

**smiths**

bringing technology to life



# John Crane Investor Day

Lutín, Czech Republic, 9 June 2009

## Opportunities to create value



This presentation contains certain forward-looking statements with respect to the operations, performance and financial condition of the Group. 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 the Company undertakes no obligation to update these forward-looking statements. Nothing in this presentation should be construed as a profit forecast.

# Philip Bowman, Chief Executive

## Observations on John Crane - An Attractive Business Model

▶ Market leading brand with strong technology and customer relationships

▶ Resilient business with high aftermarket exposure in diverse markets

▶ Strong global network of sales and service centres

▶ Opportunity to leverage this network through addition of new technologies

▶ Significant scope to improve margins – even in the current market

▶ Strong cash generation

# Key Themes for Today

- 1** Outline the business strategy
- 2** Examine the market place and John Crane's position
- 3** Explore the strengths of John Crane's technology and business model
- 4** Describe the major restructuring programme and benefits – a key value driver
- 5** Develop a greater understanding of the aftermarket dynamics
- 6** See John Crane's products and visit a manufacturing facility

# Paul Cox, President, John Crane



## Welcome to John Crane Sigma a.s, Lutín



Activities: HQ for John Crane Eastern Europe, assembly of standard cartridge seals, couplings and machining of adaptive hardware

## Investor Day Agenda

<b>12:00</b>	Welcome and Introduction: Philip Bowman
<b>12:15</b>	John Crane Presentation: Paul Cox, GMD
<b>13:15</b>	Lunch
<b>13:45</b>	John Crane Presentation: Bob Wasson, VP Finance & IT
<b>14:15</b>	John Crane Presentation: Dave Hill, VP Product Line Management
<b>14:45</b>	Q&As
<b>15:15</b>	Tour of facility
<b>16:45</b>	Refreshments
<b>17:00</b>	Depart facility, take coach to Brno Airport
<b>18:30</b>	Flight departs Brno
<b>19:30</b>	Flight arrives Stansted





# Today's Goals

- 1 Outline the business strategy
- 2 Explore the key drivers of future growth
- 3 Demonstrate how we are managing the growth challenges
- 4 Recent developments in R&D
- 5 Visit our manufacturing facility and product demonstrations
- 6 Opportunity to meet the management team
- 7 Why we are different

## John Crane - An Attractive Investment Case

- ▶ Market leader in growth markets with high barriers to entry
- ▶ Resilient business with high aftermarket exposure in diverse markets
- ▶ Unrivalled geographical coverage to leverage expanded products
- ▶ Business underpinned by leading edge technology services
- ▶ Production solutions – expanding into adjacent markets
- ▶ Opportunities to create value, including new acquisitions
- ▶ John Crane growth range: sales 6 to 8%\*; margins 17 to 22%\*\*

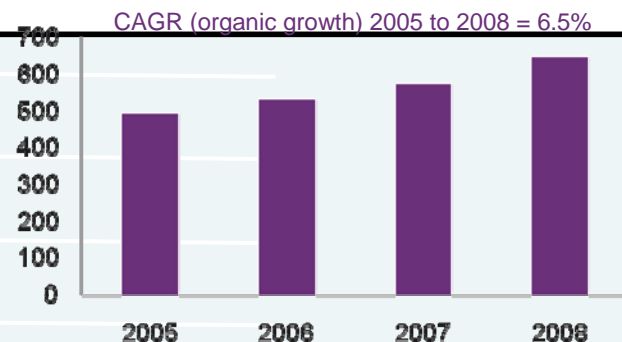
\*Range of underlying growth over 3 year period \*\*Organic growth at constant currency

# John Crane Historical Overview

## Financial performance 2008

Sales	£645m
Organic Growth	7.6%
Headline Op. Profit	£108m
Organic Growth	7.2%
<i>Margin</i>	<i>16.8%</i>

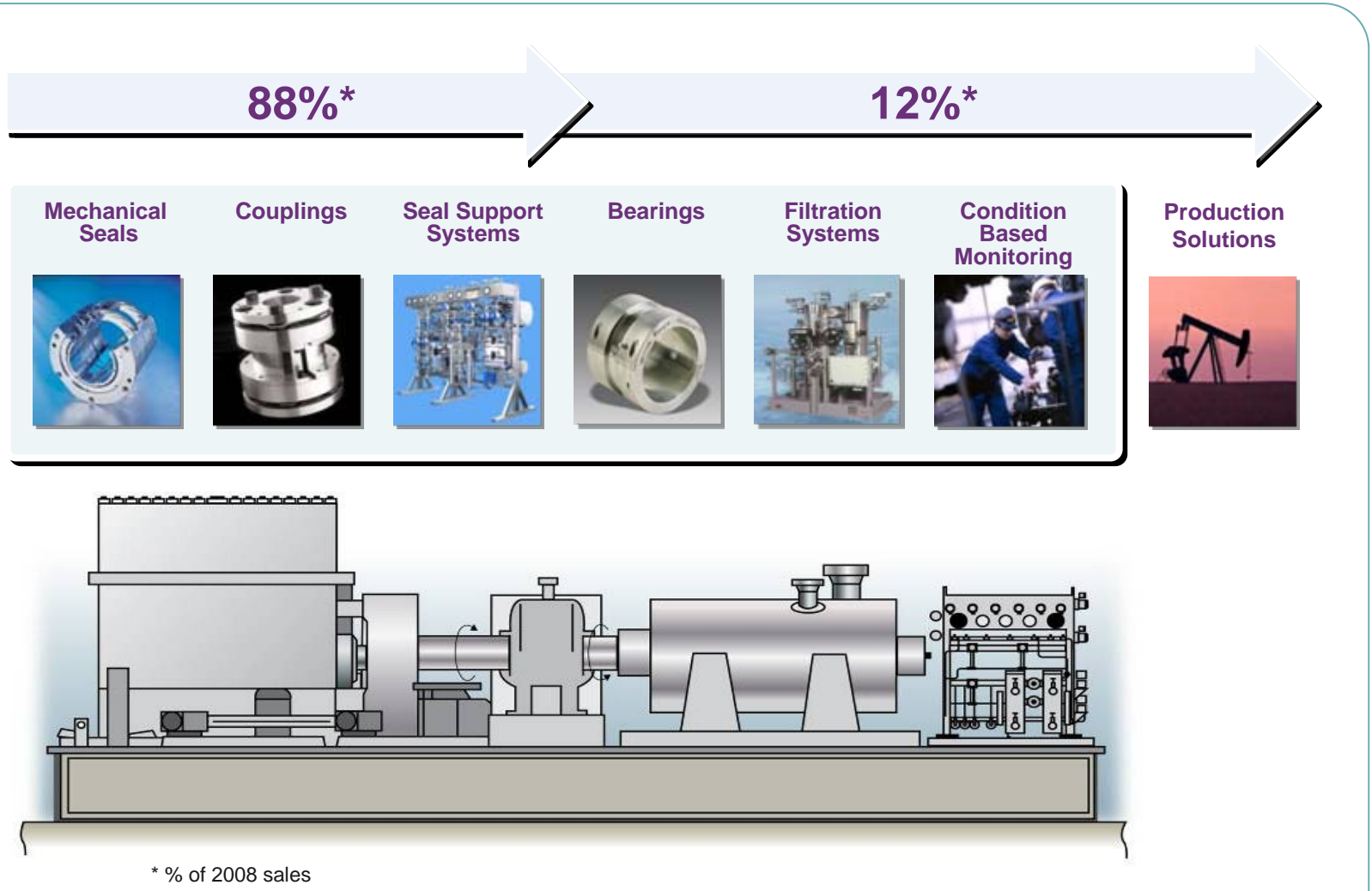
## Sales growth since 2005 (£m)



## John Crane is:

- The acknowledged world leader and largest developer, manufacturer and service provider of mechanical sealing systems, transmission couplings, engineered bearings, filtration systems, artificial lift rods
- A prime aftermarket service provider with 2/3 of its sales coming direct from end users

# A Portfolio of Product & Services



# Key Strategies

## Going Global “One John Crane”

- Clear Communication / One Direction
- World Class performance

## Leveraging the Footprint

- Existing (organic growth)
- Acquisitions (bearings / filtration)

## Building John Crane Production Solutions

- Upstream focus
- Builds on global footprint



# John Crane Fact File

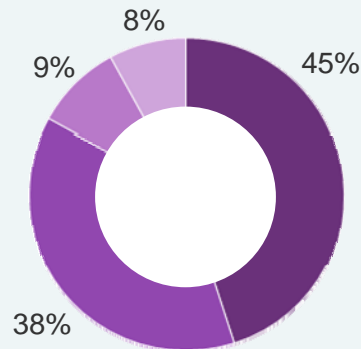
## 2008 Sales £645m

7.6% organic growth

- 21 manufacturing sites in 15 countries covering ~120,000 SQM of manufacturing space.
- 230 sales & service facilities in 59 countries
- Sales to 121 countries
- 2 R&D centres in Chicago & Slough
- 6400 employees
- Over 700 engineers
- Over 40% employees in customer facing roles

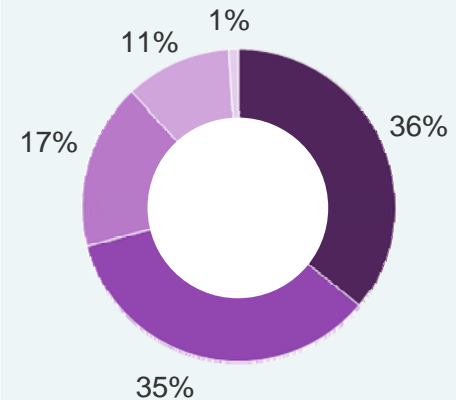
## Sales Profile - by region

- Europe/ME/Africa
- North America
- Asia-Pacific
- South America

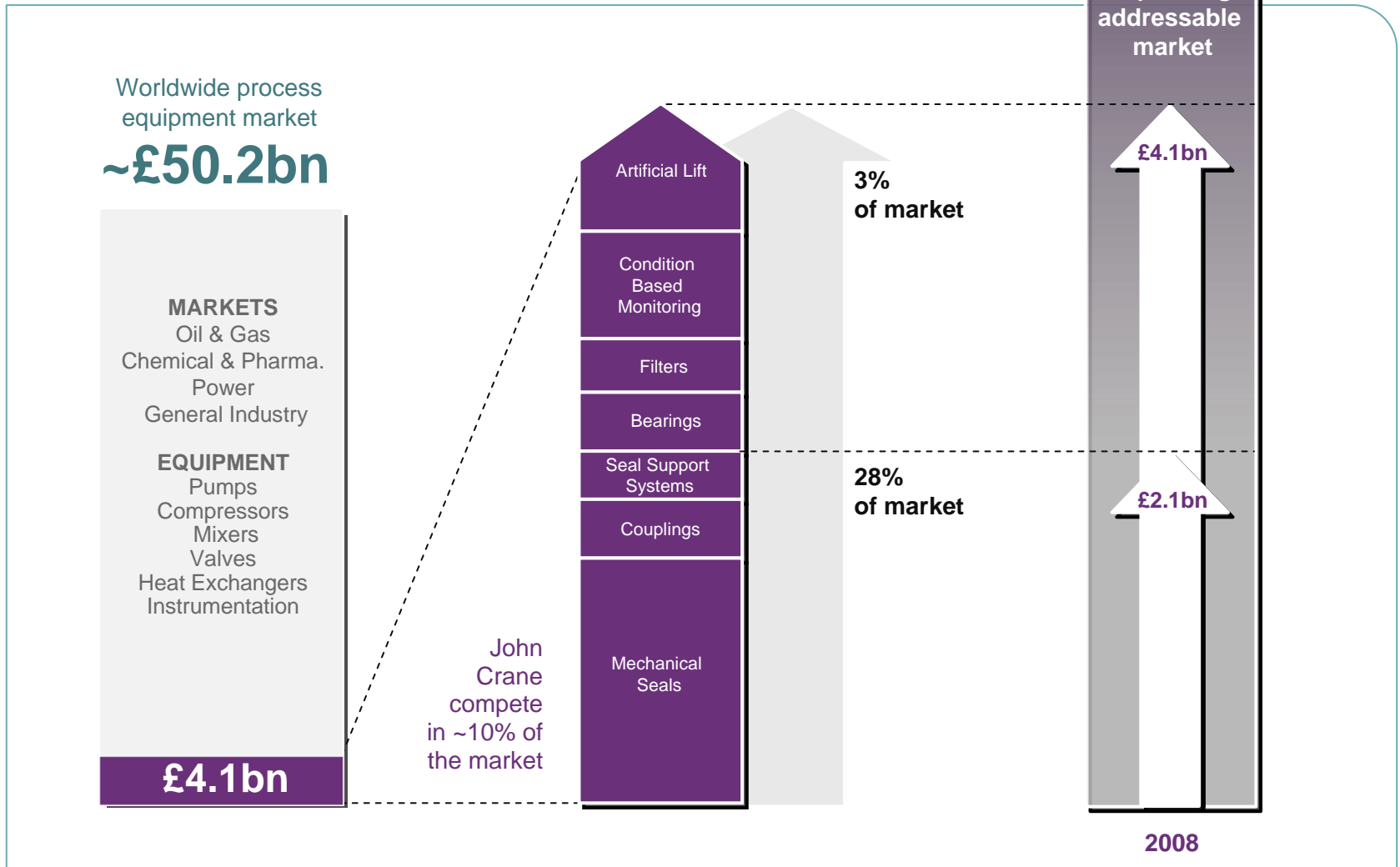


## Sales by sector %

- Oil & Gas
- OEM
- General Industry
- Chemical Processing
- Power

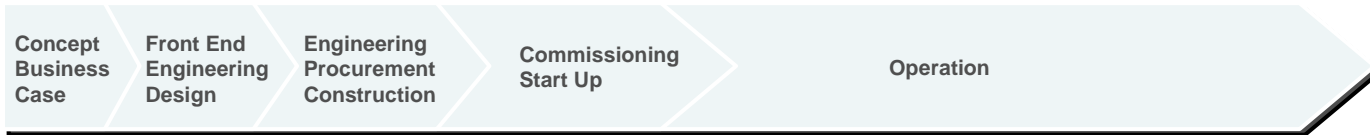


# Where John Crane Sits



# Business Model: From Concept to Installation to Lifetime Support

Customer



John Crane



First Fit: 1/3 of business

Aftermarket: 2/3 of business





# John Crane Serves a Wide Range of Blue Chip Customers

First-Fit Supply to Original Equipment Manufacturers



**SBW**



**SULZER**



**MITSUBISHI**



**DRESSER-RAND**



**Solar Turbines**  
A Caterpillar Company



**TEXTRON**

Aftermarket Supply and Value-Added Services to Operating Facilities

**ExxonMobil**

**TALISMAN**  
ENERGY



**PDVSA**



**BASF**



**ROHM**  
**IHAAS**

**ConocoPhillips**

**VALERO ENERGY**  
CORPORATION



**LYONDELL**  
Lyonell | Equistar | Mitcheman | The Lyondell Companies

**OxyChem**

**SOLVAY**

**DOW**  
Living.  
Improved daily.

*Lilly*

**中国石油化工股份有限公司**  
CHINA PETROLEUM & CHEMICAL CORPORATION

# John Crane – Unique Global Reach



- Over 230 sales & service facilities in 59 countries
- 17 facilities opened in last 3 years:
  - 11 in Asia Pacific
  - Four in Middle East
  - Two in Europe

**around the world,  
around the corner**

**KNOWLEDGE • EXPERIENCE • SERVICE**

**Knowledge:** As global leaders in seal technology, John Crane is committed to continuous innovation and investment in cutting edge technology around the world.

**Experience:** The company is the largest designer, manufacturer and supplier of modern sealing technology. Continuous research and unparalleled industry experience has created the widest available range of bespoke sealing solutions. Significant investment programmes ensure that increasing sealing demands will continue to be satisfied well into the future.

**Service:** Around the world and around the corner, John Crane is totally committed to customer service with investment in a vast network of global customer support units offering world class service 24/7. Specialist forsemachinery centres offer dedicated support in key locations with turnaround reduced by as much as 70%.

Which is why seal users around the world rely on John Crane to minimise cost of ownership, guarantee reliability and maximise asset availability.

**John Crane - For real choice you need  
look no further**

**John Crane**

For more details please contact  
John Crane Singapore Pte Ltd  
29 Tuas Avenue 11  
Singapore 639986

Tel: +65 6512 5200  
Fax: +65 6512 5222 (Sales)  
Fax: +65 6512 5233 (Mgmt)  
Email: [sales@johncrane.com.sg](mailto:sales@johncrane.com.sg)

[www.johncrane.com](http://www.johncrane.com)



# Global Infrastructure Investments - Key Drivers

Energy Independence

Regulatory Requirements



Ageing Infrastructure

- Efficiency
- Upgrades

Demographics

- Industrialisation
- Population growth



Economic Growth



# Market Update: Addressable Market

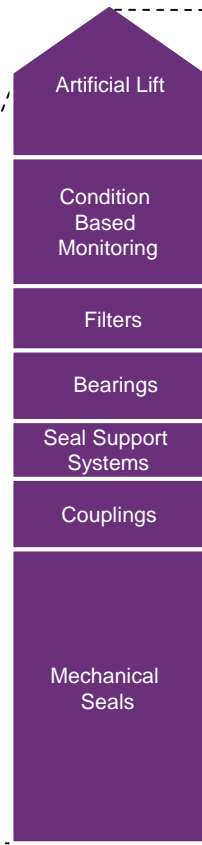
Worldwide process  
equipment market  
**~£50.2bn**

**MARKETS**  
Oil & Gas  
Chemical & Pharma.  
Power  
General Industry

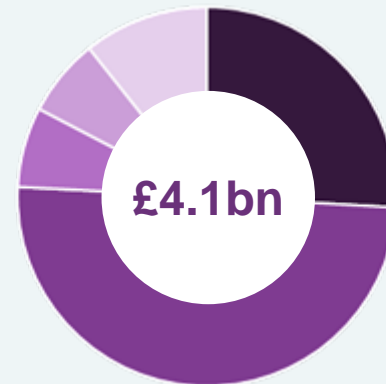
**EQUIPMENT**  
Pumps  
Compressors  
Mixers  
Valves  
Heat Exchangers  
Instrumentation

**£4.1bn**

John  
Crane  
compete  
in ~10%  
of the market



- OEM
- Oil & Gas
- Chemical Processing
- Power
- General Industry



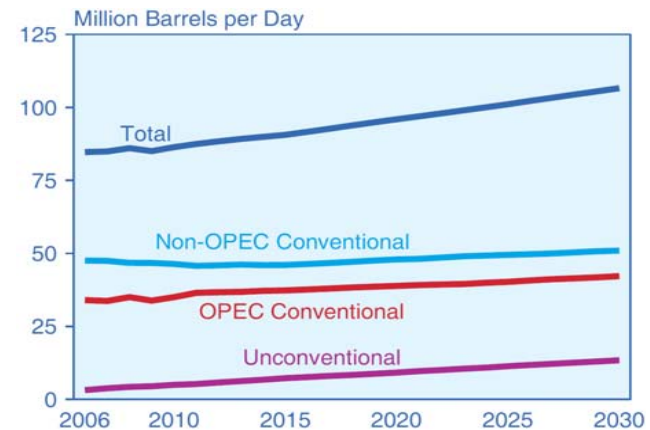
# Market Update: Oil & Gas Industry



## Oil Industry

- Additional 28 million barrels / day required by 2030
- Demand showing decline in 2009 with a recovery in 2010
- Non-OPEC production in 2030 projected to increase to 13 million barrels / day
- Optimisation of performance continues to drive aftermarket spend
- Major projects remain active, driven by long term demand projection

World liquid production 1990-2030\*



\*Source: History (EIA), Forecasts: World Oil Balance Model (May 2009), EIA

## John Crane Opportunities

- Leverage unrivalled Sales and Service network
- Independent capability
- Maximise share of new projects in traditional and expanded products and services
- Maintain and strengthen customers' relationships

# Market Update: Oil & Gas Industry



## John Crane: Oil price has limited impact

% of petroleum/  
chem/pharma sales\*

**Upstream 25%**

**Midstream 15%**

**Downstream 60%**



High



Low

Increased investment  
Maintain / increase output

Limited  
impact

High feed costs  
Margin pressure  
Reduce investment

Reduced investment  
Reduce output  
Cut costs

Limited  
impact

Low feed costs  
Increased price pressure  
Investment in growth  
areas and efficiency

- Mid range oil price fluctuation (\$40-80pb) has little impact
- Sustained oil price <\$40pb medium to long term will have an impact
- Underlying demand remains strong
- Good order book visibility and stable aftermarket

\* OEM and aftermarket sales - c. £425m in FY08 excluding Production Solutions

# Market Update: Oil & Gas Industry



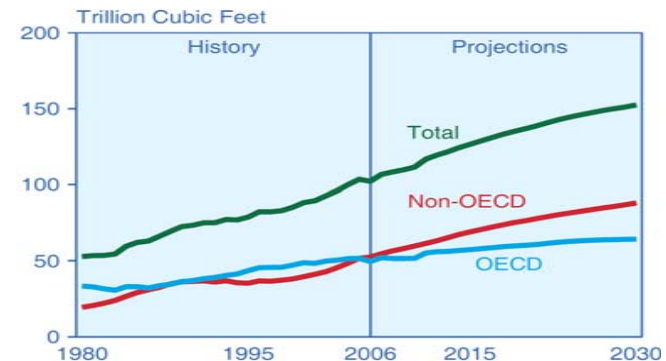
## Gas Industry

- Production increases in the non-OECD region
- Natural gas replaces oil wherever possible
- LNG to double capacity by 2012
- Middle East will remain net exporters
- Driven by power generation, climate change, population growth, industrialisation, urbanisation

## John Crane Opportunities

- Technology leadership
- Long term end user relationships
- Continue to develop Sales and Service network in developing regions

## World natural gas consumption 1980-2030



Source: History (EIA), Forecasts: World energy projections plus (May 2009), EIA

## Natural Gas supply and demand balance



# Market Update: Chemical Processing Industry

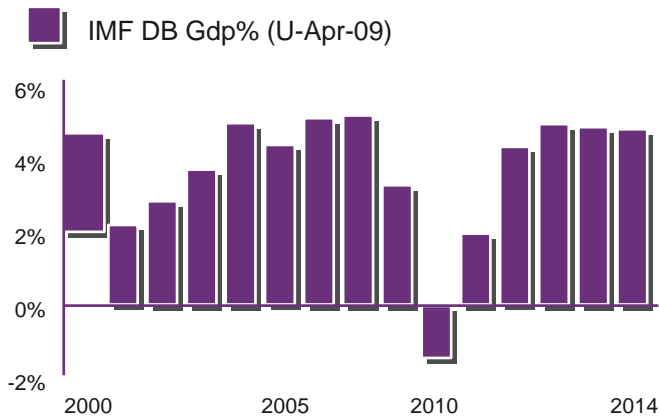


- Directly linked to GDP and consumer activity growth
- Capacity is not being reduced globally
- Chemical market end users posting large falls in earnings
- Investments expected to continue in developing regions

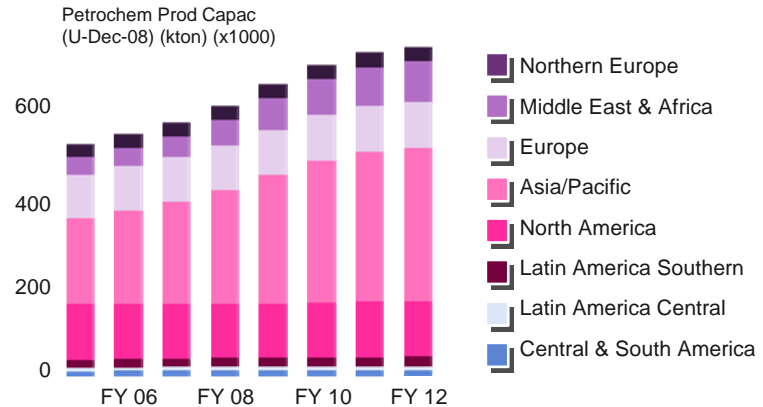
## John Crane Opportunities

- Sales and Service network to maximise aftermarket opportunities in developing regions
- Focus on new project opportunities

Sources: International Monetary Fund, Updated April-09; Chemical Market Associates Inc. (CMAI), John Crane Business Intelligence, Updated Dec-08.



## Petrochemical Production Capacity by Region (KTON)



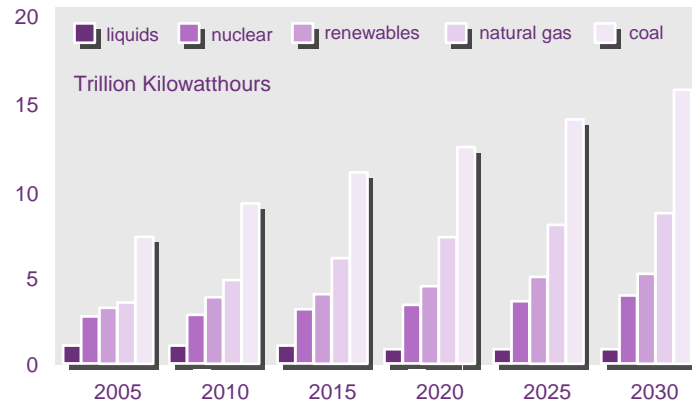


# Market Update: Power Industry



- Total energy consumption and generation is expected to double from 2005 through 2030
- Resilient to economic downturn
- Major expansion - Asia & Middle East
- Renewed interest in nuclear power and renewable energy sources

World Electricity generation by fuel 2005-2030\*



\*Source: History (EIA), Forecasts: World energy projections (May 2009), EIA

## John Crane Opportunities

- Technology leadership position in nuclear applications
- Expanded products and services increase exposure
- Coal - investments in CO<sub>2</sub> capture projects due to emissions legislation



# Market Update: General Industry



## Water

- Directly linked to population growth
- Water infrastructure require \$56bn investments in next seven years



## Pulp & Paper

- Major expansion in Asia Pacific
- Limited replacement of ageing western assets
- Increasing environmental pressures
- Drive for increase in recycling and reducing pulp requirements



## John Crane Opportunities

- Expanded product portfolio
- Desalination capacity projected to double by 2016
- Utilisation of Sales and Service network in developing regions

# John Crane has a Broad Range of Technologies

Technologies & Services	Mechanical Seals	Couplings	Seal Support Systems	Bearings	Filtration Systems	Equipment Management & Process Improvement	Production Solutions
<b>Markets</b>							
Oil and Gas	✓	✓	✓	✓	✓	✓	✓
Power	✓	✓	✓	✓	✓		
Chemical	✓	✓	✓	✓	✓		
Gen. Industry	✓	✓	✓				



# John Crane has a Strong Competitive Position

Mechanical Seals	Couplings	Seal Support Systems	Bearings	Filtration Systems	Equipment management & process improvement	Production Solutions
						
						
						
						
						



# John Crane Key Differentiators: Customer Intimacy



# Key Strategies

## Going Global “One John Crane”

- Clear Communication / One Direction
- World Class performance

## Leveraging the Footprint

- Existing (organic growth)
- Acquisitions (bearings / filtration)

## Building John Crane Production Solutions

- Upstream focus
- Builds on global footprint



## John Crane - Lunch



# Robert Wasson

## VP Finance & IT, John Crane

**1** John Crane Restructuring

**2** ERP Implementation

**3** Acquisitions

**4** Business Priorities



# John Crane Restructuring is Delivering Margin Benefits

## Restructuring for better customer service and lower costs

- Merge two John Crane businesses: Americas and Europe / Asia / Africa
- Leverage global talent
- Established global coordination of various activities / functions
  - Customer account management / Global Projects Group
  - Product Line Management / Engineering
  - Manufacturing capacity and supply chain
  - I.T. / Finance / Human Resources / Legal

## Restructuring priorities

- Implement restructuring programmes
  - Fixed cost – One John Crane / ongoing opportunities
  - Low cost moves – Czech / India / China / Mexico
  - Leverage supply chain – optimising internal assets globally / enhance capabilities in developing regions

## Restructuring for Better Customer Service and Lower Costs

- Restructured into one global organisation - August 2008
- Regional Sales & Service organisations supporting local customer needs (Americas / Europe, Middle East, Africa / Asia Pacific)
- Focused business units to leverage recent acquisitions
  - Specialised Businesses – Sartorius, Indufil & Orion
  - Production Solutions – CDI and Fiberod)
- Supported by global functional areas

£m	Costs to date	Future costs	Benefits to date	Full annualised benefits
<b>John Crane</b>	<b>5</b>	<b>19</b>	<b>3</b>	<b>25</b>

# John Crane - ERP Implementation

## Scope:

- Total investment £24m
- Completion June 2010
- 31 countries across – Europe / Middle East / Africa / Asia Pacific
- Significant financial benefits – Headcount / Purchasing / W. C.
  - Profit & Loss benefits of £10 million per annum once complete
- High level of stakeholder commitment

## Benefits:

- Replaces legacy systems with a fully integrated system
- Improved management information and control
- Enhance business processes & optimised internal supply chains
- Improved lead times and delivery reliability
- Allows for “bolt-on” acquisitions
- Provides capability to integrate John Crane globally

## Building Through Acquisitions - Strategy

### Adding complementary technologies

- Sartorius / Orion - engineered bearings
- Indufil - filtration systems

### Building Production Solutions upstream energy services business

- Fiberod - fibre-glass sucker rods

### Extending our geographic footprint

- Japan JV - purchase of 21% for control (70% share)



# Building Through Acquisitions - Timeline



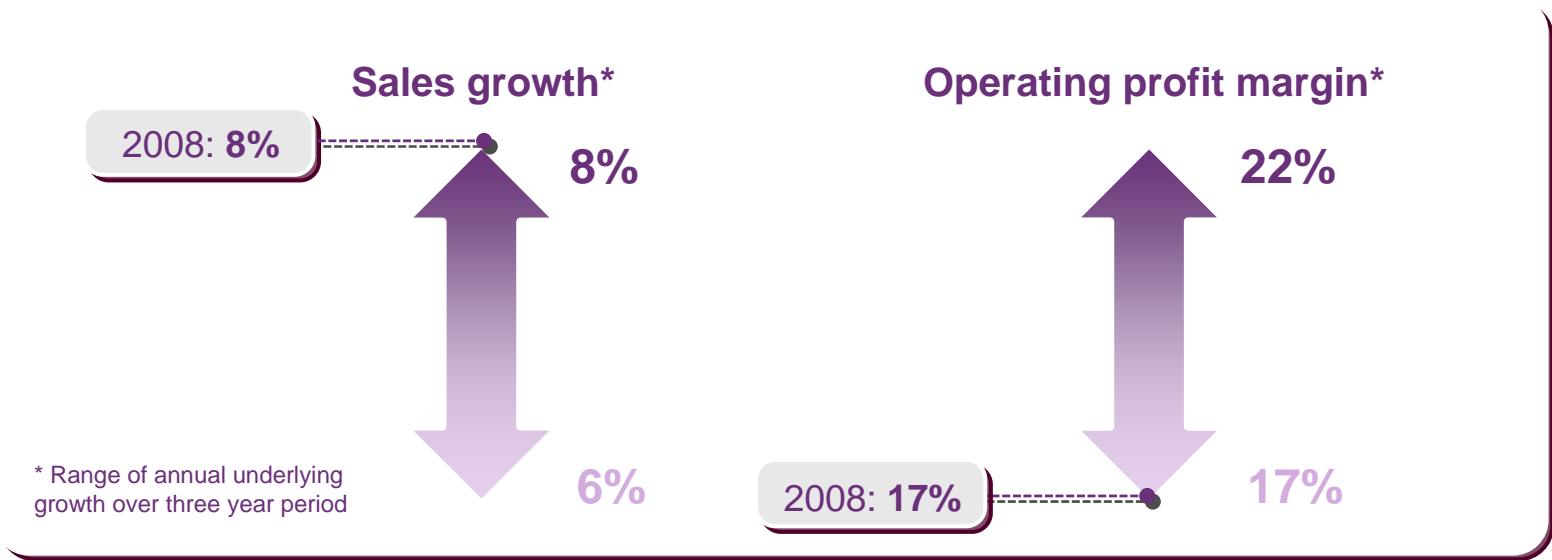
 Acquisition

 Divestment

 J.V./Majority Share

## John Crane: Business Priorities

- Implement restructuring programme - Global John Crane
- ERP implementation
- Enhance customer service
- Leverage manufacturing capability and global footprint
- Build the business through acquisitions



\* Range of annual underlying growth over three year period

# David Hill

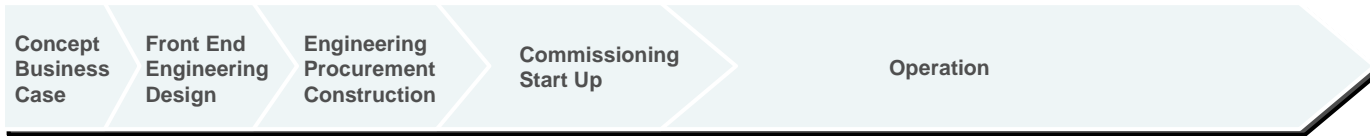
## VP, Product Line Management, John Crane

**1** Business model including a review of our principle routes to market

**2** Products and Services and recent developments in R&D

# Business Model: From Concept to Installation to Lifetime Support

## Customer



## John Crane



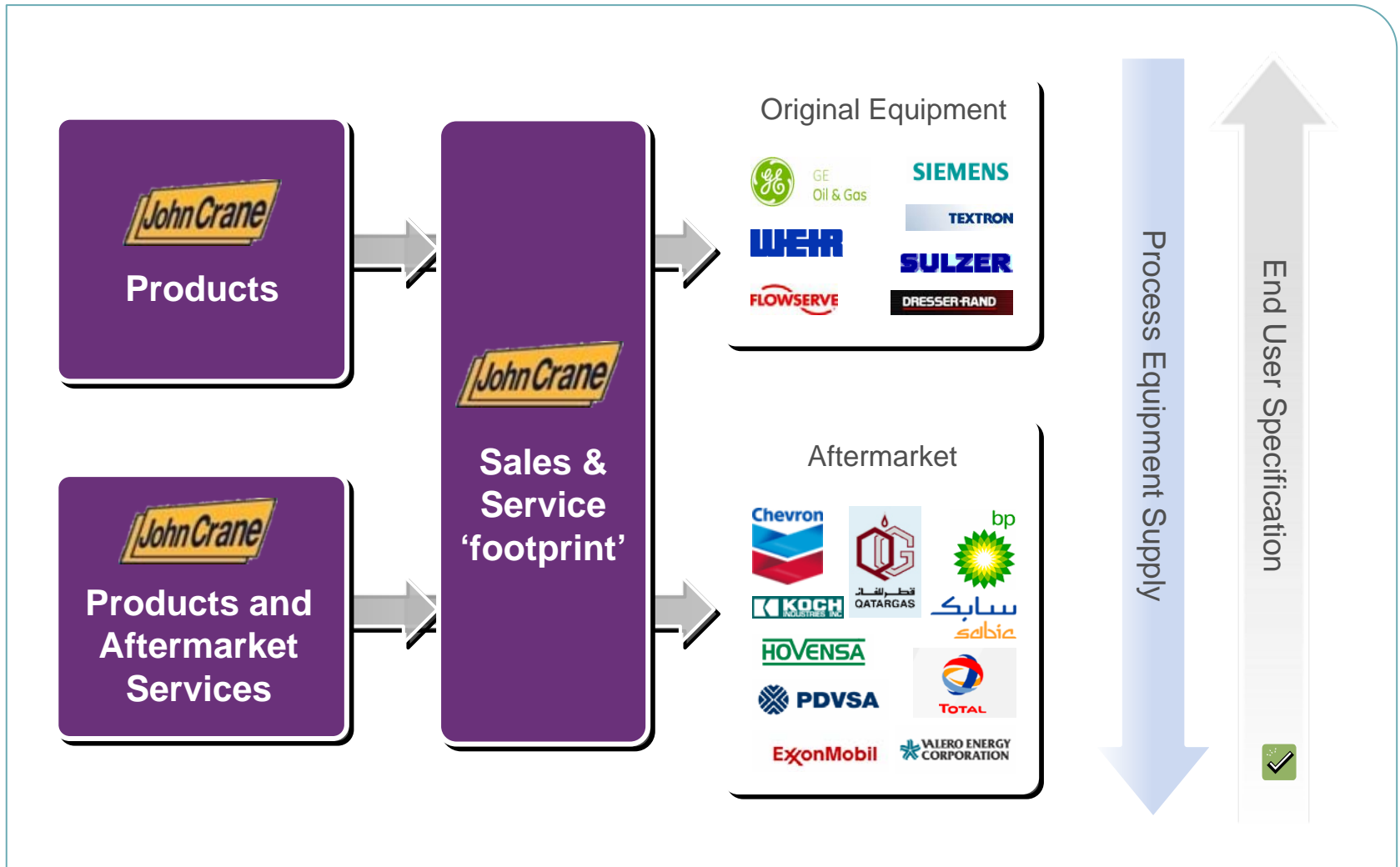
**First Fit: 1/3 of business**

**Aftermarket: 2/3 of business**

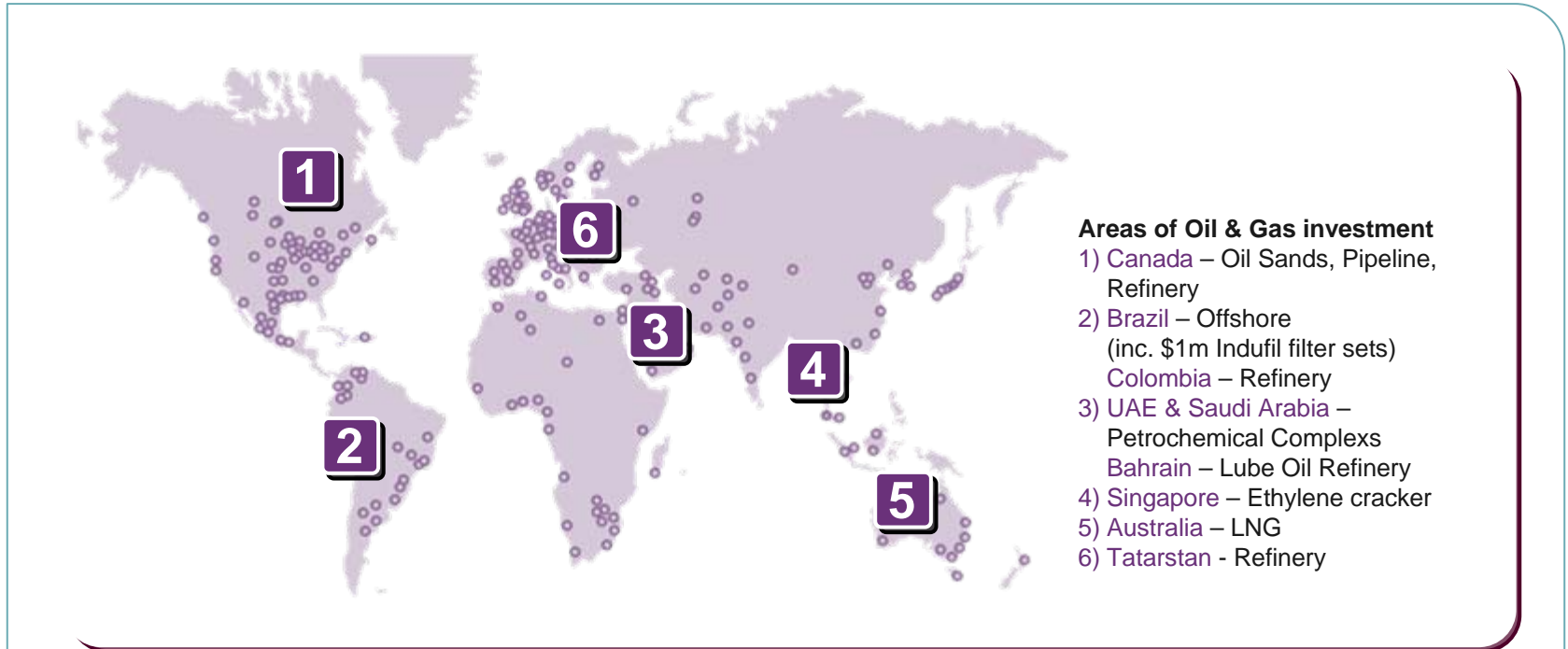




# Routes to Market



# Original Equipment Investment Projects



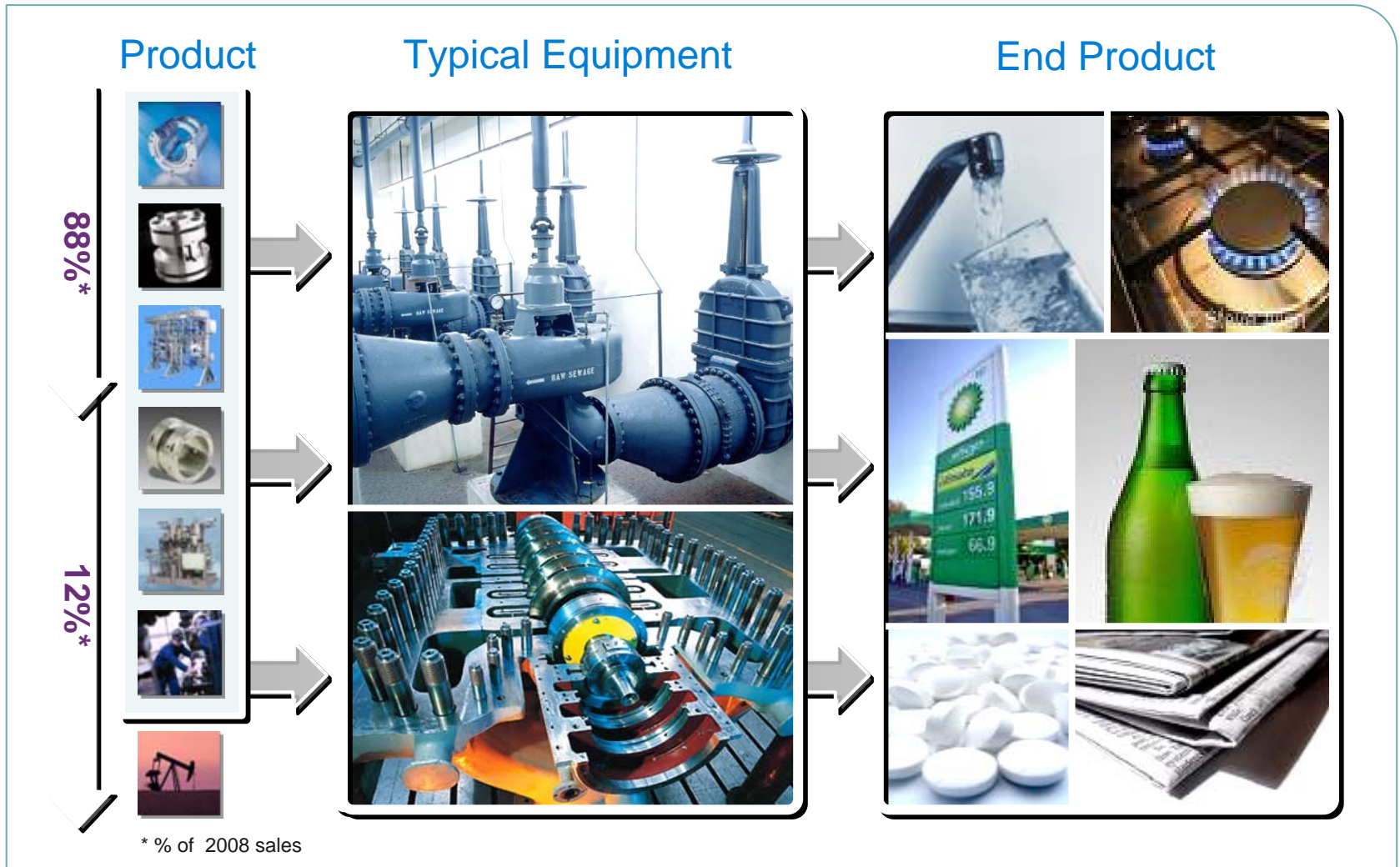
## Areas of Oil & Gas investment

- 1) Canada – Oil Sands, Pipeline, Refinery
- 2) Brazil – Offshore (inc. \$1m Indufil filter sets)
- Colombia – Refinery
- 3) UAE & Saudi Arabia – Petrochemical Complexes
- Bahrain – Lube Oil Refinery
- 4) Singapore – Ethylene cracker
- 5) Australia – LNG
- 6) Tatarstan - Refinery

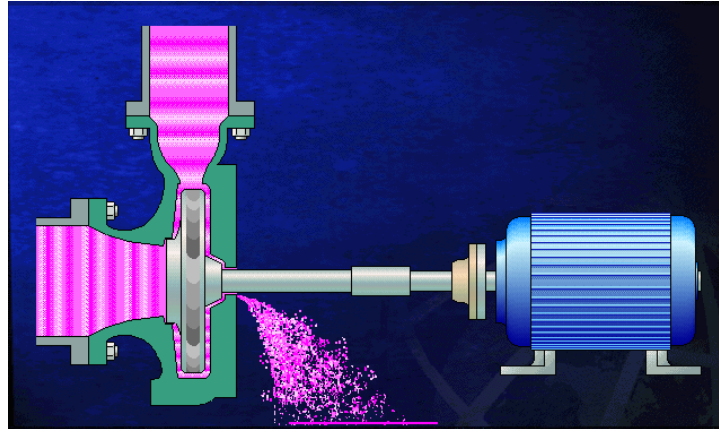
## Future Outlook & Opportunities

- LNG investments will continue and increase as demand continues to grow
- Confidence returning; major projects in UAE, Saudi Arabia and China continue
- End Users expect 30% project CAPEX reduction from contractors on commodities price drop
- OEM customers report full order books to end 2009
  - Weakening global demand but cautiously optimistic about outlook

# What we do - Invisible Contribution



# What we do - Mechanical Seals for Pumps



- Prevents leakage into the environment
- Fluid handling equipment
- Process industries and many commercial applications

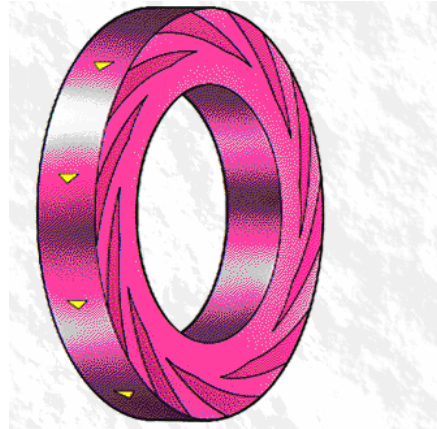
## CASE STUDY: Dow Chemical

- Leakage of toxic chemicals from 1000 pumps, Freeport Texas complex
- T-2800 seal met strict emission regulations
- Proven technology
- Adopted as Global Preferred Technology by Dow Chemical

## OPPORTUNITIES

- Growing global demand for power
- Expansion of bio-fuels
- Environmental Control Regulations
- Emerging Asia Pacific markets
- Condition monitoring – Smart Seals

# What we do - Dry Gas Seals for Compressors



- Prevents leakage of gas into the environment
- Centrifugal compressors
- Over 24,000 seals supplied with more than 750 million operating hours

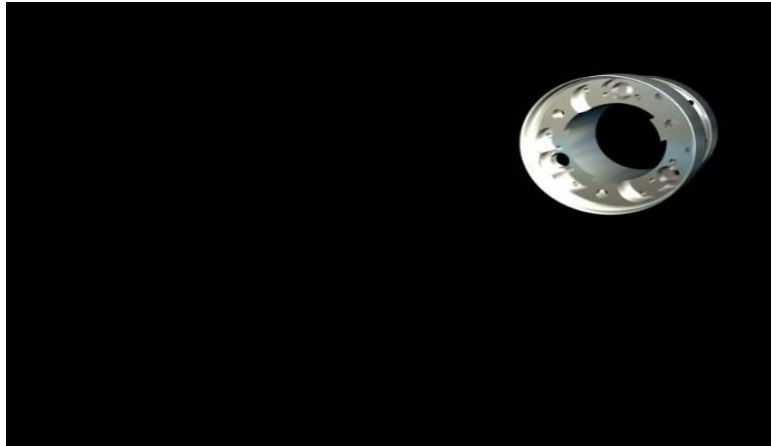
## CASE STUDY: BP

- Refinery in Bulwer Island, Brisbane, Australia
- Competitor seals and systems replaced with John Crane Technology
- Supported by local expertise and support
- Increased level of reliability and reduced cost of maintenance

## OPPORTUNITIES

- FPSO's Pipeline
- LNG
- Sour Gas Re-injection
- CO2 Sequestration

# What we do - Power Transmission Couplings



## **CASE STUDY:** Methanol Plant - Trinidad

- Torsional vibration problems
- Losses around \$2 million a day if the plant is not operational
- John Crane high performance coupling was supplied
- Torsionally tuned to match the exact requirements of this application

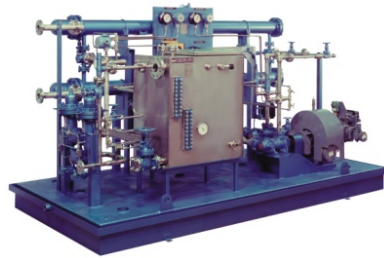
## **Powers machine drives**

- Turbo Compressors at 25000RPM
- Turbo Generator at 70MW
- Propulsion of 38 Navies
- Over 1 million refinery and power installations worldwide

## **Future Opportunities**

- Turbine drives
- Pipeline applications
- Power Generation – Nuclear & Renewables
- Technology leadership

# What we do - Seal Support Systems



- Provide a safe, efficient, controlled operating environment
- When the seal and/or equipment operating environment is unsuitable e.g. volatile, toxic, abrasive or polymerising

## **CASE STUDY:** Athabasca Oil Sands Project

- 100,000 barrel per day expansion
- New oil sands mining operation and bitumen upgrading
- Further expansion expected
- JC systems are only pump seal support systems on site
- Global engineering support secured project

## **OPPORTUNITIES**

- Wet Seal Support Systems
- Strong Oil & Gas market demand
- Improving plant safety, availability and environmental management standards
- Gas Seal Support Systems
- Upstream / Pipeline compressor reliability and environmental improvement

## What we do - Filtration Systems



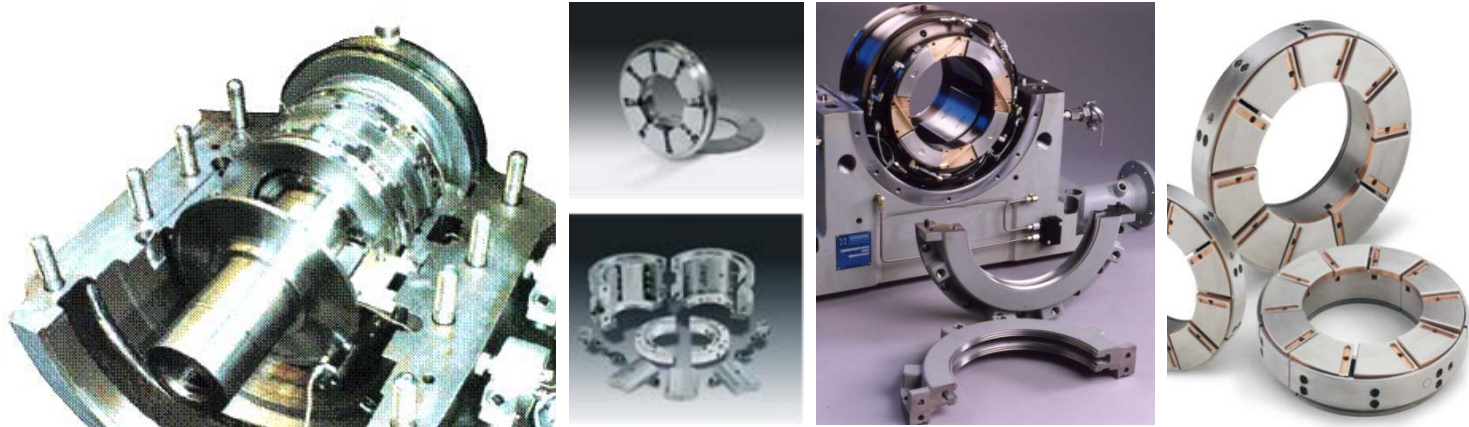
- Removes contaminants from fluid streams
- Gas Turbines / steam turbines / compressors and generators
- Used for oil and gas production / transmission / hydrocarbon processing / refining and the rapidly developing power generation industry across the globe

### OPPORTUNITIES

- Supply of seal and filter from one supplier is differentiator
- Global footprint provides local customer support for Indufil installed base
- The addition of Indufil filters complements our range of Turbomachinery products



## What we do - Hydrodynamic Bearings



### Supports radial and axial loads of rotating shafts

- High speed rotor applications
- Gas & Steam Turbines
- Pumps & Compressors
- Gearboxes & Turbochargers

### Future Opportunities

- Expansion of OEM installed base
- Large size bearings
- Development of new materials
- Aftermarket service strategy

# John Crane Production Solutions (JCPS)



- Well design and analysis
- Steel and fiberglass sucker rods and subsurface well pumps
- “Fiberglass Sucker Rod” technology
- Innovative product, lighter and stronger than the steel
- Lowers lifting costs
- Non-corrosive
- More efficient oil production

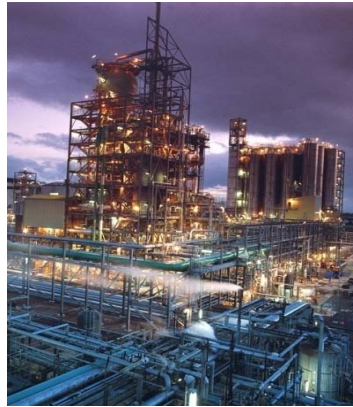
## **CASE STUDY:** Petrom SA

- Implementation of well modernisation study
- Improvement of well reliability
- Updated technology and equipment
- Employee training and development
- Well production increased by 88%
- \$1.3 million annual savings per well

## **Future Opportunities**

- Growing global artificial lift demand
- Markets which are losing well pressure and related output
- Environmental control regulations
- Unique fibreglass rods
- Expand service capabilities

# Equipment Management and Process Improvement



## Rotating Equipment Performance Management

- Shared benefit agreements
- Long term customer relations
- Cross selling opportunities
- Condition based maintenance contracts
- Oil & Water Chemistry Consultancy

## CASE STUDY: Shell Stanlow

- 15 years of continuous improvement
- Inventory optimisation

## CASE STUDY: North Sea

- Condition based maintenance contract
- Leveraging product sales

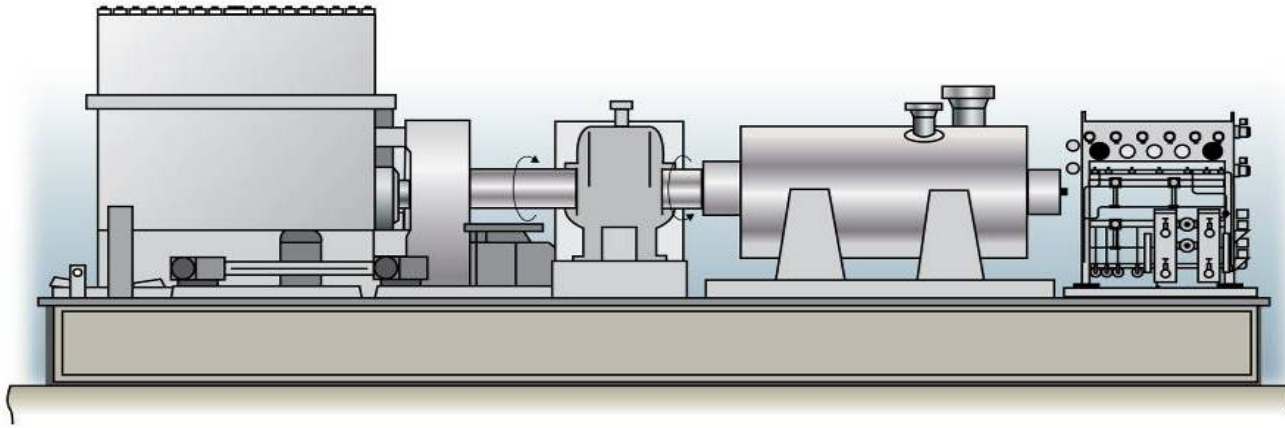
## Future Opportunities

- Introduction of new products
- Expansion into other growth markets
- Tightening on EHS regulations
- Reduced total cost of ownership
- Higher availability at a reduced lift cost

# Product & Services



Mechanical Seals	Couplings	Seal Support Systems	Bearings	Filtration Systems	Condition Based Monitoring	Production Solutions
						

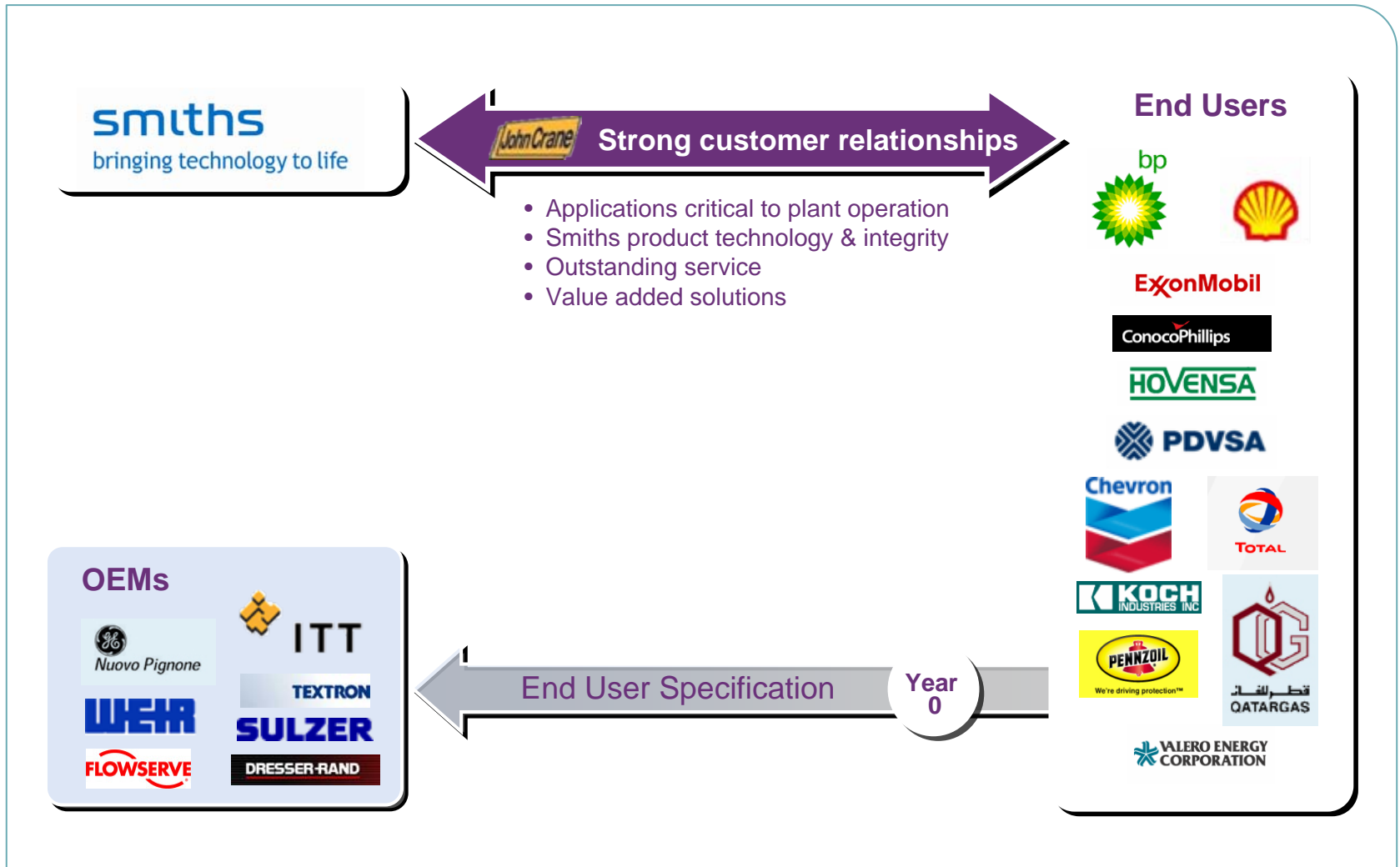


\* % of 2008 sales

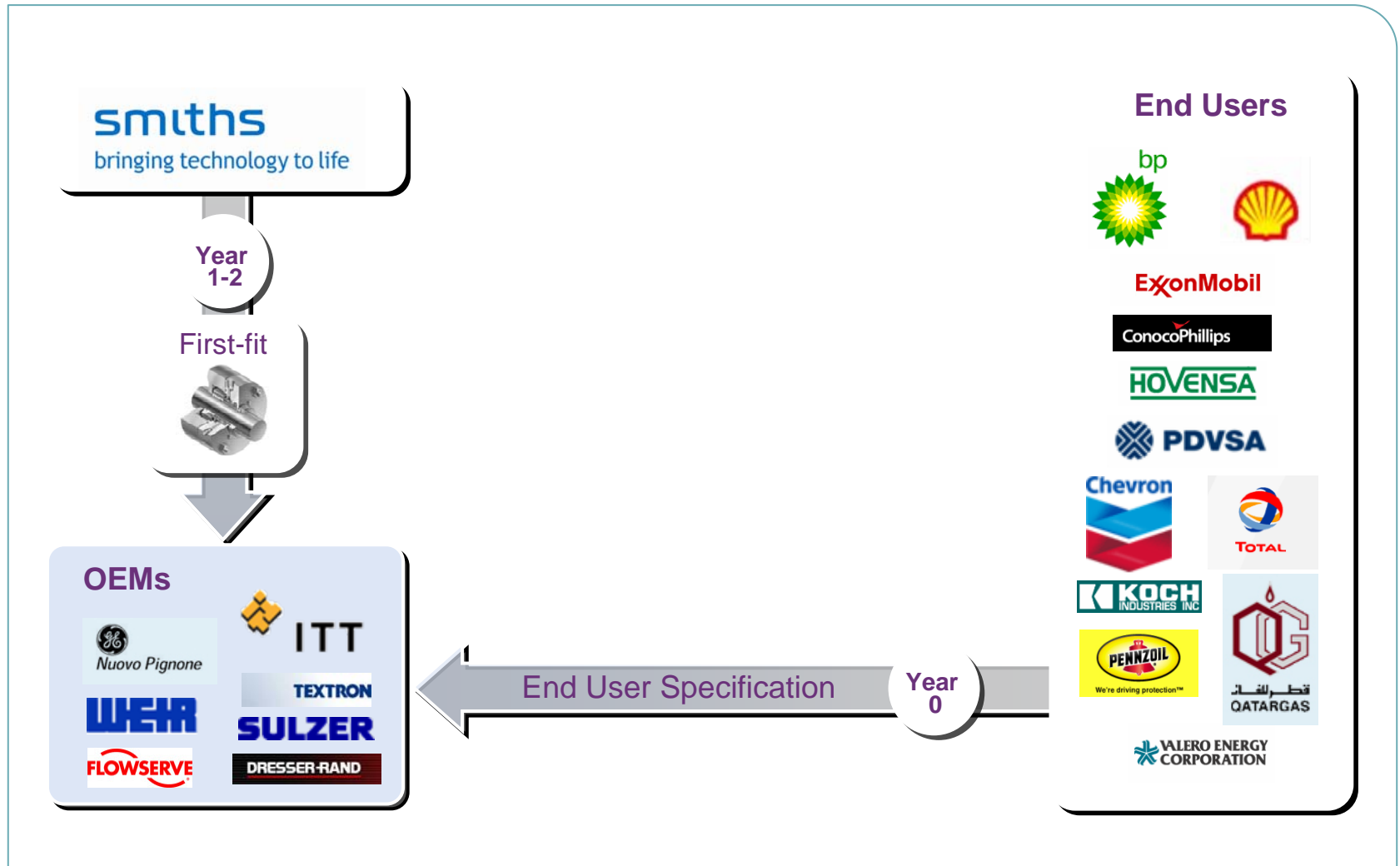


# Focus on Aftermarket

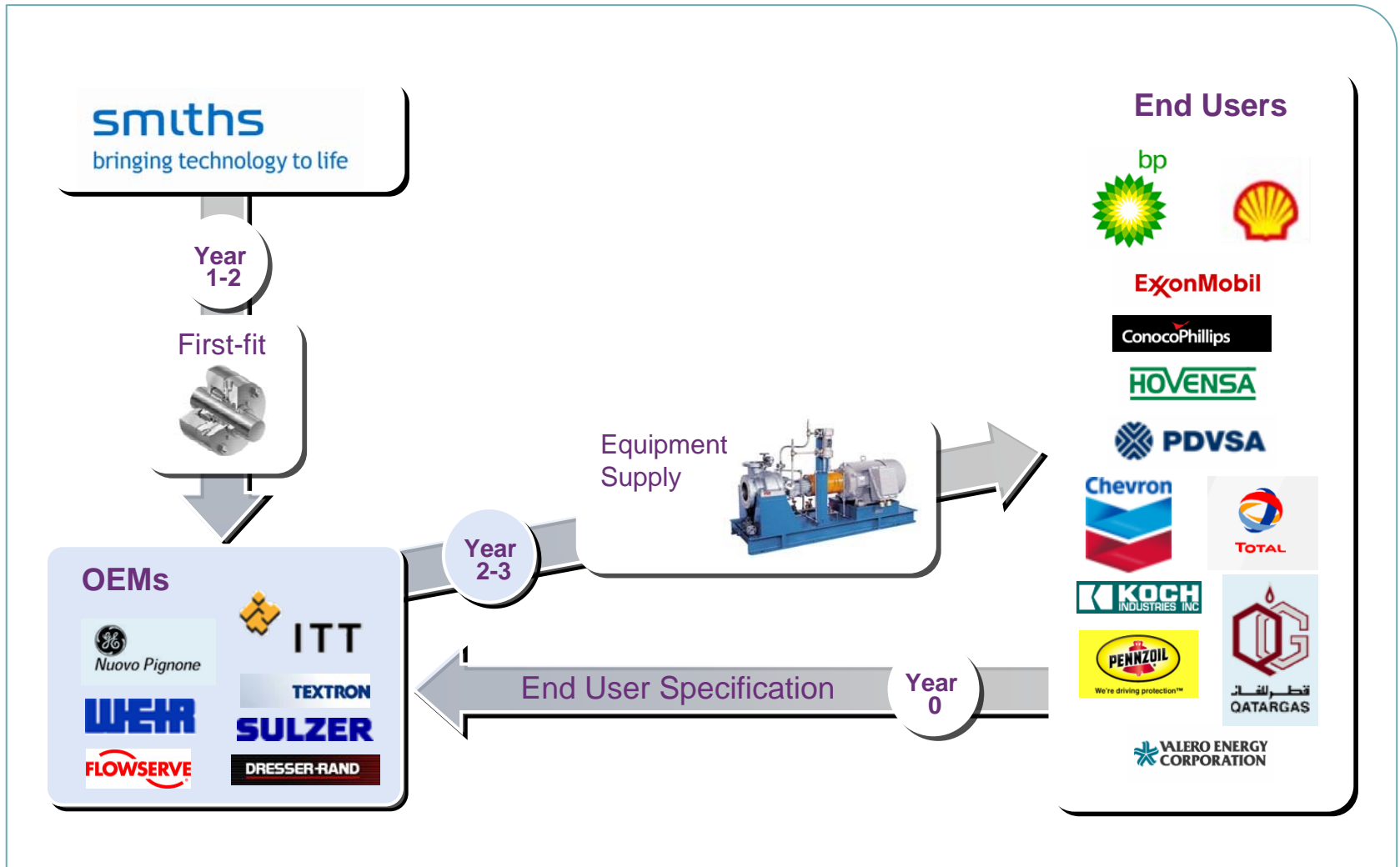
# 1. End User Specifies Products



## 2. OEM Complies with Specification

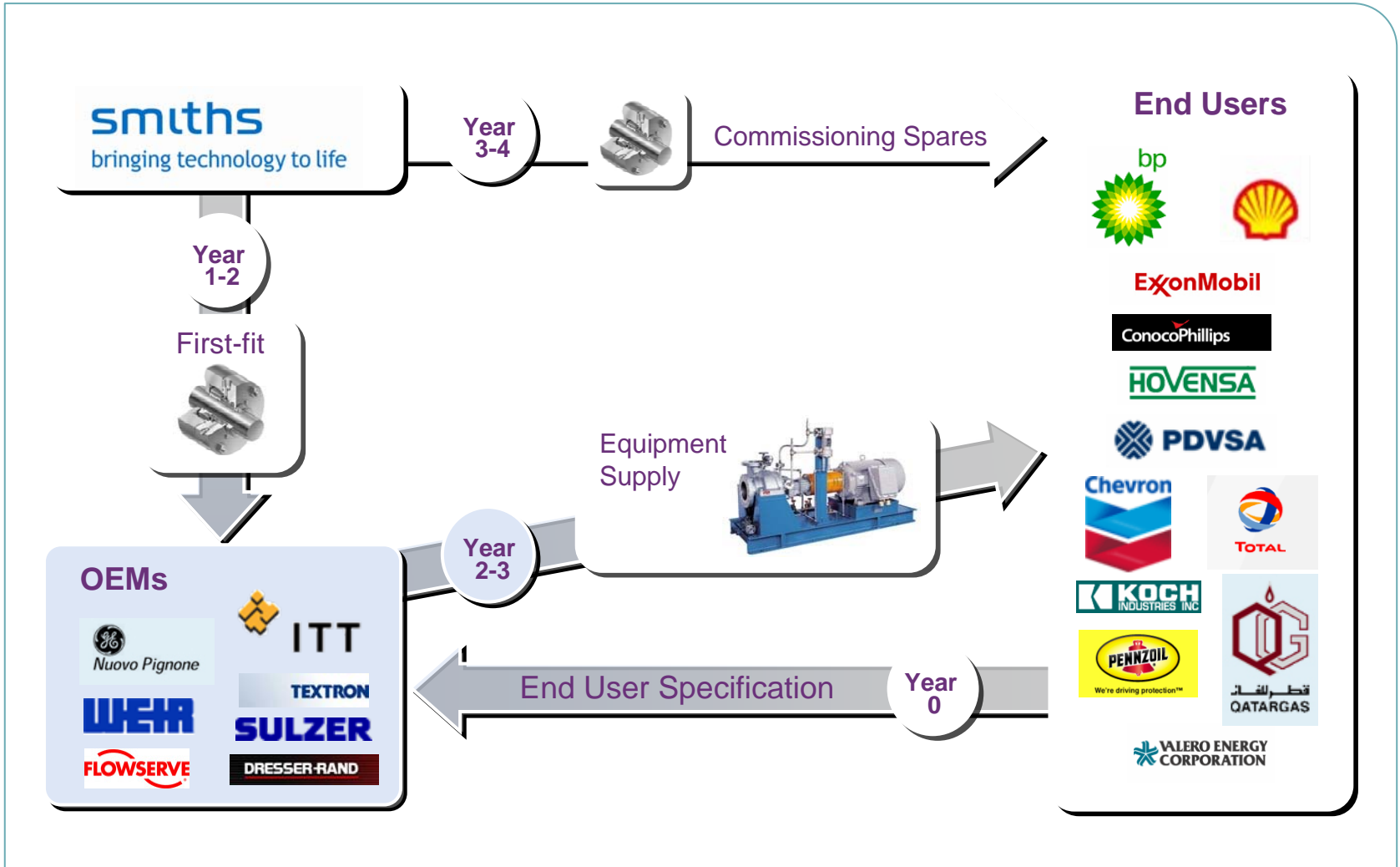


### 3. OEM Fits Products and Supplies Equipment

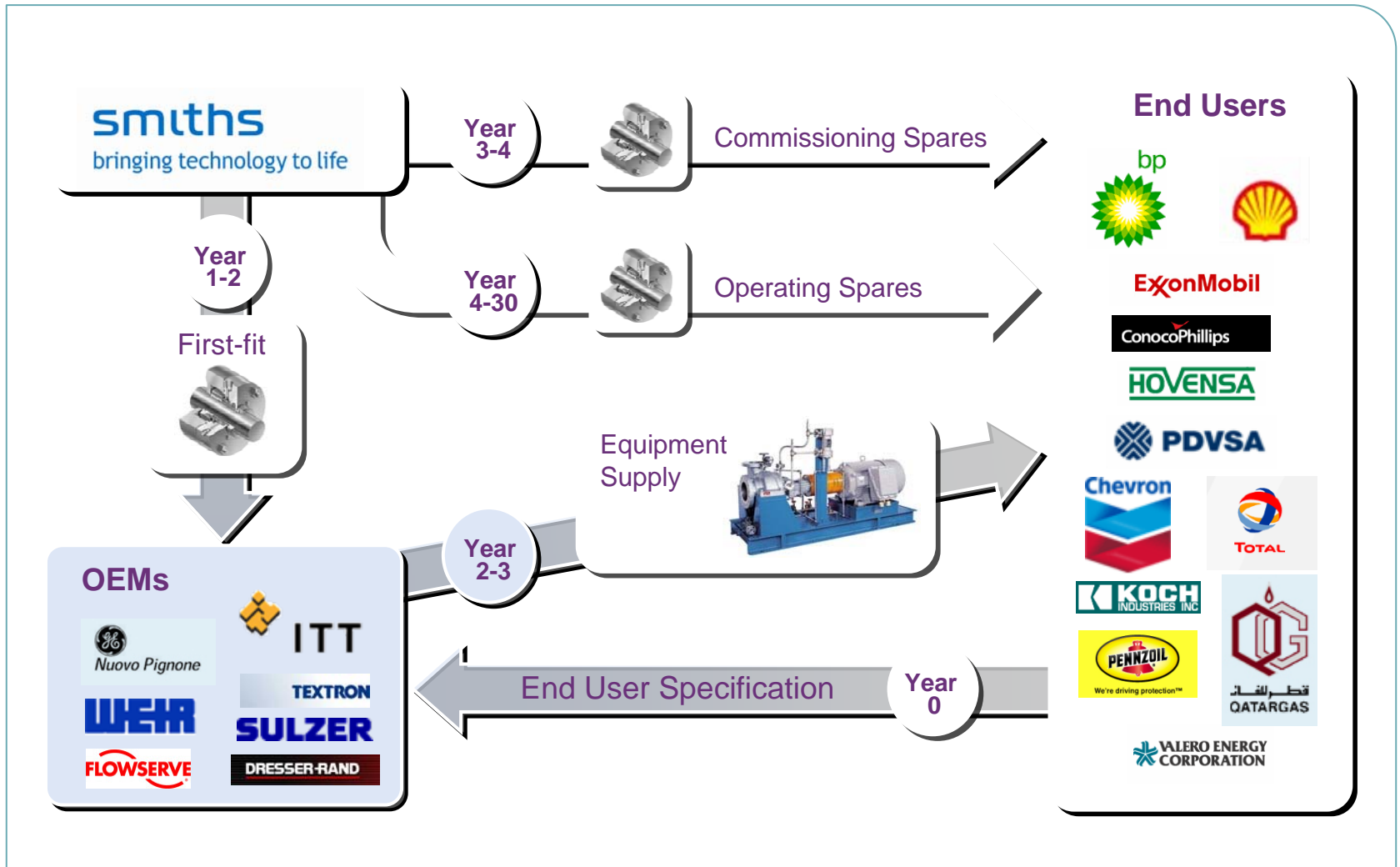




# 4. Commissioning Spares Supplied to Plant Start-Up



# 5. Operating Spares and Services for Life



# Aftermarket Services

Seals, couplings, systems, bearings, filters, condition monitoring, reliability programmes

## Applications

- Pumps, compressors, reactors, mixers
- 300 to 3000 per site with potential for six times John Crane products
- Average seal life 24 months
- Average filter life 3-12 months
- Average bearing life 1-5 years
- Average cost of repair £3,000

## Services

- Failure analysis
- Refurbishment
- Retrofits – performance, environmental, safety
- Inventory reduction
- Alignment
- Condition monitoring

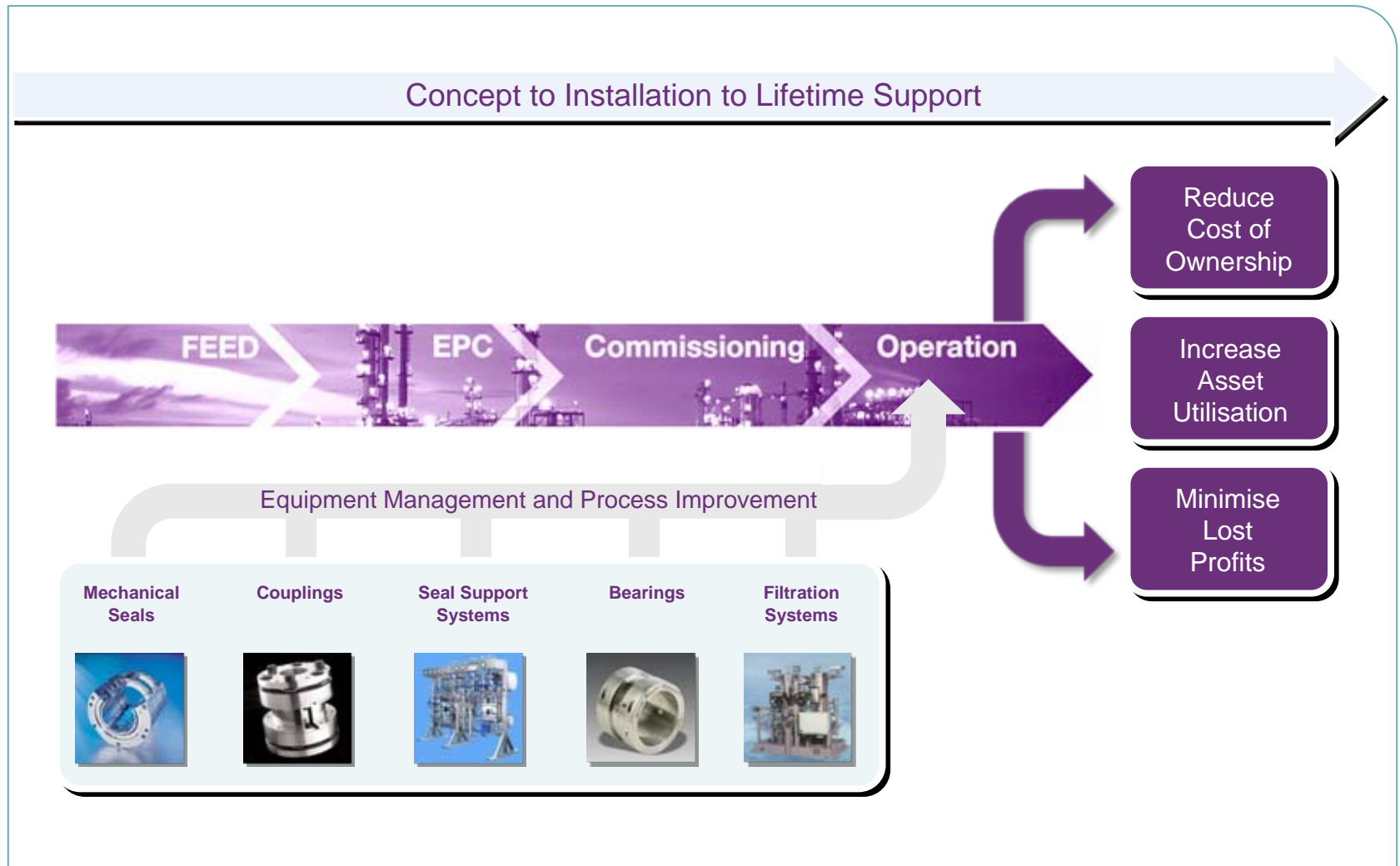


# Complete Responsibility



- There is a fundamental disconnect between the drivers in the capital side of clients business and the needs of their operating company
- Invariably this disconnect adds total cost, reduces efficiency and lays blame at the door of the supplier
- John Crane **Project Management** processes the specification, design, supply, certification and commissioning of Mechanical Sealing Systems on a Life Cycle Cost (LCC) basis to support new Plant Start-Up targets
- The John Crane **Managed Reliability Program (MRP)** applies Root Cause Analysis and Defect Elimination processes to Rotating Equipment (technology, maintenance and operation) to achieve excellence in Operational Reliability
- John Crane provides the seamless management of the factors influencing Rotating Equipment reliability from FEED to Production at the lowest total cost of ownership (TCO) and maximum availability for the life of a Plant

# Asset Management To Achieve Corporate Objectives



# Aftermarket Summary

## Benefits to Client

- Reduction of total cost of ownership
- Reliability improvement of the rotating equipment
- Improved safety performance
- Improved environmental performance
- Improved equipment availability
- Optimisation of inventory
- Standardisation of parts

## Benefits to John Crane

- Repairs and refurbishments
- Upgrades
- First fit on plant expansions
- Competitor change out
- Leverage existing and new products / services
- Guaranteed minimum level of annual sales
- Improved cash flow

## John Crane - An Attractive Investment Case

- ▶ Market leader in growth markets with high barriers to entry
- ▶ Resilient business with high aftermarket exposure in diverse markets
- ▶ Unrivalled geographical coverage to leverage expanded products
- ▶ Business underpinned by leading edge technology services
- ▶ Production solutions – expanding into adjacent markets
- ▶ Opportunities to create value, including new acquisitions
- ▶ John Crane growth range: sales 6 to 8%\*; margins 17 to 22%\*\*

\*Range of underlying growth over 3 year period \*\*Organic growth at constant currency

## John Crane - Questions and Answers





## Site Tour



3 groups colour coded on badges



3 zones to visit

**1**

Engineering & Commercial

**2**

Operations

**3**

Aftermarket (Role Play)

**smiths**  
bringing technology to life

