

John Crane Deep Dive

smiths

30th November 2023

Improving our world
through smarter
engineering



Agenda

	09:00	Smiths Group update Paul Keel CEO		10:45	New energy solutions Frank Ma VP New Energy Solutions
	09:30	John Crane: a powerful example of Smiths' strategy in action Bernard Cicut John Crane President		11:15	Optimising customer delivery Rob Sharman VP Customer Operations
	10:00	Coffee break		11:45	Coffee break and Q&A
	10:15	Customer-led growth Sook Won Moon VP Sales and Aftermarket		12:30	Facility tour <ul style="list-style-type: none">• R&D centre• Ultra-high-pressure rig• Test and inspection• SES
				13:30	Lunch

Executive summary

The Smiths Value Engine is delivering for our stakeholders

- Our Purpose of improving our world through smarter engineering has been our North Star for over 172 years
- Fundamental strengths in engineering, market positions, global reach and financial strength underpin our long-term potential
- We focus our strengths on our three main priorities of accelerating growth, improving execution and inspiring and empowering our talented and committed people
- We are building a track record of delivering for our stakeholders

Our businesses share a common purpose, business models, and Group-wide capabilities

- Common purpose: improving our world through smarter engineering
- Similar business models: sophisticated OE products coupled with world-class service, often serving the same end markets
- Group-wide capabilities: safety, talent, sustainability, SES, M&A, R&D, infrastructure, balance sheet

We featured Flex-Tek and Smiths Interconnect at last year's Capital Markets Event; John Crane is our focus for today

- Last year we took deep dives into Flex-Tek and Smiths Interconnect
- John Crane is another good example of the Smiths Value Engine in action
- John Crane is well positioned for sustained profitable growth over the near, medium and longer term

Smiths Value Engine

OUR PURPOSE



PIONEERS OF PROGRESS

Improving our world through smarter engineering

OUR STRENGTHS



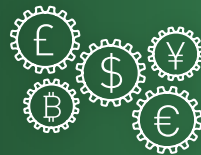
World-Class Engineering



Leading Positions in Critical Markets



Global Capabilities



Robust Financial Framework

OUR PRIORITIES



Growth



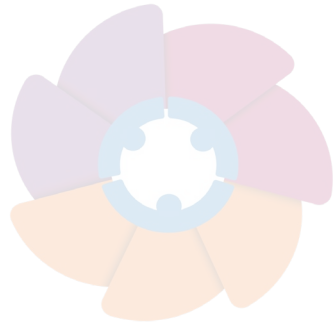
Execution



People

Our fundamental strengths

OUR PURPOSE



PIONEERS OF PROGRESS

Improving our world through smarter engineering

OUR STRENGTHS



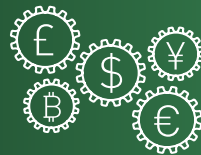
World-Class Engineering



Leading Positions in Critical Markets



Global Capabilities



Robust Financial Framework

OUR PRIORITIES



Growth



Execution






People



World-class engineering

- Highly-skilled engineers in new product development, operations and service
- Meaningful investment in developing differentiated, proprietary technologies
- Valued and trusted partners to customers for critical applications
- Innovation driving a quarter of our growth and a third of our total revenues

	Mission-critical technologies and services for energy, new energy and process industries
	Differentiated proprietary technologies for security screening and threat detection
	Innovation leader in the safe and efficient movement and temperature management of fluids
	Leading provider of technically differentiated connectivity solutions

~3,000
Engineers

~2,700
patents








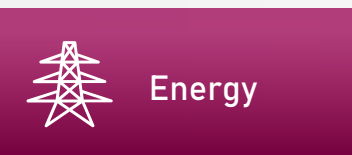

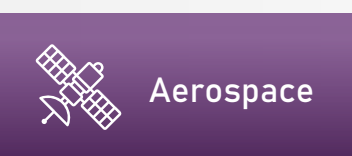


3.7%
R&D spend % sales

31%
Gross vitality¹

+310bps
Revenue growth from
new products



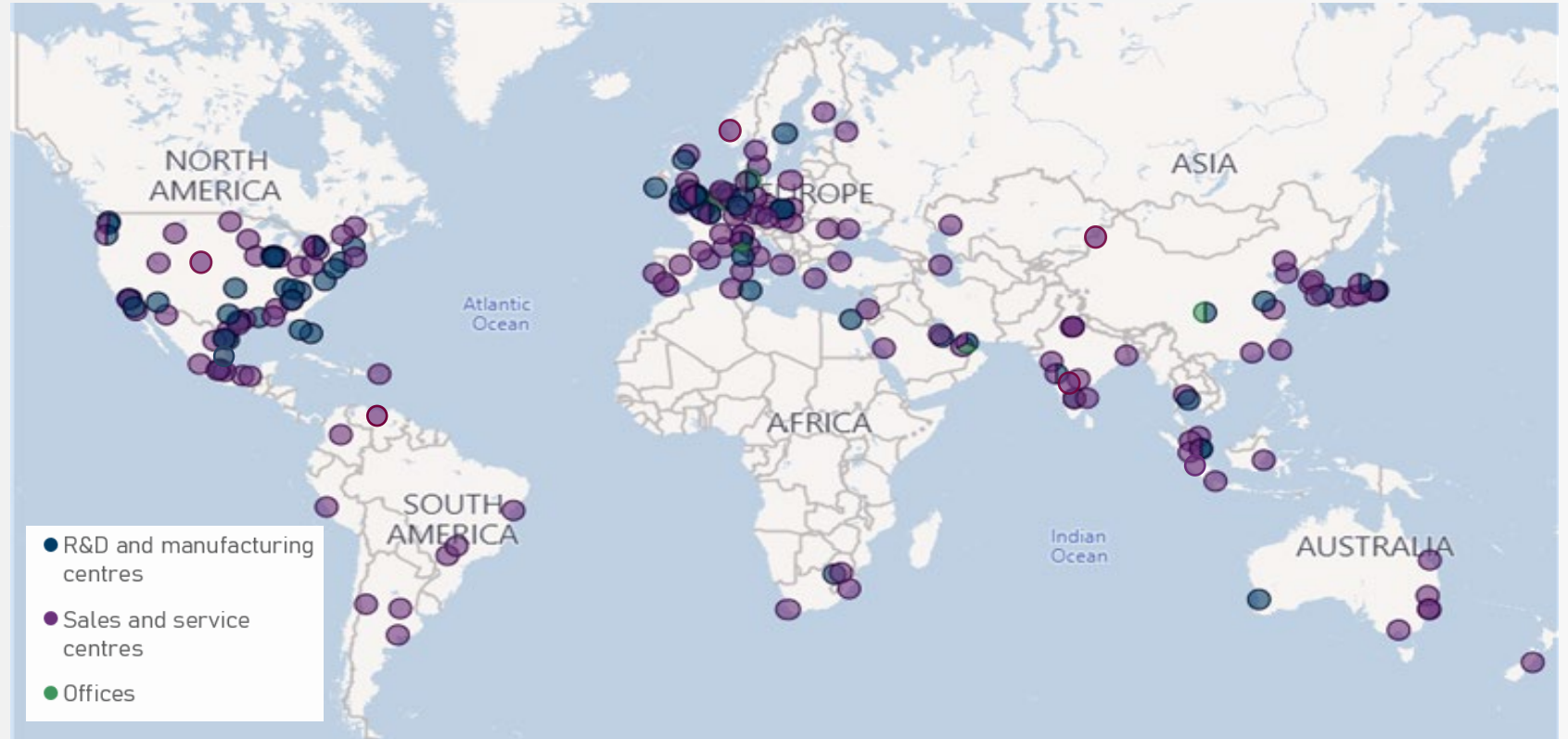
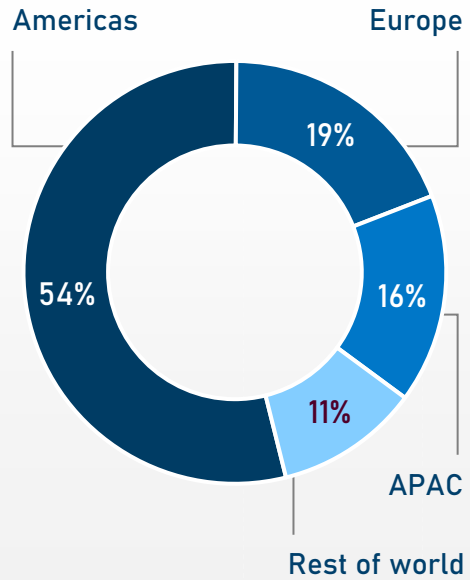
Leading, defensible positions in structurally attractive markets

	% of Group	Business	Medium-term growth outlook ¹	Market update
 General Industrial	40%	  	2-3%	<ul style="list-style-type: none">• Strong demand continues in all industrial markets served by John Crane• Softness in Flex-Tek's US construction and Smiths Interconnect's connectors and semiconductor end markets; expected to recover in H2 2024
 Safety & Security	31%	 	3-4%	<ul style="list-style-type: none">• Strong growth in aviation security supported by ever-rising passenger/cargo volumes and mandated regulatory upgrades (e.g., CT baggage scanning)• Surging demand for chemical detection and defence electronics
 Energy	22%		3-4%	<ul style="list-style-type: none">• Traditional energy markets strong, driven by energy security, efficiency and emission reduction• High energy transition activity, including hydrogen and carbon capture projects
 Aerospace	7%	 	4-5%	<ul style="list-style-type: none">• Aircraft build rates growing high-single-digits across next five years• Double-digit growth in low Earth orbit satellite markets



Global capabilities

Smiths Group FY23 Revenue by geography



Operations in over 50 countries

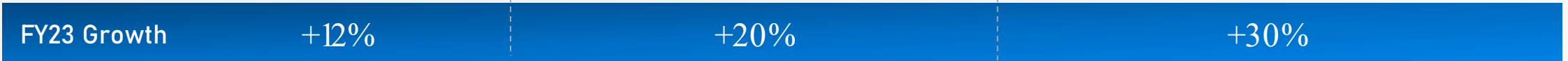
Over 100 manufacturing / R&D sites

Over 200 service centres

Our global presence allows us to deliver real-time, mission-critical support to our customers

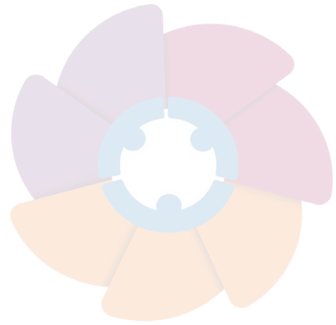


Robust financial framework



Our priorities

OUR PURPOSE



PIONEERS OF PROGRESS

Improving our world through smarter engineering

OUR STRENGTHS



World-Class Engineering



Leading Positions in Critical Markets



Global Capabilities



Robust Financial Framework

OUR PRIORITIES



Growth



Execution



People



Delivering consistent growth

Disciplined M&A



Building out priority
adjacencies



New product development and
commercialisation



Strong execution to maximise
market opportunity

FY23 PROGRESS

- Plastronics acquisition
- Advanced Diamond build-out
- Royal Metal Products scale-up

- Process electrification
- Semi-test durability testing
- Flex-Tek Houston facility

- H2 Green Steel
- Gas Recovery Systems
- iCMore
- Rheia Duct System

- Price capture in excess of input inflation
- Ramping manufacturing capacity to meet demand

FY24 FOCUS

- HCP acquisition
- Strong pipeline of additional bolt-on acquisitions

- Energy transition
- Security sectors beyond airports
- Process electrification

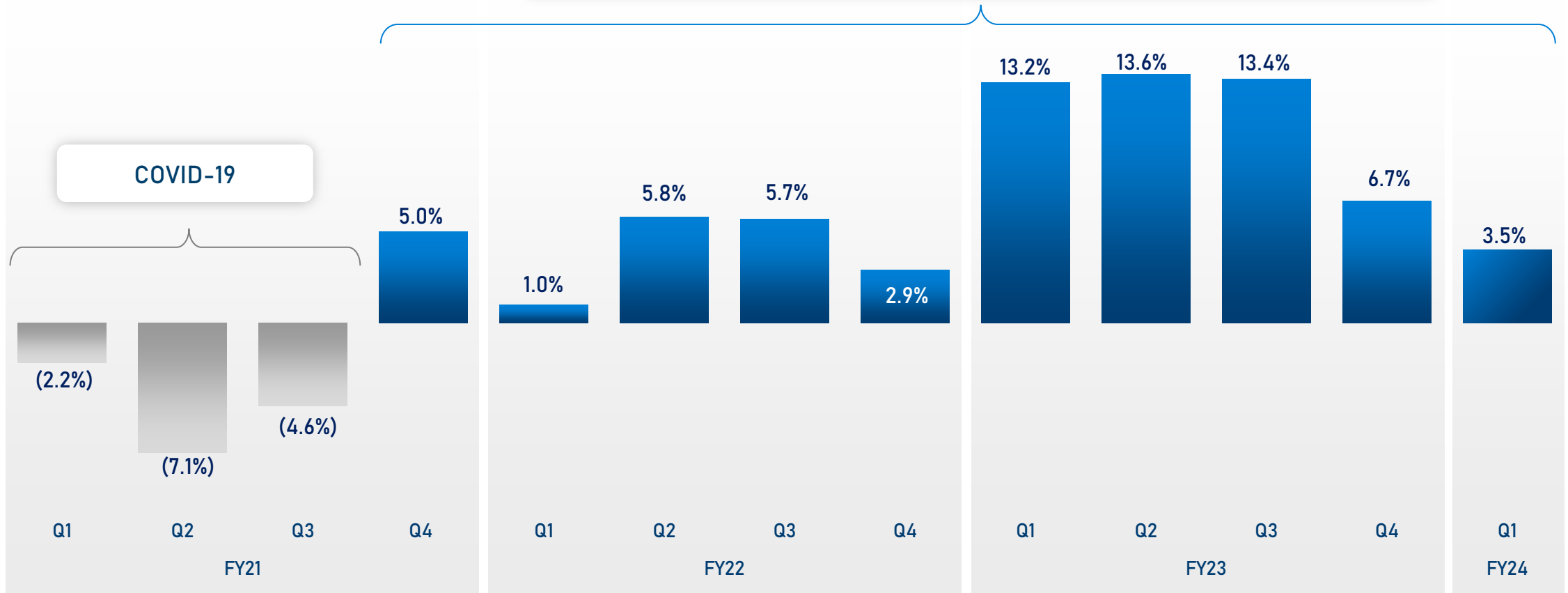
- 56 GB satellite transceivers
- John Crane Sense digital seals
- Python scale-up
- Smiths Detection digital platform

- Market share gains across the Group
- Ramping up service capacity to meet demand



Q1 adds to our growing track record

Ten consecutive quarters of organic revenue growth



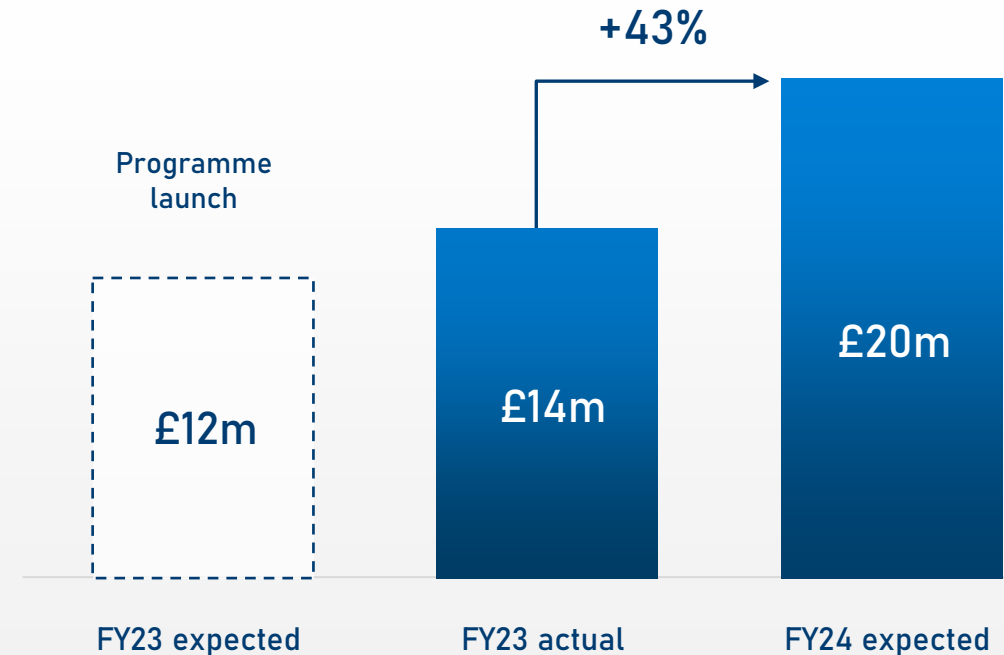


SES delivers results, develops talent, and advances our culture

Smiths Excellence System

- Continuous improvement programme now embedded across Smiths
- SES is scaling quickly with 20 projects completed and another 60 underway
- 6 Master Black Belts (MBBs) and 31 Black Belts (BBs) now in the programme
- First wave of BBs and MBBs will re-enter into high-impact leadership roles in H2 FY24; replaced by SES Wave 2 talent

SES operating profit contribution (£m)





People – delivering for all our stakeholders

Customers

Helping them achieve their goals

- New product innovation with over 300bps of growth from new products in FY23
- ~200 global service networks across the Group
- Growing in core markets and gaining share in adjacencies



Colleagues

Empowering and inspiring

- Refreshed leadership team
- Incentive compensation aligned to financial and sustainability commitments
- Record high employee engagement with attrition down over 300bps



Communities

Improving our world

- Numerous government awards and grants
- Launched the Smiths Group Foundation promoting STEM-related causes
- Global colleague volunteering initiative encouraging community support



Shareholders

Performance matching potential

- Record revenue and EPS growth
- Year-over-year improvement against all five financial commitments
- 72 straight years of dividends and over £1bn returned to shareholders over the last two years

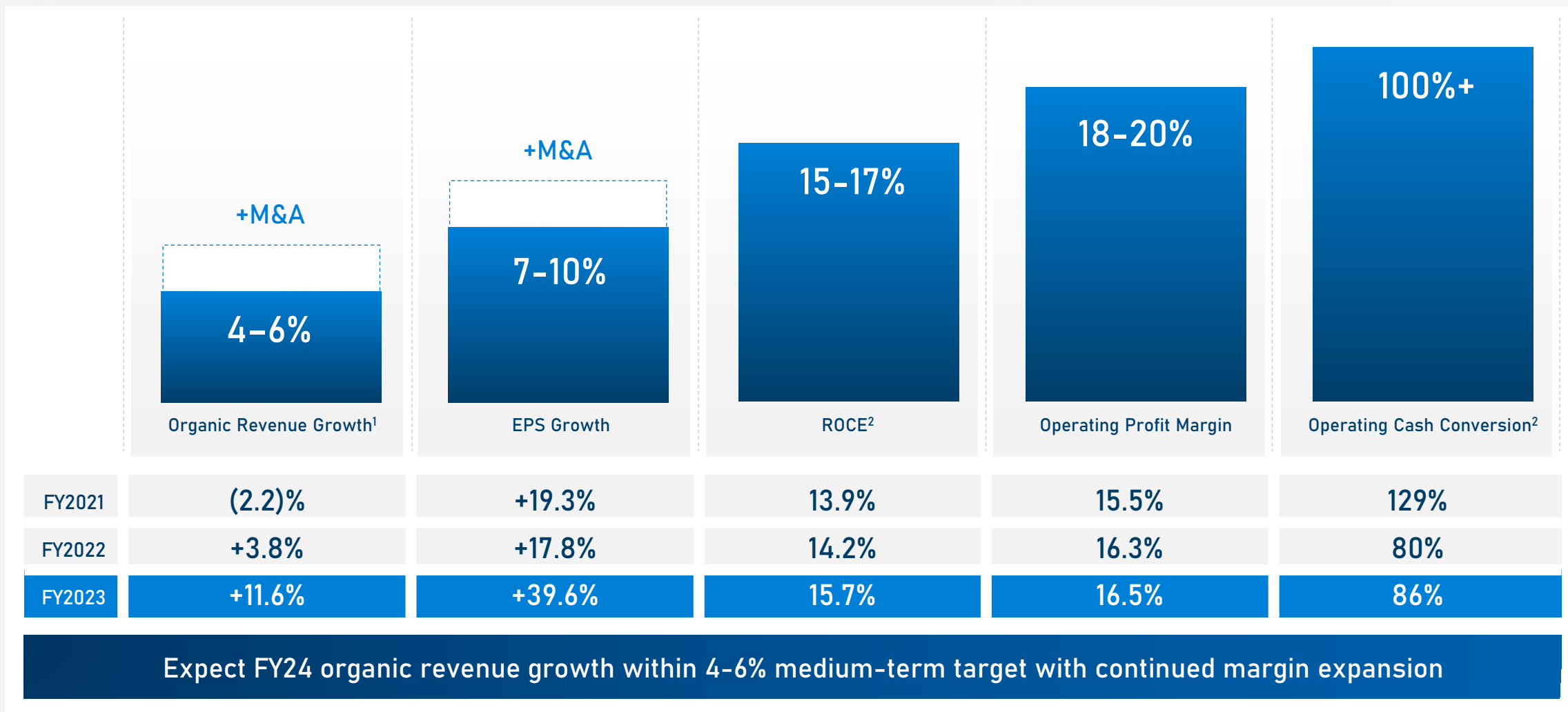


Improving our world through smarter engineering

Sustainability underpins our growth, execution, and people priorities

Our priorities	Focus	Progress
 Growth	Commercialising high-value green technology solutions that help our customers meet their sustainability objectives	<ul style="list-style-type: none">• H2 Green Steel programme progressing to plan; £8m of £45m contract received• ~30% of John Crane sales from products that provide decarbonisation benefits• Active in over 70 new energy projects; opportunity funnel doubled in last 12 months
 Execution	Delivering Net Zero Scopes 1&2 by 2040 and Net Zero Scope 3 by 2050	<ul style="list-style-type: none">• 8% improvement in energy efficiency in FY23• 10% reduction in non-recyclable waste in FY23• 12% reduction in GHG in FY23, 65% since 2007• 13% reduction in water use in stressed areas in FY23
 People	Empowering our people and living our purpose each and every day	<ul style="list-style-type: none">• Consistent, world-class safety record• Delivery of ESG commitments tied directly to short- and long-term incentive compensation• Launched Smiths Group Foundation with initial contribution of £10m

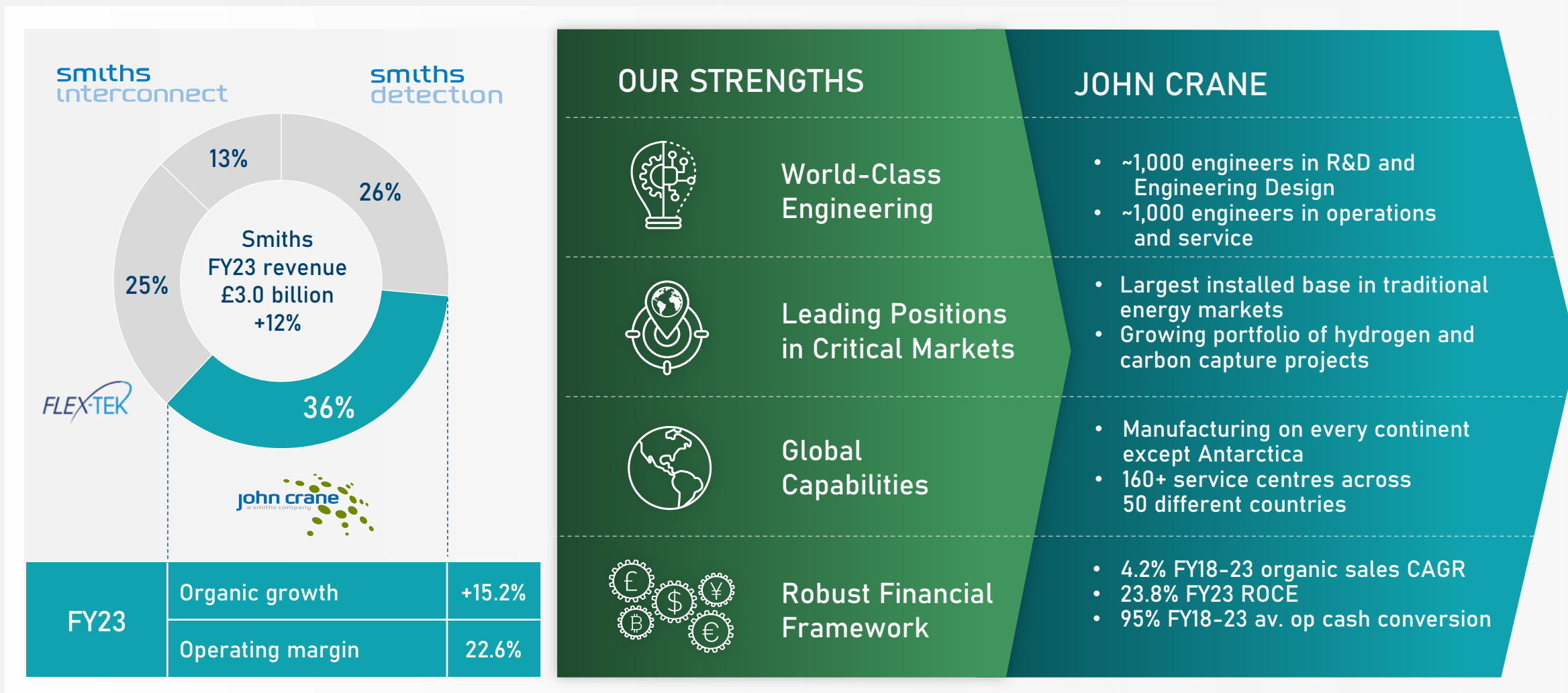
Delivering significant progress against all medium-term targets



Shared Purpose, strengths, and Group-wide capabilities are woven across Smiths



How John Crane employs the Value Engine to create value for its stakeholders



Closing remarks

Smiths is a fundamentally strong business with defensible positions in secularly attractive markets

Our businesses share a common purpose, business models and Group-wide capabilities

We have a clear strategy that is delivering value for all stakeholders

Today, we'll take a closer look at how John Crane employs the Value Engine to create value



John Crane Deep Dive

John Crane: a powerful example of Smiths' strategy in action



Bernard Cicut, President, John Crane

John Crane President, April 2022 - present

3M - 38 years in multiple roles and divisions including:

- President of \$4.5bn Personal Safety Division
- Senior VP / Managing Director
East Europe, Middle East & Africa / France, Mexico
- Master Black Belt

MBA - Institut Supérieur de Gestion (ISG Paris)



Executive summary

We are a leading provider of mission-critical technologies

Highly-engineered products, technical service capabilities and customer intimacy create a sustainable competitive advantage

Leading positions in attractive markets with long-term growth opportunities

Global capabilities, extensive service network and large installed base underpinning deep customer relationships

Robust financial framework with a strong track record of revenue growth and high margins and returns

Well-positioned to deliver sustained growth over the long term



John Crane: improving our world with mission-critical technology

Key data

FY2023 revenue

£1,079m (36% of Smiths)

FY2023 organic revenue growth

+15.2%

FY2023 operating margin

22.6%

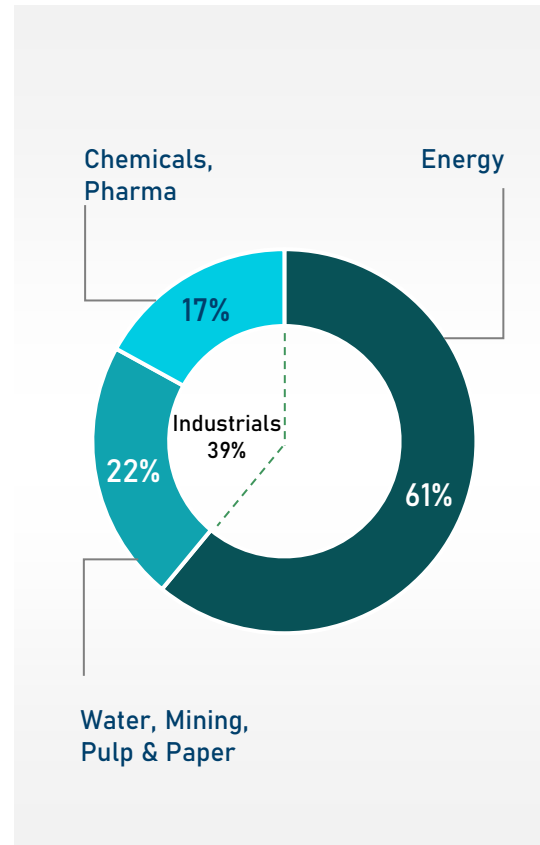
FY2023 operating profit

£244m

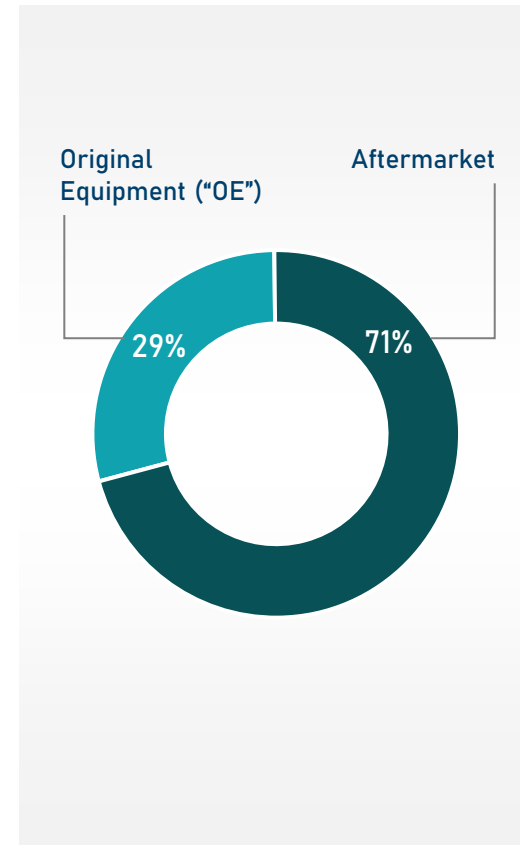
FY2023 ROCE

23.8%

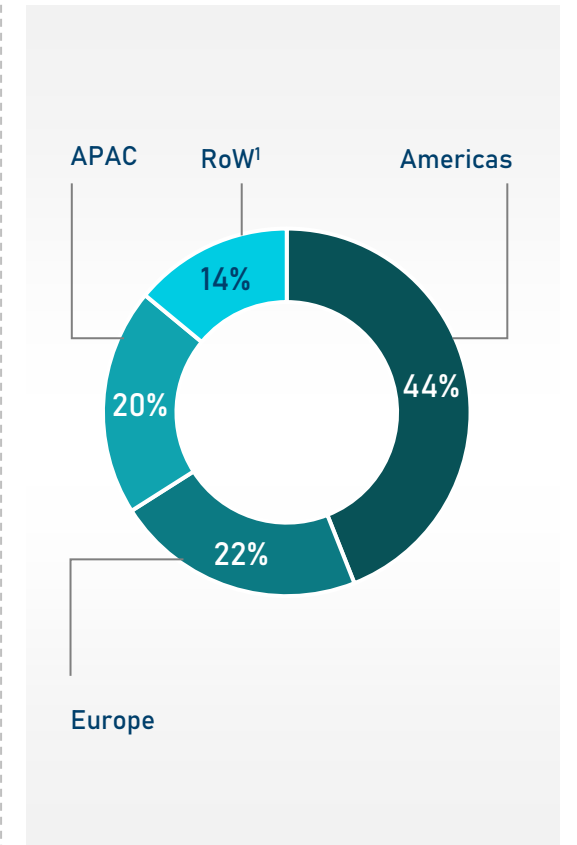
Revenue breakdown by end market



Revenue breakdown by type

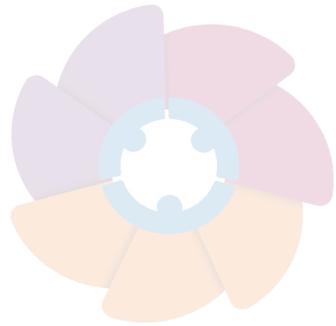


Revenue breakdown by geography



The Smiths Value Engine advancing John Crane

OUR PURPOSE



PIONEERS OF PROGRESS

Improving our world through smarter engineering

OUR STRENGTHS



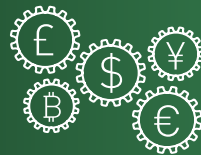
World-Class Engineering



Leading Positions in Critical Markets



Global Capabilities



Robust Financial Framework

OUR PRIORITIES



Growth



Execution



People

John Crane's fundamental strengths



World-Class Engineering

- Over 100 years of bringing highly engineered mission-critical products to market
- Unique expertise helping customers solve critical needs
- Engineered-to-order model creates sustainable competitive advantage



Leading Positions in Critical Markets

- Largest installed base, in secularly growing markets
- Distinctive and sustainable competitive advantage
- Increased demand for efficiency, decarbonisation and energy transition



Global Capabilities

- Unmatched customer proximity and local capabilities with over 200 sites in more than 50 countries
- Global technical talent with > 2,000 engineers
- Deep customer connection with global OEMs, EPCs and end users



Robust Financial Framework

- Resilient, repeatable revenues (71% aftermarket)
- Low asset intensity
- High margins and returns
- Excellent cash conversion



World-class engineering

Strong Original Equipment portfolio

Gas compression seal solutions



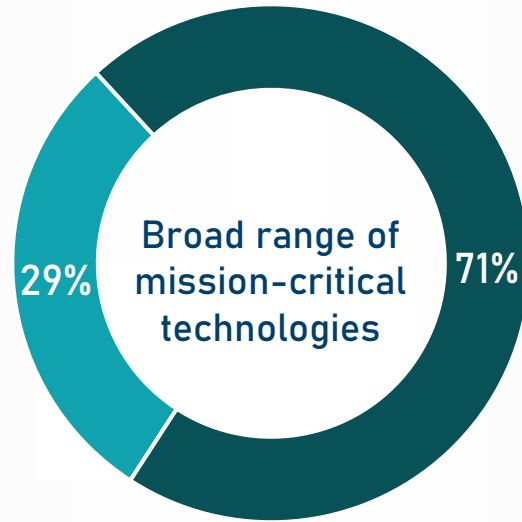
Wet seal solutions



Auxiliary systems



Filters and couplings



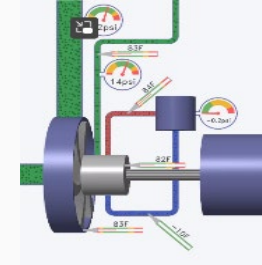
■ Original Equipment ■ Aftermarket

Aftermarket margins
—
OE margins ~ 1.75x

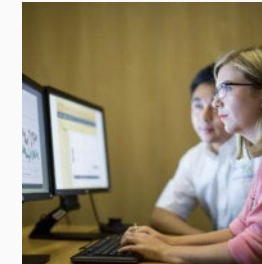
Aftermarket revenue: 25+ years on each device

Differentiated Aftermarket services

Predictive maintenance



Training, education, certification



Field service



Repair and replace

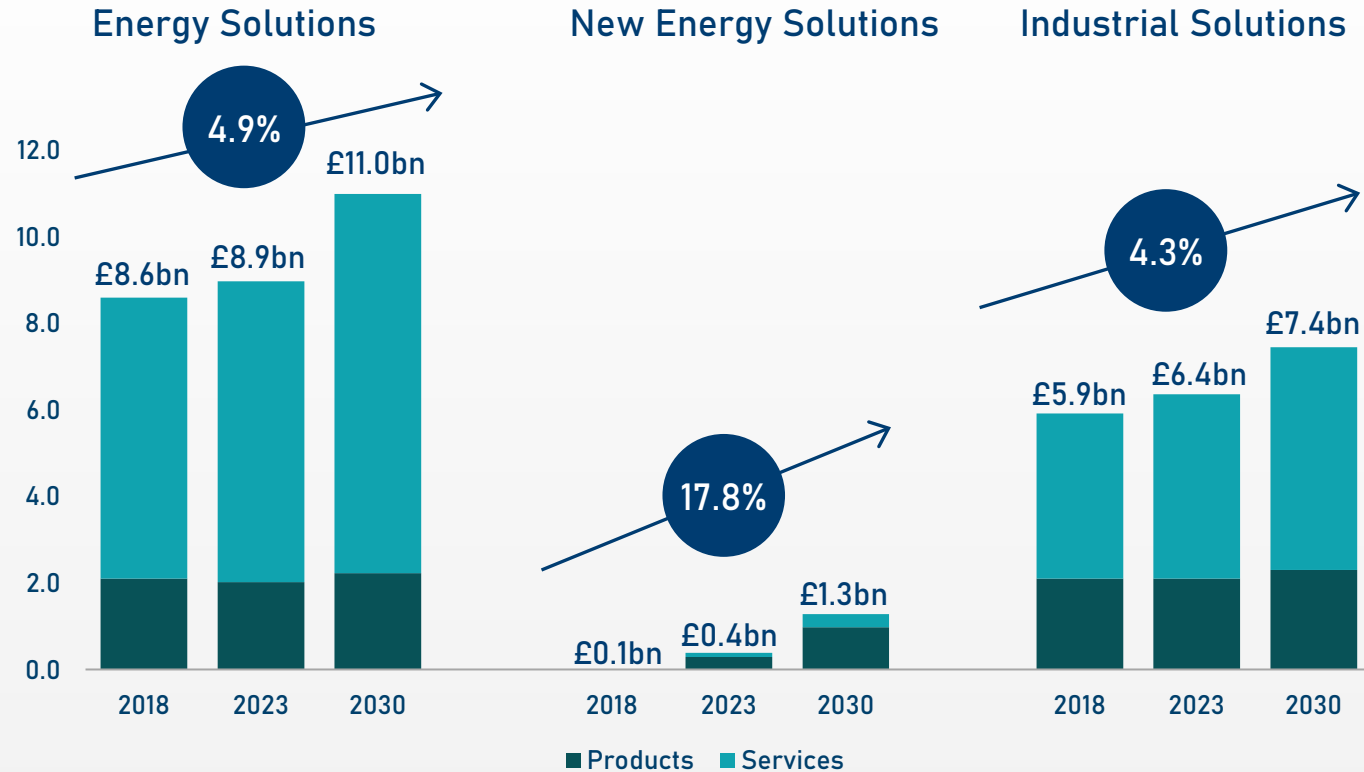




John Crane has built leading positions in critical markets



Total addressable market (£bn) and nominal growth (%)





Our industrial market segments have attractive growth opportunities

Industrial market segment	Market segment size	Market segment growth	John Crane opportunities
 Chemical/ pharmaceutical	✓✓	+++	<ul style="list-style-type: none">• Energy efficient products• Service to reduce emissions (decarbonisation)
 Mining	✓	++	<ul style="list-style-type: none">• Products to minimise environmental impact (e.g., water use)
 Pulp and paper	✓	++	<ul style="list-style-type: none">• Energy efficient/low emission products• Water reduction solutions
 Other industrial segments	✓✓✓	++	<ul style="list-style-type: none">• Energy efficient products• Decarbonisation



Global footprint enables unparalleled customer intimacy

Global Capabilities



Total locations ~200

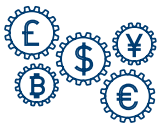
Sales & Service Centres 163

Manufacturing Centres 35

Engineering and R&D Hubs 9

Installed base >3 million





John Crane enjoys a robust financial framework

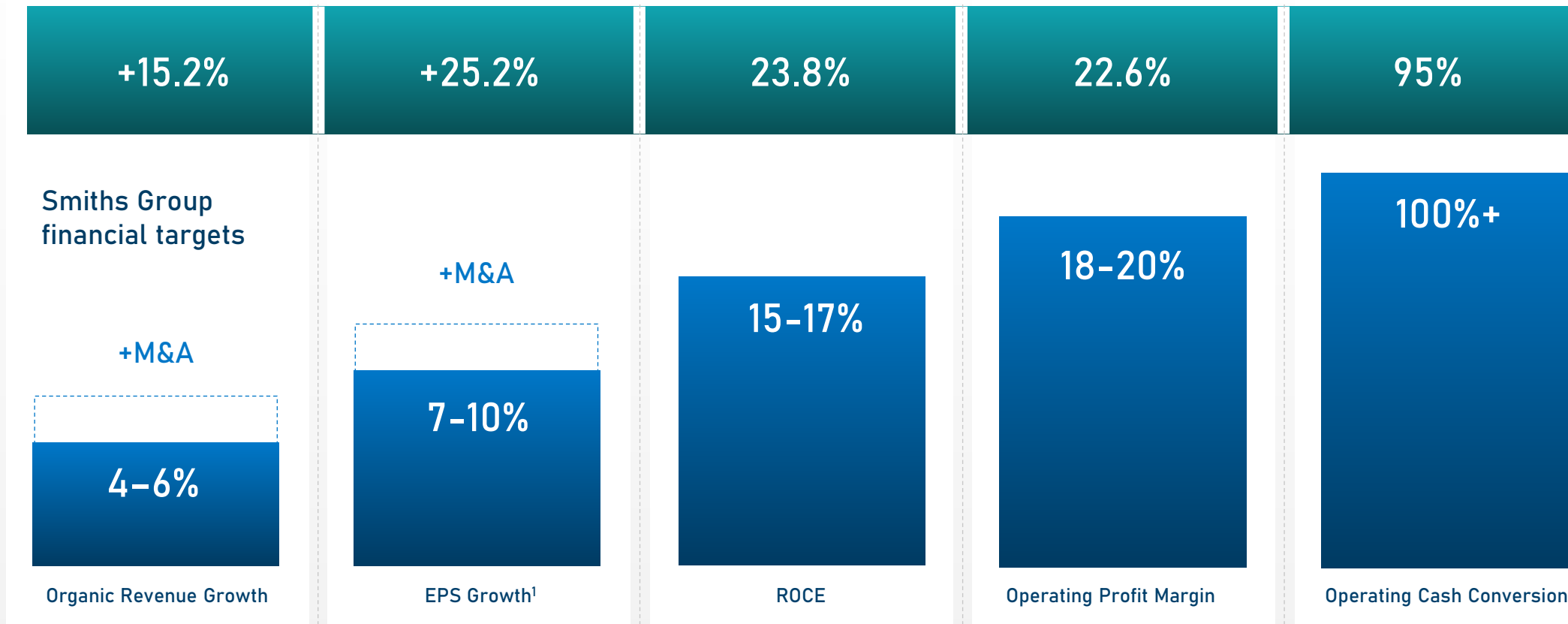
	FY2022	FY2023	Reported change	Organic change
Revenue	£901m	£1,079m	19.8%	15.2%
Original equipment revenue	£279m	£314m	12.5%	8.1%
Aftermarket revenue	£622m	£765m	23.0%	18.4%
Operating profit	£188m	£244m	29.7%	25.2%
Operating profit margin	20.9%	22.6%	+170bps	+180bps
Operating cash conversion ¹	91%	95%	+400bps	
ROCE	19.4%	23.8%	+440bps	

Summary:

- Strong organic revenue growth across all geographic and customer end markets
- FY2023 15.5% order growth and strong order book supports continued growth across FY2024 and beyond
- Attractive margins and returns
- Healthy cash conversion, with plans in place to improve further

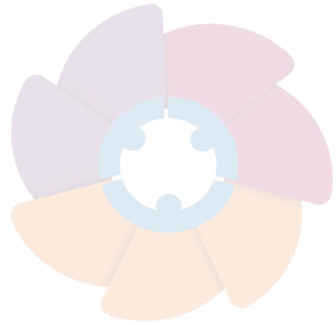
John Crane is accretive to Smith's medium-term financial targets

John Crane actuals FY2023



The Smiths Value Engine advancing John Crane

OUR PURPOSE



PIONEERS OF PROGRESS

Improving our world through smarter engineering

OUR STRENGTHS



World-Class Engineering



Leading Positions in Critical Markets



Global Capabilities



Robust Financial Framework

OUR PRIORITIES



Growth



Execution



People



How John Crane is accelerating growth



Focus

- Accelerating access to new technology and products (e.g., in energy transition)
 - Geographical expansion
 - Helping support expanded services
-
- Supporting our customers through energy transition with existing technologies
 - Expanding services portfolio
-
- Enhancing performance to meet higher specification required by energy transition
 - Carbon LF seal platform for LNG applications
 - Digitisation of product and service portfolio
-
- Near-term global demand for stable energy supply
 - Secular growth in energy and primary resource demand
 - Increasing demand for enhanced efficiency, environmental safeguarding and cleaner processes
 - Supporting our customers through energy transition with existing products

Examples

- Acquired Advanced Diamond Technologies industrial division – superior diamond chemical deposition process for industrial applications
 - Acquired Seebach GmbH – highly-engineered filtration solutions
-
- Bioenergy, sustainable aviation fuel
 - Expanded services
-
- Seal gas recovery system
 - John Crane Sense product portfolio
-
- +19.5% growth in energy in FY2023
 - +9.2% growth in industrial end markets in FY2023
 - Double digit growth in all regions in FY2023
 - Active in over 70 hydrogen and CCUS projects



Executing our strategy to deliver success

	Priorities	Metrics
 Growth	New Product Commercialisation	% growth from new products
	Pricing	% growth from pricing, covering input inflation
	Sustainability	Energy efficiency GHG emissions reduction
	Portfolio	# of M&A opportunities reviewed
 Execution	Customer Service	On time, in full Back orders as % of orderbook
	Smiths Excellence System	£m profit and cash saving
	Productivity	Factory productivity/COPQ
	Inventory	Inventory turns
 People	Leadership Development	% promotions made internally
	Diversity & Inclusion	% of female employees % of leaders who are diverse
	Colleague Engagement	Voluntary attrition
	Safety	Recordable incident rate Safety leading indicators

- High levels of demand for our products and services
- Executing well to deliver for our customers
- Operating a highly engineered-to-order process
- Managed by optimising our supply chains
- Ensuring continuous improvement through SES
- Working closely with our customers to ensure a high-quality service, through the product life-cycle



Sustainable execution

Progress in sustainability

Growth



Commercialising high-value green technology

- Supporting hydrogen and CCUS projects globally
- ~30% of sales from products and services which provide decarbonisation benefits

Execution



Progress towards our Net Zero GHG emissions and natural resource targets

- Renewable energy
- Solar panel installations

People



Empowering our people

- Top quartile safety performance, RIR¹ of 0.25
- Developing internal talent
- Diverse leadership team

Our roadmap to achieve net zero

Our Commitment

Scope 1 & 2 by 2040

Scope 3 by 2050


Supported by our initiatives:

- Improving energy efficiency
- On-site renewables
- Green product initiatives
- Renewable energy supplies
- Fleet electrification
- Scope 3 supply chain





John Crane Senior Leadership Team

 Today's presenters



**President
Bernard Cicut**



**Sales &
Aftermarket
Sook Won Moon**



**Customer
Operations
Rob Sharman**



**Strategy,
Portfolios
& Marketing
Ruben Alvarez**



**Chief
Technology
Officer
Mike Eason**



**New Energy
Solutions
Frank Ma**



**Chief
Financial
Officer
Céline Boland**



**Engineering
Solutions
Philippe
Lambert**



**Human
Resources
Kini
Pathmanathan**



**General
Counsel
Vanya
Bromfield**



**Master
Black Belt
Alex Clothier**

Closing remarks

We are a leading provider of highly-engineered, mission-critical technologies with a sustainable, competitive advantage

We are well-positioned in markets with attractive, long-term growth drivers

We have global capabilities and service expertise, which supports deep customer relationships

We are delivering a strong financial performance

We are well-positioned to support growth over the long term



John Crane Deep Dive

Customer-led growth



Sook Won Moon, VP Sales and Aftermarket, John Crane

- John Crane - 26 years in multiple roles including:

- VP Sales and Aftermarket

- Global Director of Projects

- Key account & Project manager across EMEA & AP

- BSc Chemistry - ChungNam National University



Executive summary

We operate in attractive growth markets

Our customers demand and value engineering capability and product reliability – often in harsh operating environments

We have a leading position in a technically advanced market

We deliver for our global customers from first fit through to aftermarket servicing

Our extensive service offering enhances our aftermarket proposition, and we provide lifetime (25+ years) support across the installed base

Our technology leadership positions us well for future growth opportunities

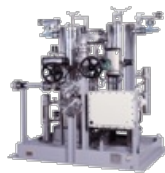
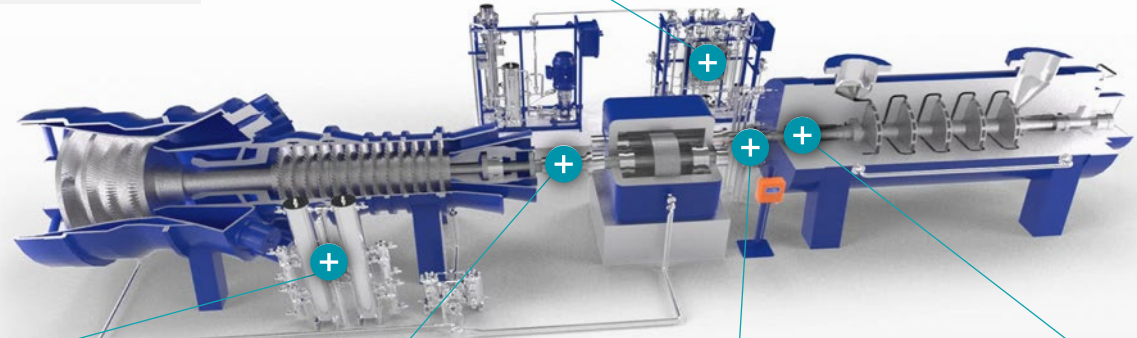


Providing mission-critical technologies and services

What is a mechanical seal?

- Highly engineered device combined with rotating and stationary parts, sealing gas or fluid in critical applications to prevent leakage
- Embedded deep into a pump, agitator or compressor
- Primary safety mechanism – a seal tells you when something is wrong
- Allows a customer to optimise pump and compressor operation
- Increases plant reliability and uptime

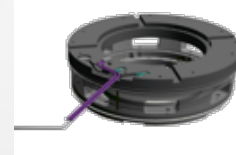
Seal gas system



Filtration



Coupling



JC Sense



Dry gas seal

Providing mission-critical technologies and services

Why is it difficult to do?

- Required to operate across a range of:
 - Speeds: up to 200 m/s
 - RPM: up to 50,000
 - Temperatures: (195)⁰C to 350⁰C
 - Pressures: up to 450 bar(g)

Why is it important?

- Seal failure results in downtime and potentially significant cost implications
- Safety critical
- Reduces environmental impact



LNG mega-trains



Pharmaceuticals & bio-chemicals

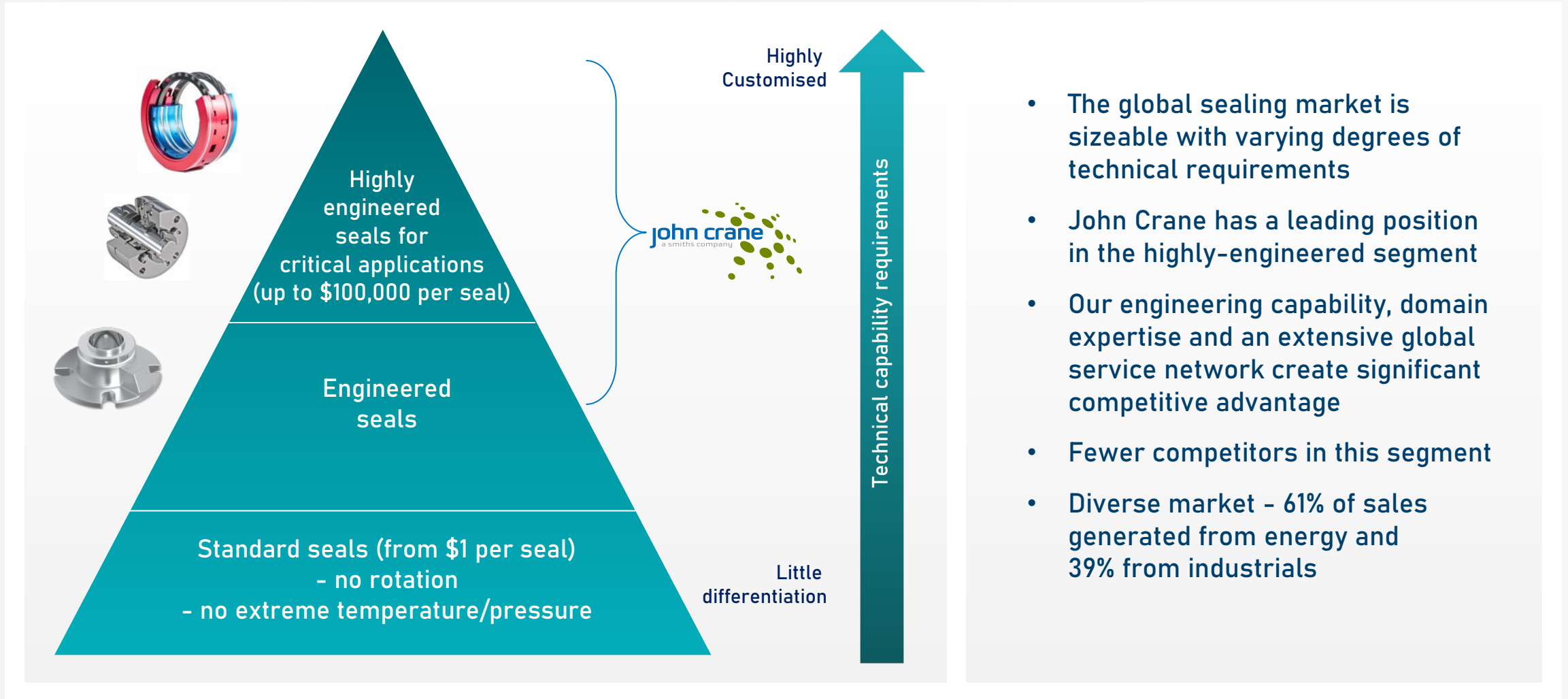


Cryogenic applications



Mining & minerals

John Crane has a leading position in a technically advanced market



How we win



Gaining market share in OE supports recurring aftermarket revenue stream



John Crane – engaged from beginning to end with multiple customers



- Work with multiple players during the feasibility, design and build phase of a capital project cycle
- Early engagement with OEMs and EPCs in design phase maximises value for both parties
- Provide products meeting customer specification requirements, with technical support

- Prime contracting relationship with end users/OEMs through a 25+ year product lifecycle
- >90% recurrent, and growing success in expanding market share with existing customers
- Aftermarket margins are ~ 1.75x OE margins

Success in capturing original equipment sales secures 25+ years of aftermarket

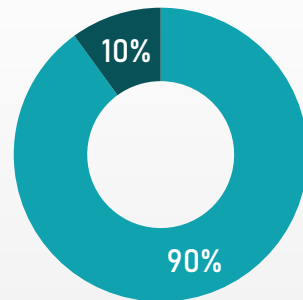
Original equipment purchasing criteria - why customers select John Crane

- 100+ years of industry experience and reputation
- Product technology leadership and in-field reliability
- Engineering to order capability and history of technological development
- Longstanding and deep customer relationships
- Global presence and largest installed base demonstrates significant in-field domain expertise



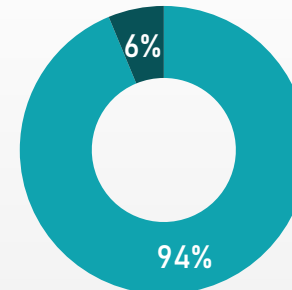
Secures 25+ years of attractive aftermarket revenue

% of John Crane installed base serviced by John Crane



■ John Crane ■ Other

% of lifetime value of order (indicative), OE vs aftermarket



■ Aftermarket ■ OE



Long-term, recurring aftermarket and service revenue

Aftermarket purchasing criteria - why customers select John Crane

- Service quality and responsiveness of support, underpinned by a network of 160+ service centres and industry-leading service engineers
- Engineering capability and product reliability
- Customer references, experience and reputation
- Total cost of ownership – increase efficiency and productivity, lower downtime



Added value services

- Upgrades and retrofits to reduce emissions
- Long-term maintenance and reliability service programmes
- Expanded services including digital solutions – condition monitoring, asset management



Closing remarks

We have attractive growth opportunities across all end markets

Our distinct customer proposition delivers a sustainable, competitive advantage

We support our customers' reliability goals, increase plant safety and help them to reduce their carbon footprint

Our aftermarket offer is “sticky” – for the entire lifecycle of a project – and we invest in expanding our service offer to meet customer needs

Our product reliability, service support and domain expertise set us apart



John Crane Deep Dive

New energy solutions



Frank Ma, VP New Energy Solutions, John Crane

- John Crane - 9 years across various roles including:

- VP of New Energy Solutions

- VP and GM of Filtration Solutions

- Strategy and M&A Director

- Previously held roles at Boston Consulting Group and General Electric Power Systems

- MBA - London Business School
- MSc Mechanical Engineering - Georgia Tech
- BSc Aerospace Engineering - Cornell University



Executive summary

Evolution of energy sources will happen – even if the pace of change is uncertain

John Crane already active in both conventional and new energy, and is well-positioned in all energy transition scenarios

Our existing portfolio helps our energy and industrial customers decarbonise existing operations, while becoming more efficient and reliable

We are also critical in the deployment of new energy markets; particularly carbon capture, utilisation and storage (CCUS), hydrogen and low carbon fuels

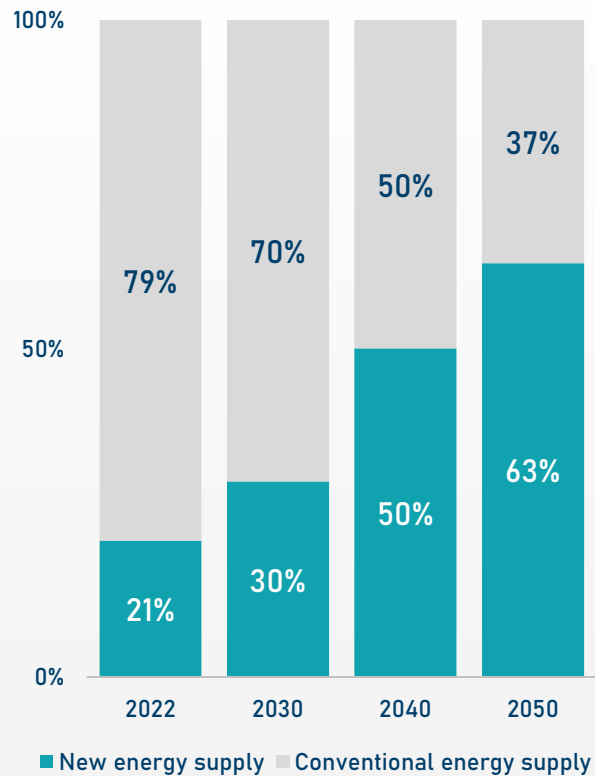
We are partnering with customers to scale up new technologies that meet future requirements

Overall, we are well positioned for today and the future to maximise the opportunity ahead

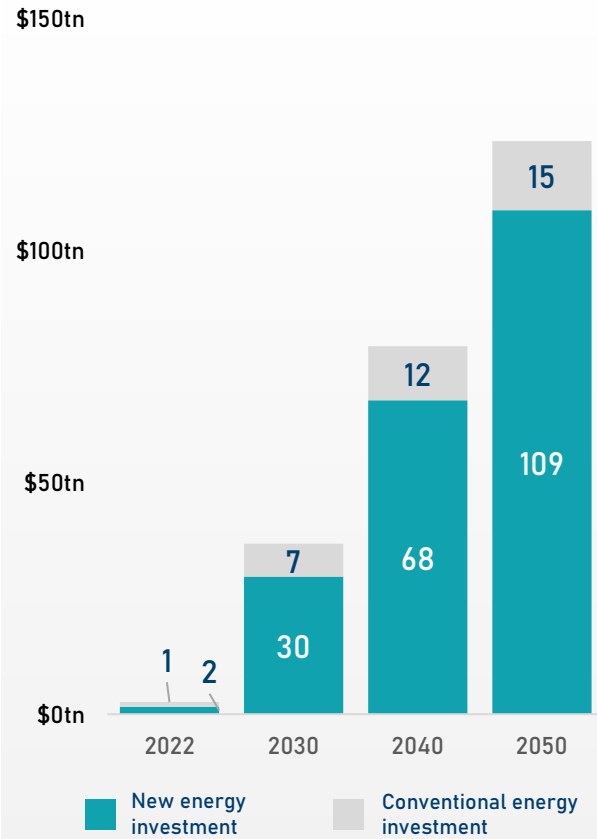


Evolution of energy to meet decarbonisation goals

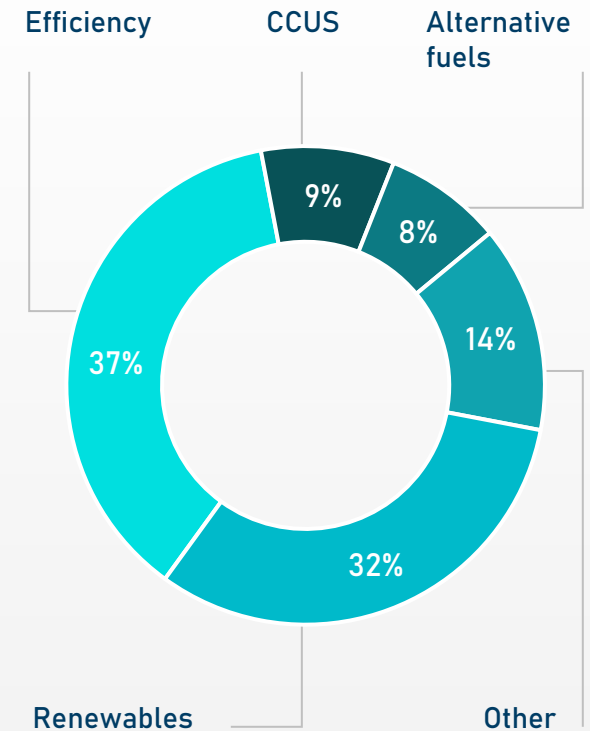
Composition of energy supply¹



Total cumulative energy investment from 2022¹



Planned carbon emission reductions by 2050 by technology



Our energy transition solutions

Energy & industrial decarbonisation



Energy efficiency

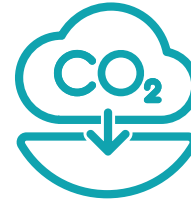


LNG¹ as bridge fuel

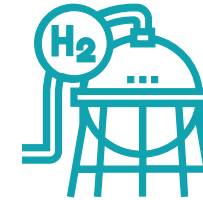


GHG emissions

Scaling high growth new energy markets



CCUS²



Hydrogen



Bioenergy & SAF³

Proven portfolio of solutions to support our customers' energy transition journey

New technologies and services to scale ecosystem

~30% of John Crane sales come from products and services that provide decarbonisation benefits

Improving our customers' energy efficiency

- Our end markets are spending ~\$45bn p.a. on energy efficiency, which is expected to double to achieve net zero targets
- Pumps, compressors and other rotating equipment accounts for 25-50% of our customer sites energy consumption
- Today, we help our customers to reduce energy consumption using existing products and solutions

John Crane Diamond



Case study

- Pulp & paper operation in the USA
- Our Diamond solution increased mean time between failures from 10 months to 4 years (4.8x uplift)
- Improved reliability, lowered water demand and increased efficiency

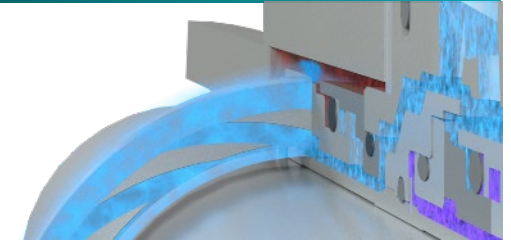
Pump Gas Seal



Case study

- O&G operator in the USA
- Upgrade to Type 2800 pump gas seal
- Over 90% reduction in energy consumed compared with wet contacting seal

USP¹ Seal



Case study

- O&G operator in Middle East
- Upgrade to Type 8600 USP
- Saves ~1 million litres water p.a.
- Upgrading all pumps estimated to save \$2m over 6 years in energy cost

Enabling LNG for energy security

- LNG is critical for energy security and as a bridge fuel to a low-carbon energy system
 - ~50% reduction in CO₂ and ~80% reduction in nitrogen dioxide emissions vs. coal
- Demand expected to grow into the medium-term
- John Crane is a market leader, with 80% of global LNG export facilities using our gas seals, and large installed base of filtration
- Mission-critical nature plays to our strengths:
 - Challenging applications
 - Global network of service centres
 - Low emissions LNG

Servicing a major LNG facility to minimise downtime & enhance energy security



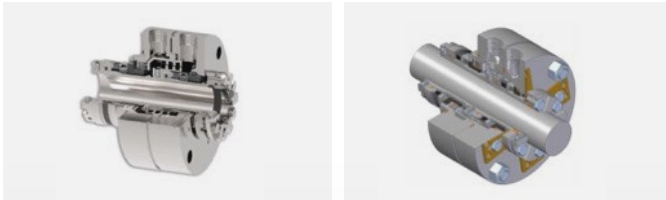
Case Study

- LNG operator in the Gulf Coast (USA), with a facility generating ~\$15m revenue per day
- Our agility and breadth of service capability enabled us to rapidly install new dry gas seals
- Minimising downtime and ensuring energy security

Delivering significant reductions in GHG emissions

- Reducing GHG emissions offers an economical pathway to decarbonisation
- GHG emissions leaks account for 3-4% of total gas production, translating to revenue loss of up to \$30bn
- Regulation is accelerating and prompting action from key O&G players
- John Crane has been reducing emissions & leaks for decades, with proven cost-effective solutions

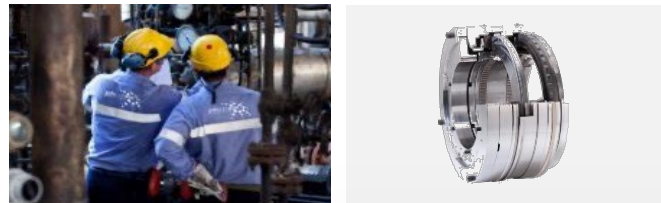
Dual Pressurised Seal



Case Study

- Driven by Clean Air Act 1990
- Installed thousands of low emissions seals
- Reduced millions of tonnes of emissions since 1990s

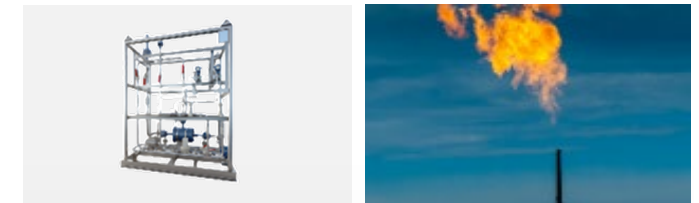
Retrofitting Compressors



Case Study

- Reduce methane leaks by up to ~95% vs wet seals
- Over past 10 years, upgrades are reducing ~280,000 tonnes of CO₂ p.a.

Seal Gas Recovery System



Case Study

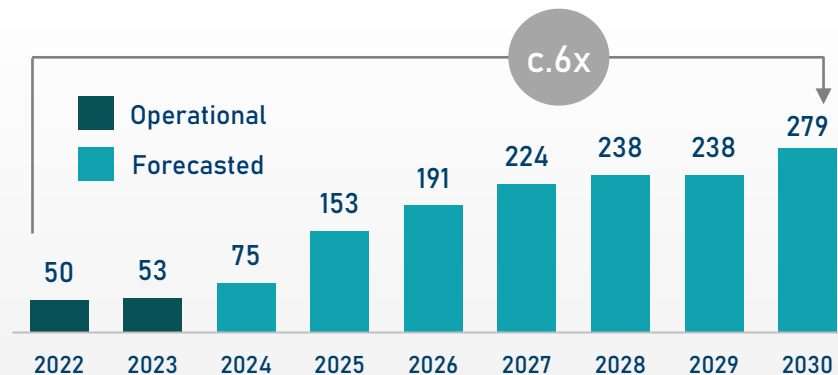
- Recover valuable process gas and reduce emissions
- Significant reduction in GHG emissions that would have been flared

We are investing in future emissions reduction services and technologies

We are well positioned in CCUS

- Market is here today across multiple energy producing regions
- We have been active in CCUS for decades as a market leader with c.80% of CO₂ injected underground using John Crane seals
- We are also engaged in 50+ CCUS projects
- Large scale projects predominantly from O&G companies – we are leveraging our relationships and asset base to win
- CCUS sites in O&G have similar aftermarket dynamics as our traditional business
- Investing in new technologies such as supercritical CO₂ seals through a c.£1m grant from the UK Department of Energy Security & Net Zero (DESNZ)

Captured CO₂ (Total market, million tonnes CO₂ per year)



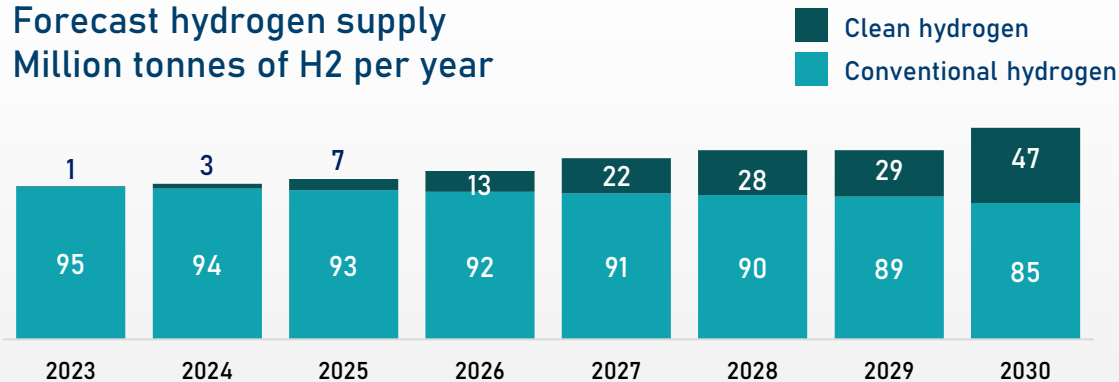
CCUS projects (market)

	Oct. 2022	Oct. 2023	% Change
Announced projects	173	278	+60%
Investments announced	\$114bn	\$171bn	+50%

- ~70% of projects are in feasibility stage
- JC opportunity funnel increased by ~3x in LTM

Our solutions are critical to scale clean hydrogen ecosystem

Forecast hydrogen supply
Million tonnes of H2 per year



Clean hydrogen

- Majority of current green hydrogen projects are smaller scale and in feasibility stages; larger projects expected to be operational by 2030+
- Several large-scale blue hydrogen projects underway around the world. John Crane is active in this area

Conventional hydrogen

- Currently accounts for ~99% of all hydrogen made, but will be displaced over time by clean hydrogen
- John Crane has large installed base in conventional hydrogen

- John Crane has been serving customers in hydrogen applications for over 40 years
- Clean hydrogen market is a small proportion of total market today, but growing quickly
- Our solutions are critical to scale clean hydrogen ecosystem, in particular in midstream (pipelines, ammonia and liquid hydrogen)
- Currently engaged in 20+ green and low-carbon hydrogen projects
- Investing in new technologies, materials and capabilities to meet challenging future technical needs

New energy in action

CCUS: Largest offshore CCS project in the world, based in Malaysia



Background

- Largest offshore CCS project in the world
- Up to 3.3 million tonnes of CO₂ will be captured and sequestered into depleted gas fields

John Crane solutions

- Providing 24 dry gas seals and 12 filters for large number of CO₂ compressors
- Strong relationship with OEMs and end customer to win project

Hydrogen: Blue hydrogen flagship project in the Gulf Coast, USA



Background

- Project is a \$4.5 billion flagship blue hydrogen project based in the US
- Facility to produce ~650,000 tonnes of blue hydrogen p.a., with ~95% of CO₂ captured

John Crane solutions

- Providing mechanical seals, systems and gas filters for rotating machinery
- Well-positioned to capture future aftermarket once facility is operational in 2026

Closing remarks

Energy transition is a \$100 trillion megatrend that will drive growth in both decarbonising existing operations and scaling new markets

We are a market leader with proven solutions helping our customers to decarbonise

The breadth of our technical expertise and capabilities enables us to be agile and responsive to changing new energy demands

We are partnering with customers to develop future technologies that will meet new market requirements and demand

We are well positioned for today and the future to maximise the substantial energy transition opportunity ahead



John Crane Deep Dive

Optimising customer delivery



Rob Sharman, VP Customer Operations, John Crane

- John Crane - 5 years across various roles including:

- VP Customer Operations

- Operations Director

- Previously held roles at GKN Aerospace; UK Government, Department for Trade & Industry and Ministry of Defence

- PhD Materials Science & Engineering - University of Birmingham



Executive summary

We are executing well to meet strong and sustained demand

Our technical expertise enables us to deliver our customers' requirements through an engineered to order process

Our global footprint provides unparalleled agility, efficiency and customer intimacy

Automation and digitisation enhances our world-class customer delivery

SES further enhances our drive for continuous improvement

Utilising these strengths to execute for our customers delivers growth and positions us well for the future



Rapid scaling to meet strong and sustained demand



Optimising
supply chain to
deliver orderbook

- Two years of double-digit order growth
- Building in resilience with multi-source strategy
- Lean management to support continuous improvement

+15% organic
revenue growth



Refining
internal processes
and products

- Reducing complexity through product rationalisation
- Standardising processes to drive efficiencies
- SES projects to increase capacity and reduce cycle times

5-10% machining
productivity
improvement



Automating
and
digitising

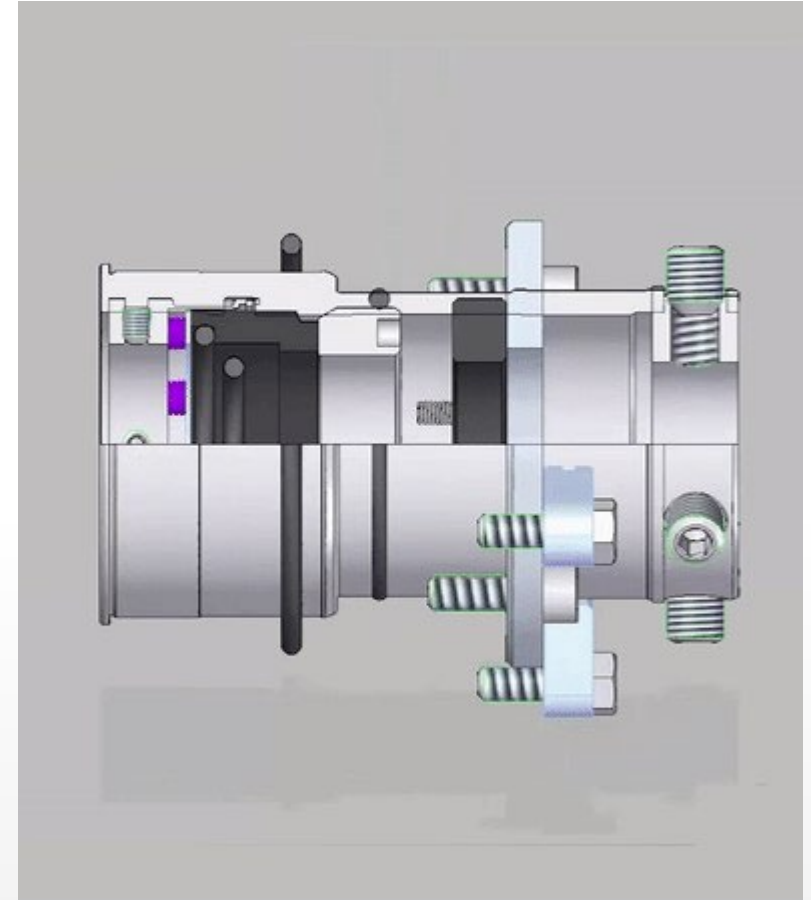
- Technology driving operational efficiencies
- Maximising productivity and minimising cost
- Increasing agility and reducing lead times for customers

Halved
engineering
drafting time

Underpinned by SES, enhancing returns
+440bps ROCE expansion in FY23
~1.7x operating leverage

Maximising our technical capabilities in an engineered to order process

- Customers select John Crane for our ability to meet and customise their bespoke requirements
- Our operational processes are deployed to be efficient and agile within this engineered-to-order process
- Demonstrated ability to deliver this model whilst achieving high returns with average margins over 5 years of 22%
- This provides us with a competitive advantage we have sustained for over a century



Global footprint enables unparalleled customer intimacy

Global Capabilities



Total locations ~200

Sales & Service Centres 163

Manufacturing Centres 35

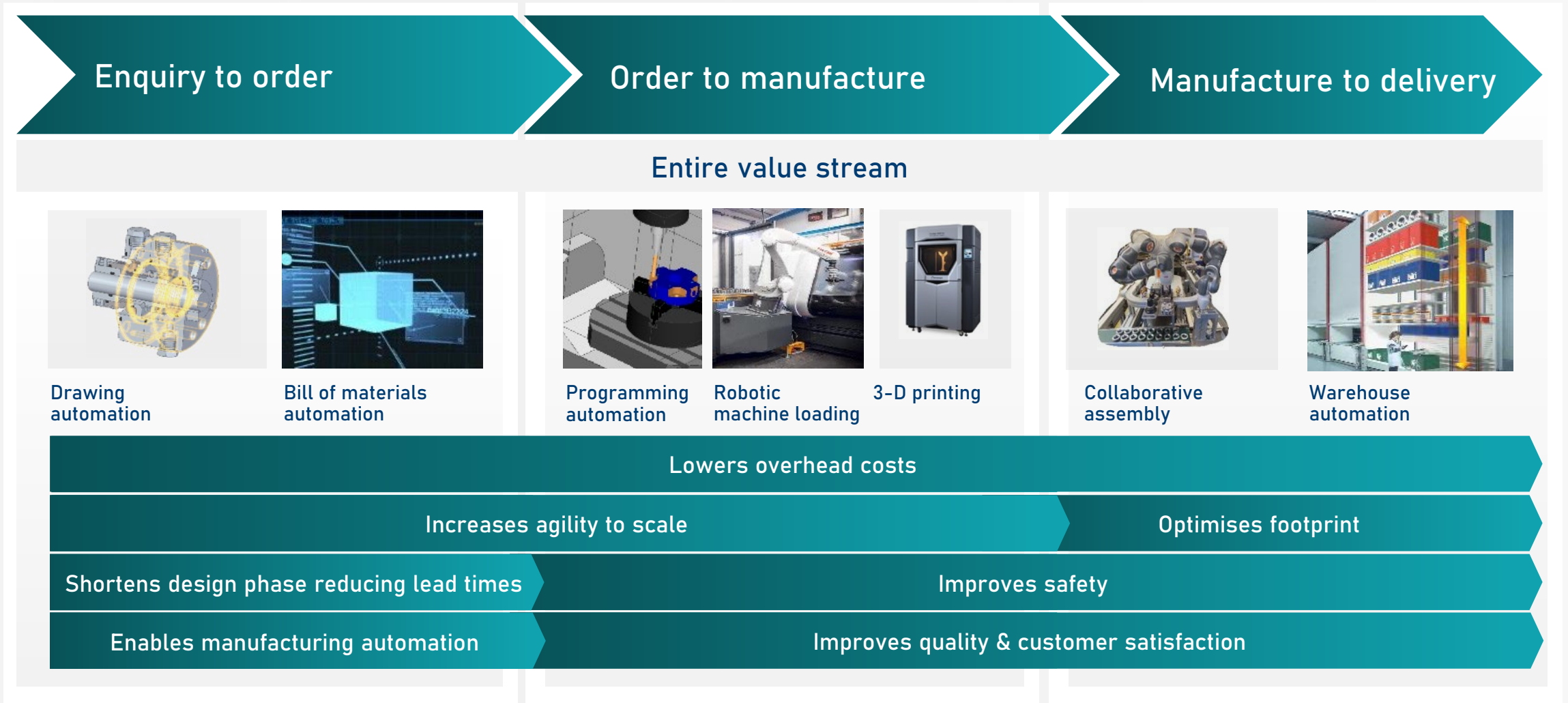
Engineering and R&D Hubs 9

Installed base >3 million



- Local presence and capabilities enables rapid customer response
- Intimacy with customers enables tailored service levels
- Regional manufacturing hubs drive efficiency
- Engineering and R&D hubs deliver solutions to complex customer problems

Manufacturing automation is improving operations



SES is embedded in the way we work at John Crane

SES is deeply embedded



- SES delivers results
- SES develops our talent
- SES advances our culture



- 1 Master black belt
- 7 Black belts delivering efficiency and improvement projects

Projects



- Reducing inventory stocks
- Predictive AI to optimise scheduling
- Delivering against record orderbook



- Building in additional supply chain resilience
- Multi-source strategy



- Standardised finance processes
- Standardised project management criteria

SES is delivering results



Case study: Single source supplier mitigation

Opportunity

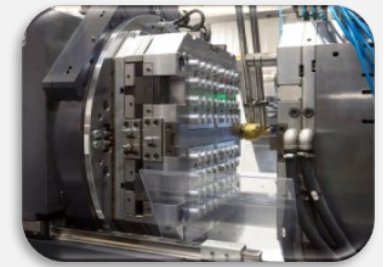
- Further supply chain resilience
- Improve on-time delivery
- Improve execution against record order book

Solution

- Embedded Black Belt at specialist supplier to maximise their output
- Acceleration of alternative supply for higher volume parts
- 3D printing solution for customised parts further improving resilience

Results to date

- Supply back log more than halved
- Significant improvement in on-time delivery
- Designed in supply chain resilience



Closing remarks

We are executing well to meet strong and sustained demand

Our engineered-to-order strategy delivers to meet our customers highly technical requirements

Our global presence provides agility to respond to customer needs

Automation and digitisation are improving our operations through the value stream

SES is delivering tangible benefits

