantial business uplift, whilst also sustaining our trajectory below our 2030 SBTi target for Scope 3.

Developed a comprehensive TCFD strategy using our own consultants to demonstrate best practice.



## SOCIAL

Introduced Ricardo's global charitable programme which is focused to support and expand access to Science, Technology, Engineering and Mathematics skills.

Demystifying climate change careers and how they are open to all, through in-school workshops to students in secondary school.



## GOVERNANCE

Established a 3-tier Governance structure for ESG with Responsible Business Committee formed at Board Level.

Recognised by the Financial Times as one of Europe's Climate Leaders for 2023. Overall Ricardo placed in position 32 out of 500.





# CLOSING REMARKS

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Graham Ritchie

## OUTLOOK – CONTINUE TO DELIVER ON OUR STRATEGY

Well positioned for future growth both in the near and long-term

Order book at record year end level, providing confidence in FY23/24 and increased visibility

A&I structural and process changes will support operating profit improvement in FY23/24 and beyond

Digital development will support accelerated organic growth plans

Functional alignment to support our growth and efficiency

Well positioned to support our clients address the long-term trends in climate change, energy decarbonisation and zero emission propulsion

THANK YOU

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QUESTIONS & ANSWERS



# APPENDIX

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# ENERGY & ENVIRONMENT

A leader in sustainability consultancy, solving complex environmental challenges

- Continued demand for solutions underpinned a very strong performance in FY 22/23
- Strong market position based on favourable market trends in policy and funding for climate change and energy decarbonisation
- Organic growth driven by high demand across multiple services, segments and geographies
- EE's growth has also included E3-Modelling (E3M) and Aither Pty Ltd, having acquired the businesses in January and March 2023 respectively – and contributed to 7% of underlying operating profit

(1) The prior period results have been restated at current year FX rates.

## FINANCIAL HIGHLIGHTS

Revenue

**£88.5m**

FY 2021/22: £67.4m

Underlying operating profit margin

**18.1%**

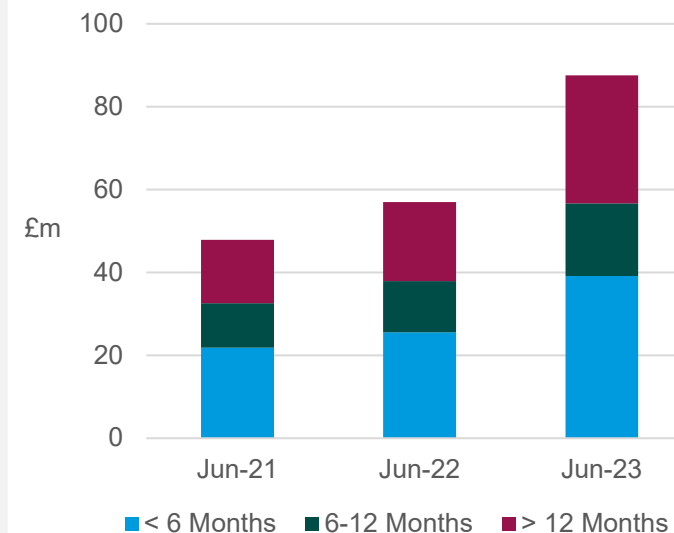
FY 2021/22: 16.3%

Underlying operating profit

**£16m**

FY 2021/22: £11m

## ORDER BOOK PROFILE



## HEADCOUNT

**971**

Voluntary attrition: 11%





# ENERGY & ENVIRONMENT

## Industry leading vehicle footprint concept

### CUSTOMER CHALLENGE

To meet their ambitions to directly address climate change, regulatory, investor and market pressures, BMW sought a strategic consultant that would support them with the development of a first-of-a-kind vehicle footprint concept.

The objective was to robustly define the full-lifecycle sustainable performance metrics for vehicles that are clear and transparent for their customers.

### RICARDO SOLUTION

Ricardo was directly sought for the project following a recommendation by the European Commission for the work our experts had done on the world's most comprehensive vehicle lifecycle analysis.

To support the development of the vehicle footprint concept, Ricardo's experts:

- Developed the robust and credible metrics that could be included in the vehicle footprint concept.
- Identified needs and expectations of regulators, NGOs and clients for a vehicle footprint concept.
- Developed a concept design for the proposed vehicle footprint concept and tested it with the stakeholder groups.
- Reviewed, validated and recommended a methodological approach for certified sustainability disclosures for BMW cars.

### CUSTOMER BENEFIT

BMW are now able to take to market a robust vehicle footprint concept that will help to demonstrate the real-world sustainability standards of their vehicles, information that is critically sought by clients and regulators.

Importantly, the project will not only help to improve visibility of BMW's already leading sustainability credentials, but to also raise the bar on robust sustainability data across the industry.

# RAIL

Experts in critical and complex railway systems, supporting industry’s operational and regulatory demands

- Order book includes wins in new territories, expanding our global footprint
- Revenue reduced to £73.5m, representing a 4% reduction on the prior year on a constant currency basis - in line with expectations, as some large projects completed in the year and new contracts have not yet started
- Underlying operating profit reduced on a constant-currency basis due to reduction in revenue, combined with investment in business development capability to drive order intake in Australia and new territories

(1) The prior period results have been restated at current year FX rates.

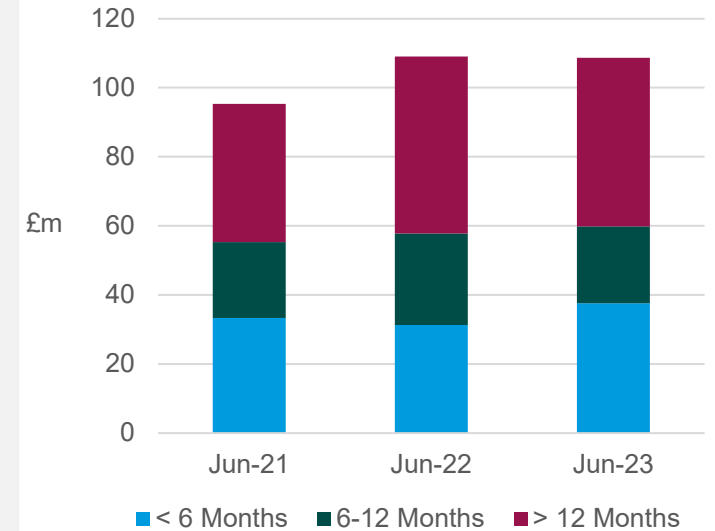
## FINANCIAL HIGHLIGHTS

Revenue  
**£73.5m**  
 FY 2021/22: £76.7m

Underlying operating profit margin  
**10.9%**  
 FY 2021/22: 12.6%

Underlying operating profit  
**£8.0m**  
 FY 2021/22: £9.7m

## ORDER BOOK PROFILE



## HEADCOUNT

**514**  
 Voluntary attrition: 14%



# RAIL

## Shadow Operator for new 15km metro line in Manila

### CUSTOMER CHALLENGE

The city of Manila has commissioned a new transit line, MRT-4, to connect the central business district with the eastern province of Rizal.

On such complex builds, a 'Shadow Operator' is sometimes appointed to advise construction and design teams on the day-to-day needs of the eventual railway operator, including guidance on infrastructure layouts, access to maintenance facilities and safety integrity.

### RICARDO SOLUTION

Our responsibilities will range from technology and design recommendations to identifying operational risks and safety hazards, developing passenger flow models, and advising on recruitment and work scheduling.

We will also ensure appropriate operations and maintenance documentation is developed in readiness for a timely handover to the eventual concessionaire.

The role was awarded by the Philippine government's Department of Transportation and follows our successful performance of the same role during the current expansion of Sydney's metro network. As in Sydney, we will be assisted on MRT-4 by Seoul Metro, who bring direct experience of daily mass transit operations.

### CUSTOMER BENEFIT

The full scope of the Shadow Operator role covers many of the performance, safety, lifecycle cost and environmental safeguards stipulated by the Asian Development Bank in its loan agreement to help commence works.

Philippine Transport Secretary, Jaime J. Bautista, stated Ricardo's expertise "*will help elevate MRT-4 operations to international standards.*"

# EMERGING A&I

Experts in electrified propulsion systems, software and digital technologies for sustainable mobility

- Zero emission propulsion is driving transformational change
- Emerging A&I built on its return to growth and delivered a good performance in both revenue and underlying operating profit in FY 22/23
- Revenue was up 16% and operating profit increased by 279% on an underlying basis, mainly driven by strong demand and project volumes delivered in H2
- Order intake declined, reflecting market shifts in the automotive industry and resulting in timing uncertainties in new electrification and integrated mobility projects

(1) The prior period results have been restated at current year FX rates.

## FINANCIAL HIGHLIGHTS

Revenue

**£82.3m**

FY 2021/22: £71.1m

Underlying operating  
profit margin

**12.9%**

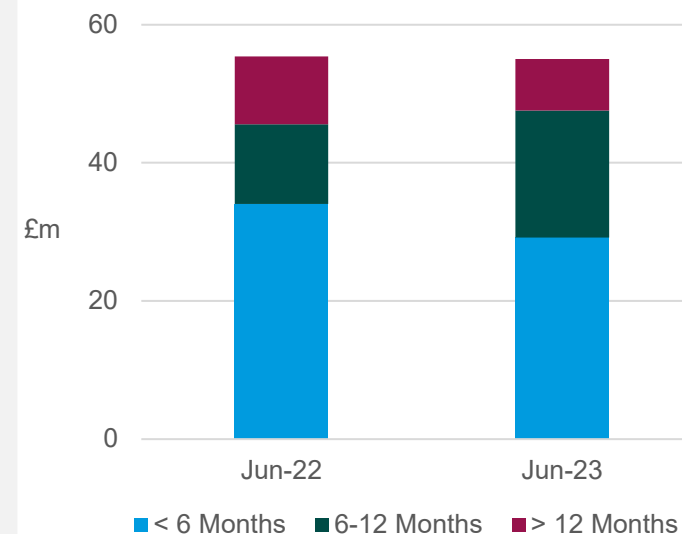
FY 2021/22: 3.9%

Underlying operating profit

**£10.6m**

FY 2021/22: £2.8m

## ORDER BOOK PROFILE



## HEADCOUNT

**435**

Voluntary attrition: 15%\*

\* Total A&I business



# EMERGING AUTOMOTIVE & INDUSTRIAL

Development of an all-electric, zero emissions RV

## CUSTOMER CHALLENGE

Winnebago Industries is a leading North American manufacturer of outdoor lifestyle products that offers refreshing quality, unparalleled customer care and experience-driven innovation through its family of brands.

The company were looking for support to develop and launch its first all-electric, zero emissions RV, called the Winnebago eRV2 as demand for eco-friendly outdoor recreational vehicles across North America is projected to grow.

## RICARDO SOLUTION

Winnebago chose Ricardo due to its proven track record in diverse product development cycles, launch management and expertise in electric vehicle integration.

The team were responsible for managing the programme delivery of the project through from clean sheet design to vehicle launch, in a specific one-year timeframe. This included project management support in engineering, manufacturing, quality, procurement and supply chain management.

Additionally, and drawing on the team's expertise in automotive electrical system development, Ricardo supported Winnebago with the integration of an advanced 48v electrical system, including electrical engineering architecture and wire harness. This project combined insights and project management by Ricardo's strategic consulting and engineering teams to ensure a successful delivery.

## CUSTOMER BENEFIT

Ricardo's support has enabled Winnebago to create a vehicle that will help the business to benefit from the projected growth of the global recreational vehicle market size and demand for eco-friendly outdoor recreation across North America.

The company has benefitted from Ricardo's expertise, providing expert insights, program management experience and engineering capabilities to achieve prototype build.

# PERFORMANCE PRODUCTS

Engineering specialists in transmission design and niche-volume manufacturing

- Record year for order intake reflecting a number of significant contract extensions as well as new clients attracted to the business
- McLaren engine volumes continued to increase in the year with the launch of the new hybrid V6 Artura
- Transmission volumes and revenue also remained strong with ongoing deliveries to Bugatti, Porsche, Aston Martin and a number of top tier motorsport programmes
- Continuing to develop new projects including electric drive units, industrial engineering services in electric vehicle (EV) production and concept work around battery systems and electric machines

## FINANCIAL HIGHLIGHTS

Revenue

**£84.7m**

FY 2021/22: £73.7m

Underlying operating profit margin

**10.6%**

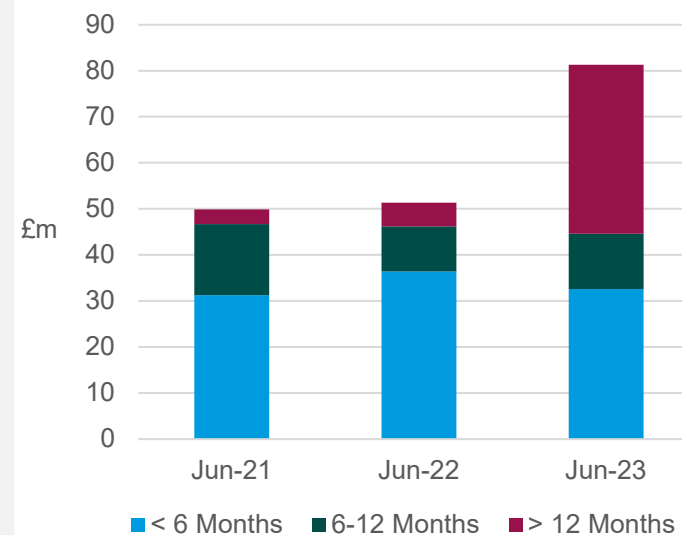
FY 2021/22: 11.9%

Underlying operating profit

**£9.0m**

FY 2021/22: £8.8m

## ORDER BOOK PROFILE



## HEADCOUNT

**355**

Voluntary attrition: 13%

(1) The prior period results have been restated at current year FX rates.



# PERFORMANCE PRODUCTS

Supporting effective production ramp-up for manufacturer of PEM electrolyzers

## CUSTOMER CHALLENGE

Ricardo supported an established manufacturer of PEM electrolyzers with the challenges associated with transitioning to producing higher manufacturing volumes including precise management of resources, finances, and timings all whilst ensuring that product quality isn't compromised.

## RICARDO SOLUTION

Ricardo performed a manufacturing site audit to rapidly measure and assess the manufacturer's operation. A benchmarking exercise was performed to identify areas of improvement in their production processes. This assessment was used to prioritise actions to support with production ramp-up, and increase control and yield from critical processes.

## CUSTOMER BENEFIT

Several key areas for improvement were identified that could be delivered in the immediate and in the longer-term to enable the manufacturer to continue to deliver a quality product at increased volumes.

# DEFENSE

Trusted expertise in delivering wide ranging engineering programmes to drive efficiencies and performance

- Defense's order intake grew on a constant currency basis in FY22/23
- \$50m of orders were received from the US Army to retrofit Antilock Brake System/Electronic Stability Control (ABS/ESC) retrofit kits
- Significant programmes included the transitioning a commercial vehicle to the Army's inventory and extended data management enabler across Navy's primary communications fleet
- Continuing work with the US Marine Corps to develop and demonstrate capabilities to improve the management of energy supplies and better secure energy resources to reduce its overall carbon footprint

## FINANCIAL HIGHLIGHTS

Revenue

**£88.6m**

FY 2021/22: £49.8m

Underlying operating  
profit margin

**15.1%**

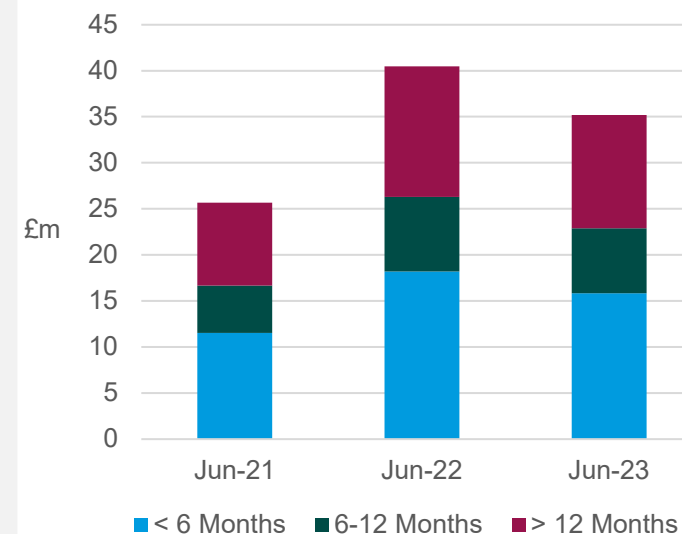
FY 2021/22: 14.5%

Underlying operating profit

**£13.4m**

FY 2021/22: £7.2m

## ORDER BOOK PROFILE



## HEADCOUNT

**223**

Voluntary attrition: 19%





# DEFENSE

## Mobile Fuel and Energy Management Software Application

### CUSTOMER CHALLENGE

Mobile distributors of energy resources for critical operational assets need near-real-time visualisation and data analytical tools as part of energy management systems. The customer is challenged in analysing changing electrical demand and fuel logistical constraints leading to inefficient fuel usage and increased carbon emissions.

### RICARDO SOLUTION

Ricardo Defense has applied its Business Management Framework (BMF) software to integrate the distributed systems' sensor information with process work flows to develop an integrated dynamic data model. The near-real time information can be accessed and utilised via a viewer developed by Ricardo Defense. The viewer includes but is not limited to: mobile asset locations; fuel levels and consumption; generator performance; distributed facility status; carbon emissions; and mission planning tools.

### CUSTOMER BENEFIT

Allows the customer to develop and demonstrate capabilities that are in alignment with the Department of Navy climate strategy to improve management of energy supplies, better secure energy resources and reduce their overall carbon footprint.

# ESTABLISHED A&I

Over a century of propulsion design and development

- Revenue decreased by 48% year on year on a constant currency basis. This was due to reduced demand for services in the area which resulted in the structural changes announced in the first half and carried out in the second half
- Significant new contracts secured included a highly customised fleet of vehicles for London's Metropolitan Police and driveline systems development for defence vehicle applications in APAC
- Underlying operating loss was £5.8m, a decrease of 214% compared to FY21/22 on a constant currency basis
- Performance to improve in FY 23/24 due to significant restructuring actions taken FY 22/23 in order to rebase the business appropriately

## FINANCIAL HIGHLIGHTS

Revenue

**£27.6m**

FY 2021/22: £53.5m

Underlying operating  
profit margin

**(21.0)%**

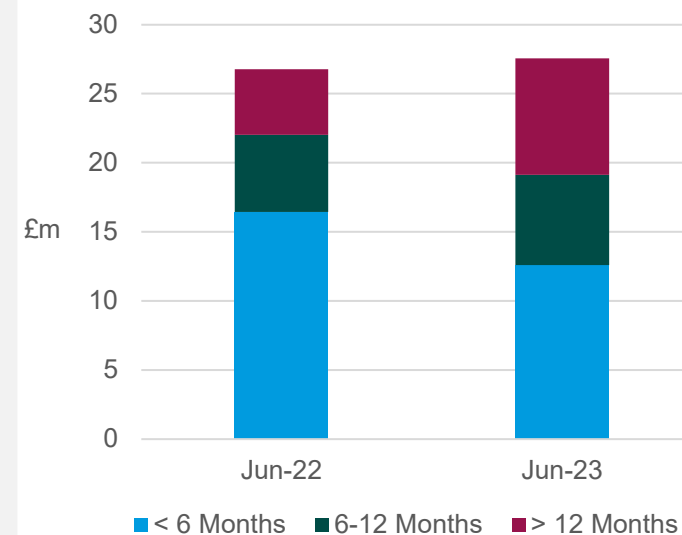
FY 2021/22: 9.5%

Underlying operating profit

**(£5.8)m**

FY 2021/22: £5.1m

## ORDER BOOK PROFILE



## HEADCOUNT

**339**

Voluntary attrition: 15%\*

\* Total A&I business



# ESTABLISHED AUTOMOTIVE & INDUSTRIAL

Next generation engine for light duty vehicles

## CUSTOMER CHALLENGE

Achates Power required support to design and develop the next generation of opposed-piston gasoline compression ignition engines.

The new engine needed to deliver fuel-efficiency and demonstrate a pathway to meet Tier 3 Bin 125 criteria emissions for light duty vehicles.

This multi-phase project (BERYL) was funded by the US Government's Advanced Research Projects Agency-Energy (ARPA-E).

## RICARDO SOLUTION

Ricardo delivered:

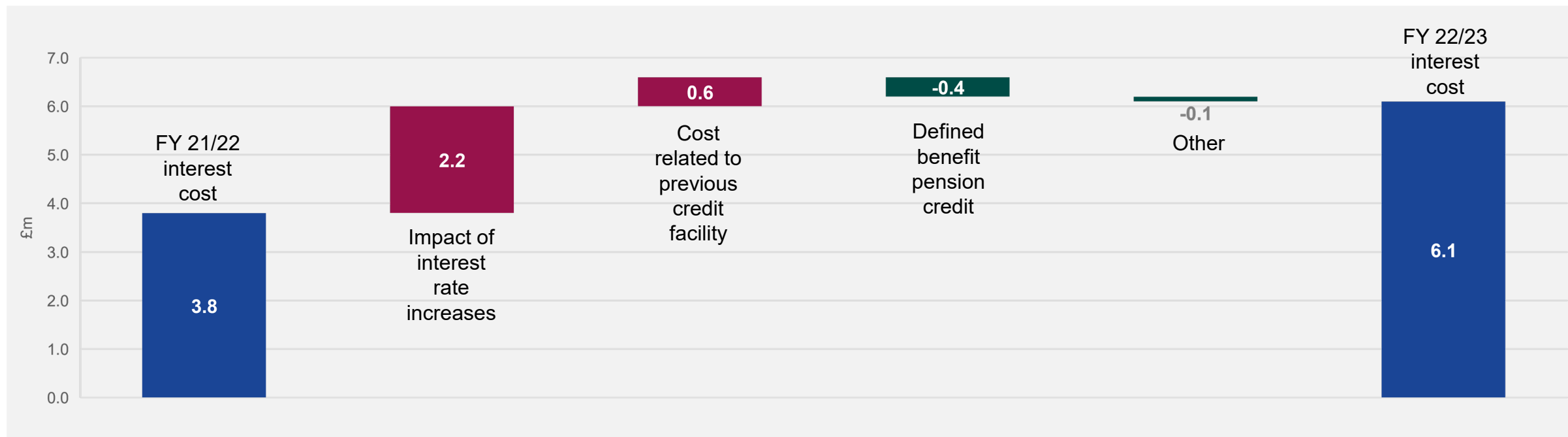
- A target of 60% weight reduction, compared to the first generation of the engine
- When fully developed the engine can achieve up to 20% fuel economy improvement over the baseline
- An unadjusted corporate average fuel economy and combined 35 MPG for a full-sized pick-up truck
- Diesel-like torque from a gasoline engine
- First fire and controls commissioning, and early-stage test phases

## CUSTOMER BENEFIT

Ricardo delivered value to its clients through its expertise and experience in the development of ICE engines.

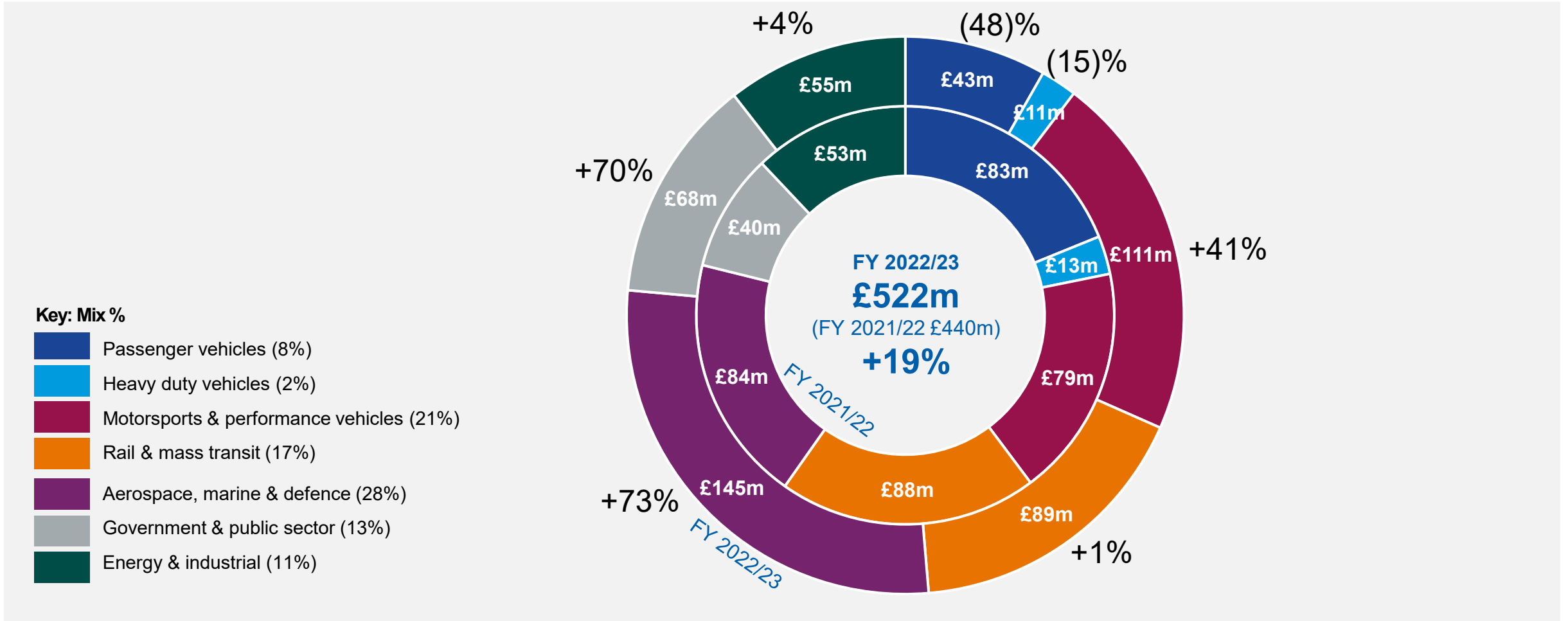
The team created a lightweight fuel-efficient opposed piston engine for the LCV market, which utilises existing infrastructure for quicker deployment and adoption.

## MACRO ECONOMIC FACTORS DRIVING INTEREST COSTS



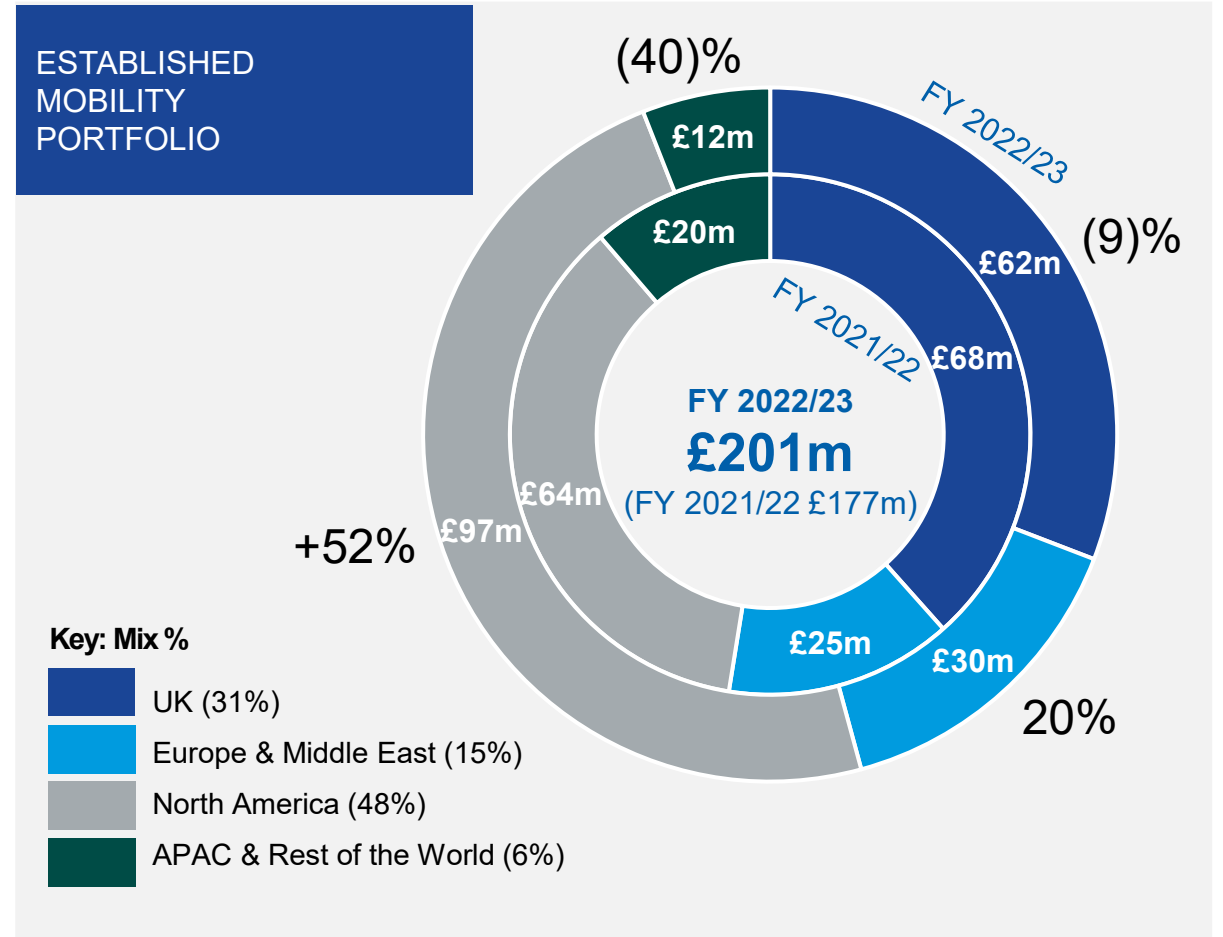
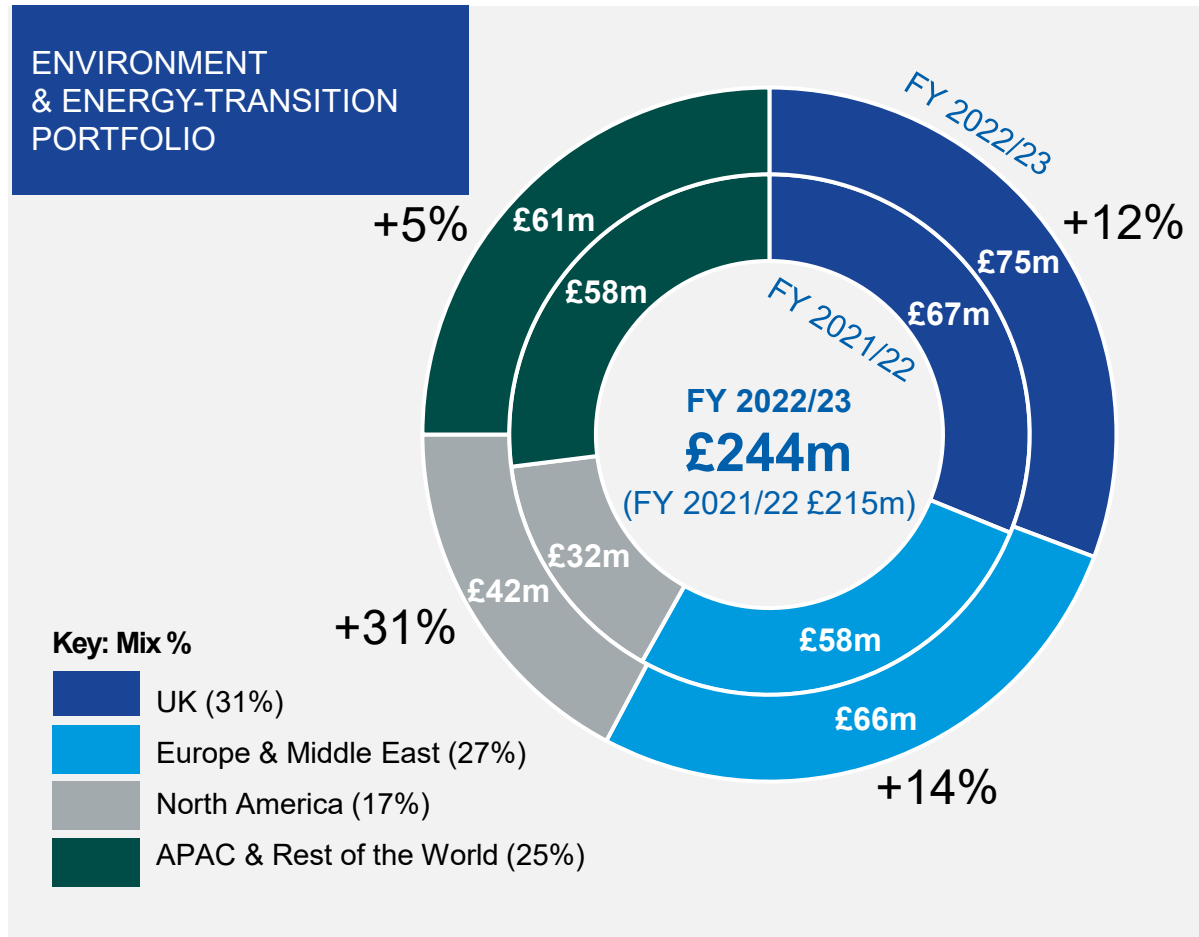
£m	Average for year		At 30 June	
	2023	2022	2023	2022
Average interest rate	4.77%	2.05%	6.17%	2.93%

# STRONGER EXECUTION AND PERFORMANCE IN KEY INDUSTRIES



Figures presented on a Continuing Operations basis. The prior period results have been restated at current period FX rates.

# REVENUE GROWTH ACROSS KEY REGIONS



Figures presented on a Continuing Operations basis. The prior period results have been restated at current period FX rates.

# INCOME STATEMENT – CONTINUING/DISCONTINUED OPERATIONS

£m	Year ended 30 June							
	2023	2023	2023	2022	2022	2022	Year-on-year movement	
	Underlying	Specific adjusting items <sup>(1)</sup>	Total	Underlying	Specific adjusting items <sup>(1)</sup>	Total	Underlying	Total
Revenue	445.2	-	445.2	380.2	-	380.2	17%	17%
Gross profit	126.3	-	126.3	119.5	-	119.5	6%	6%
Indirect costs	(92.3)	(35.9)	(128.2)	(91.5)	(11.8)	(103.3)	1%	24%
Operating profit/(loss) from continuing	34.0	(35.9)	(1.9)	28.0	(11.8)	16.2	21%	n/a
Net finance costs	(6.1)	-	(6.1)	(3.8)	-	(3.8)	61%	61%
<b>Profit/(loss) before tax from continuing operations</b>	<b>27.9</b>	<b>(35.9)</b>	<b>(8.0)</b>	<b>24.2</b>	<b>(11.8)</b>	<b>12.4</b>	<b>15%</b>	<b>n/a</b>
Taxation charge	(7.3)	3.3	(4.0)	(6.5)	2.3	(4.2)	12%	(5)%
<b>Profit/(loss) from continuing operations</b>	<b>20.6</b>	<b>(32.6)</b>	<b>(12.0)</b>	<b>17.7</b>	<b>(9.5)</b>	<b>8.2</b>	<b>16%</b>	<b>n/a</b>
Profit/(loss) from discontinued operations	0.4	6.4	6.8	1.7	(1.3)	0.4	(76)%	1600%
<b>Profit/(loss) for the period</b>	<b>21.0</b>	<b>(26.2)</b>	<b>(5.2)</b>	<b>19.4</b>	<b>(10.8)</b>	<b>8.6</b>	<b>8%</b>	<b>n/a</b>

(1) Specific adjusting items comprise asset impairment, amortisation of acquired intangible assets, acquisition-related expenditure, ERP system implementation costs, reorganisation costs and non-recurring items.

# RECONCILIATION OF FINANCIAL RESULTS BY OPERATING SEGMENT FY22

Year ended 30 June 2022					
£m	Underlying operating profit <sup>(1)</sup>				
	Originally reported	Remove plc management charge	Restated	Effect of currency translation	Restated at constant currency
Energy & Environment	9.1	1.9	11.0		11.0
Automotive & Industrial	3.7	3.9	7.6	0.3	7.9
- Emerging A&I			2.7	0.1	2.8
- Established A&I			4.9	0.2	5.1
Rail	7.7	1.7	9.4	0.3	9.7
Defense	5.9	0.7	6.6	0.6	7.2
Performance Products	7.2	1.6	8.8		8.8
Plc Costs	(5.6)	(9.8)	(15.4)		(15.4)
<b>Continuing operations</b>	<b>28.0</b>	<b>-</b>	<b>28.0</b>	<b>1.2</b>	<b>29.2</b>

(1) Excluding specific adjusting items, which comprise asset impairment, amortisation of acquired intangible assets, acquisition-related expenditure, reorganisation costs and non-recurring items.



## BALANCE SHEET SUMMARY

£m	30 June	
	2023	2022
Tangible non-current assets	35.3	47.0
Intangible non-current assets	131.5	113.7
Right of use assets	20.7	18.3
Pension surplus	12.6	15.2
Inventories, trade and other receivables	185.4	152.2
Net assets held for sale	-	6.2
Net debt	(62.1)	(36.5) <sup>(2)</sup>
Trade and other payables	(109.8)	(78.2)
Lease liability	(25.1)	(23.3)
Other <sup>(1)</sup>	(11.9)	(17.0)
<b>Net assets</b>	<b>176.6</b>	<b>197.6</b>

(1) Other includes provisions, deferred and current tax, derivative financial assets and liabilities and investments

(2) Total Group net debt £35.4m, including £1.1m of cash reported within assets held for sale