
Engineering a more sustainable future.

Investor Seminar

29 June 2022



Investor Seminar

Welcome and Context.

Nimesh Patel
Chief Financial Officer



Today's agenda

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Session 1
Welcome and context
Nimesh Patel



Session 2
ETS strategic fit
Nicholas Anderson



Session 3
Introducing ETS
Armando Pazos



Session 4
Why ETS is differentiated
Christopher Molnar



Session 5
Drivers of growth
Armando Pazos



Session 6
What ETS will deliver
William Croyle



Session 7
Q&A
Nimesh Patel

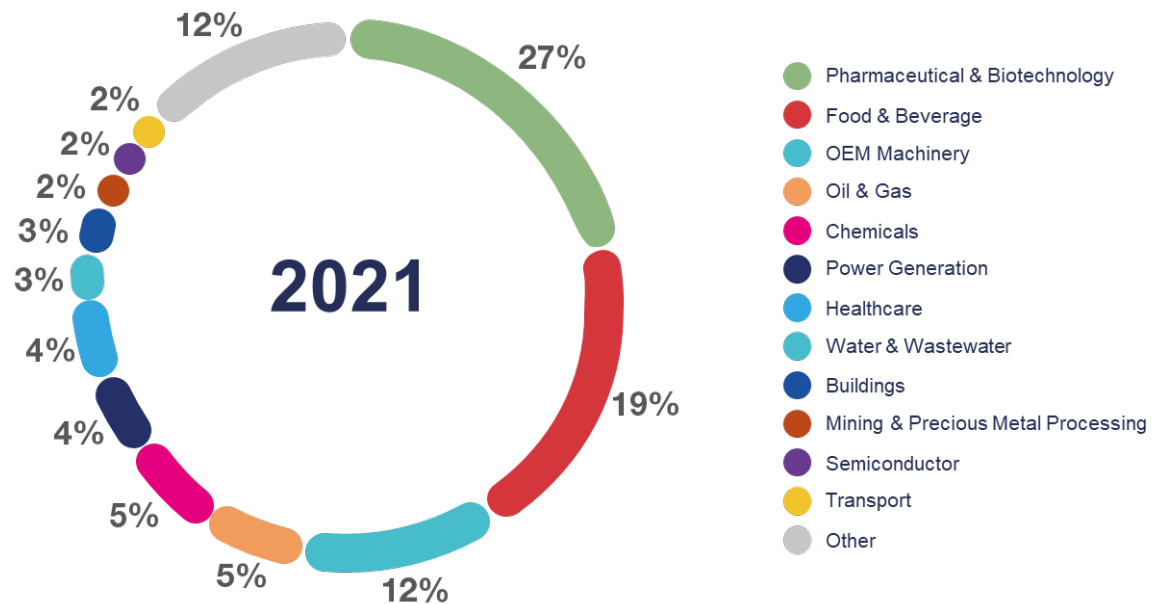
Group update

- Global IP now forecasted at 3.6% for 2022, down from 4.4% in February
- Strong demand and order books remain at all time highs
- China lockdown impact in H1; no impact on full year absent further lockdowns
- Manufacturing capacity expanded and supply chain disruption being managed
- Active price management offsetting inflation; no impact on margin
- Continued revenue investments; FY margin expected to be above pre-pandemic levels
- Higher capex in 2022 reflecting capacity expansions; balance sheet remains strong

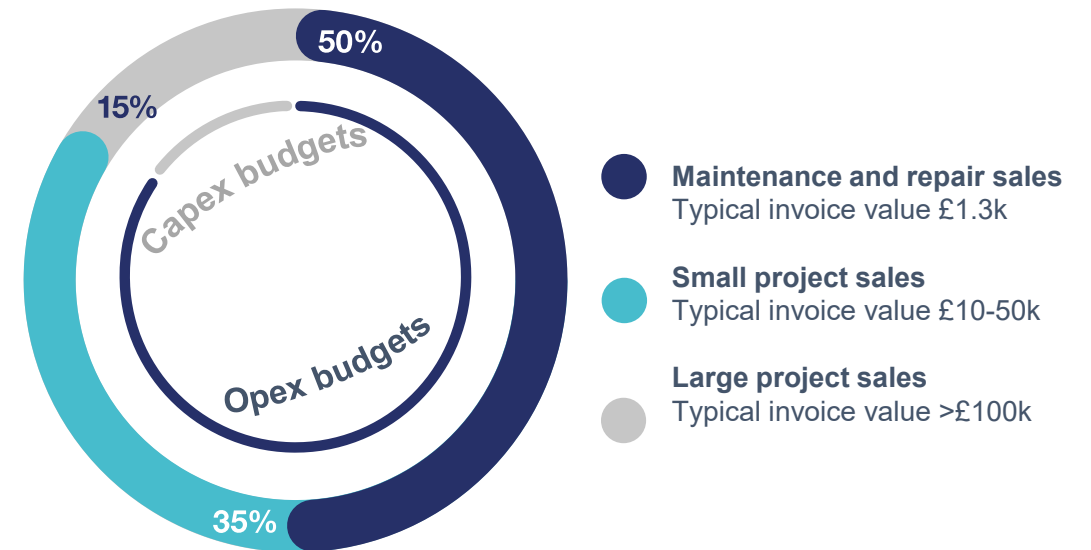
Our full year expectations remain unchanged

Sources of our resilience

Over 60% of Group revenue derived from defensive, less cyclical end markets



85% of Group revenue generated from annual maintenance and operational budgets



Our value proposition

Benefits of our direct sales approach

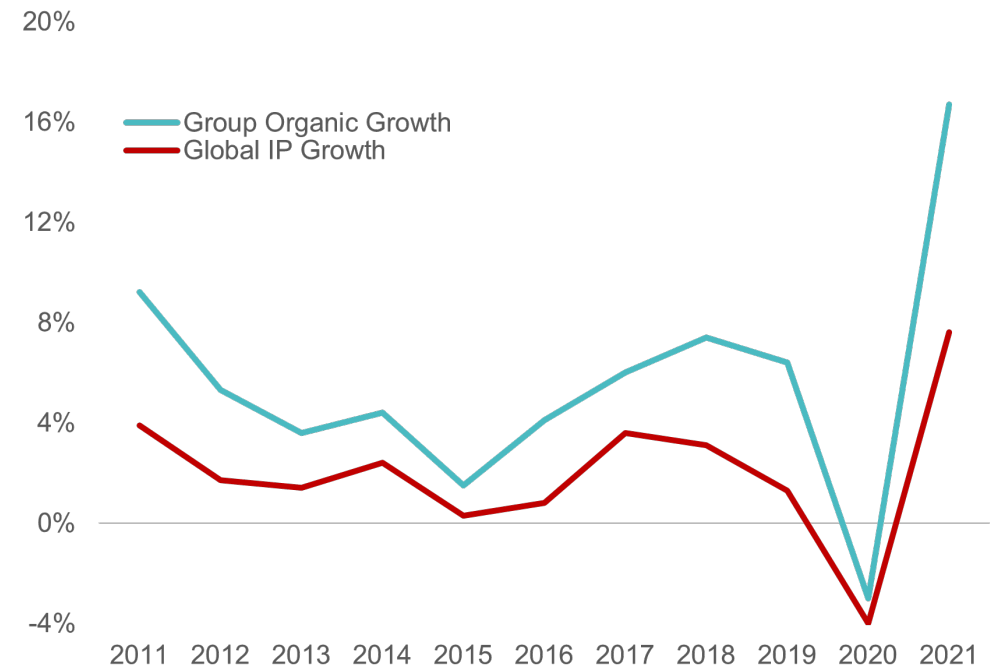

2,000 direct
sales and
service
engineers

- Productivity and reliability
- Sustainability

Solutions to meet customers'
critical needs through the cycle

- Efficiency and cost
- Sustainability

Sustained organic growth above IP



Our long term investment case

Long Term Addressable Market Growth

Continued growth in
global Industrial
Production (IP)

...driven by population
growth and emerging
markets development

Demand for energy
efficiency solutions...

...in response to
growing demand for
energy

Demand for
decarbonisation
solutions...

...in response to the
global goal of
achieving net zero

Financial Track Record

Delivery of
organic
revenue
growth >IP

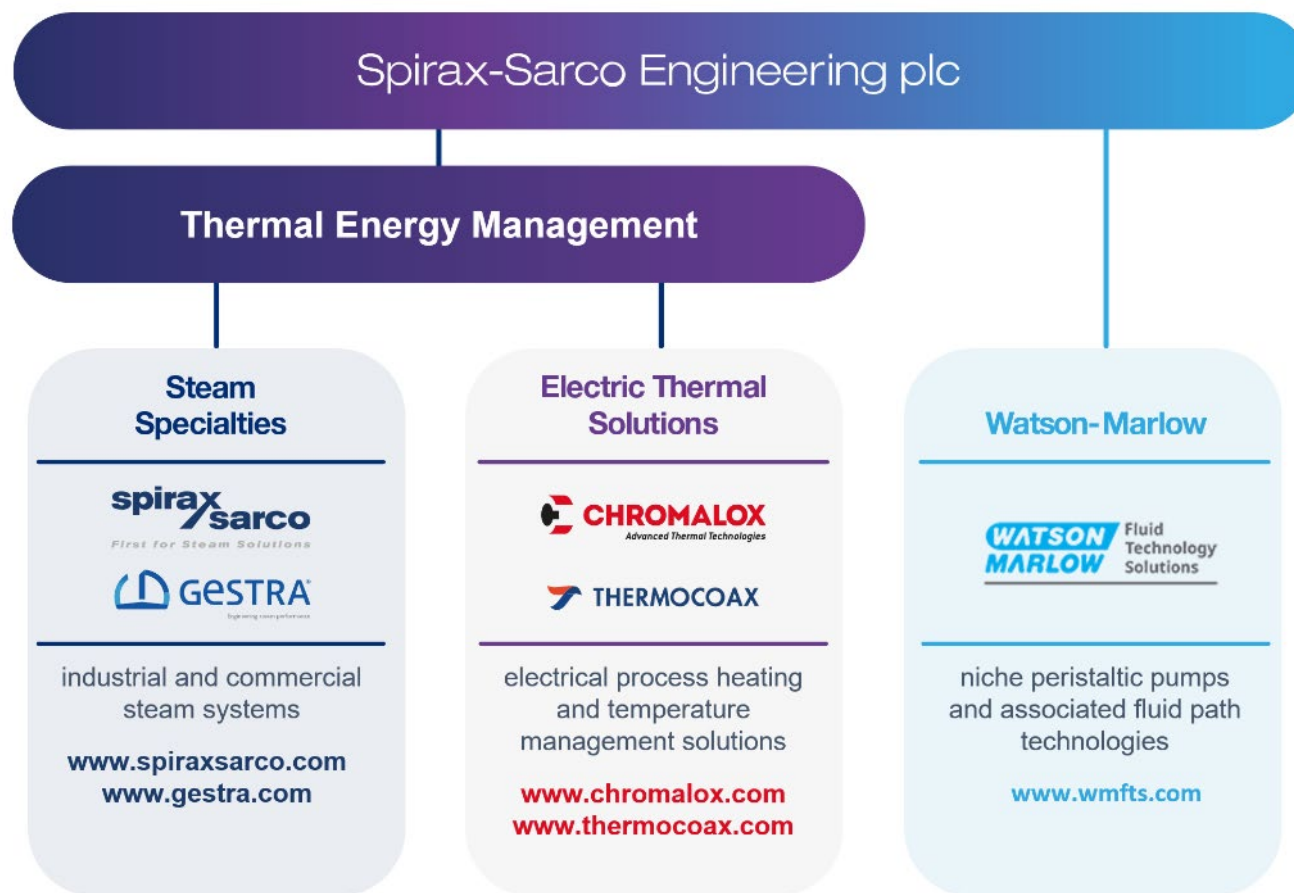
Attractive
margins

Strong cash
generation

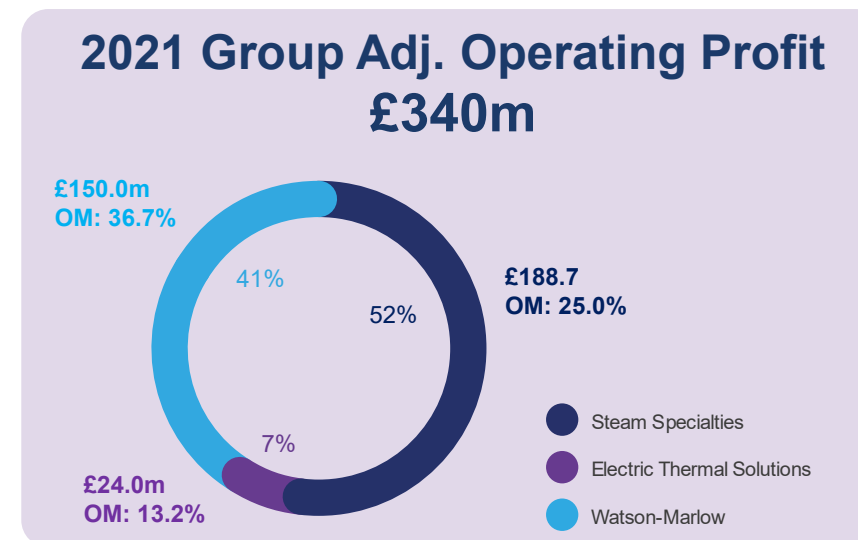
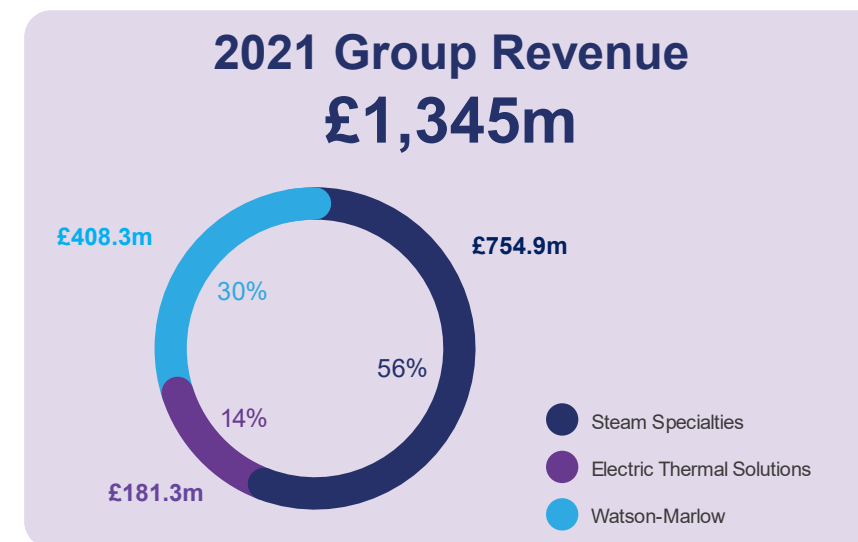
Earnings
and
dividend
growth

ETS within our Group

Three world-leading niche businesses



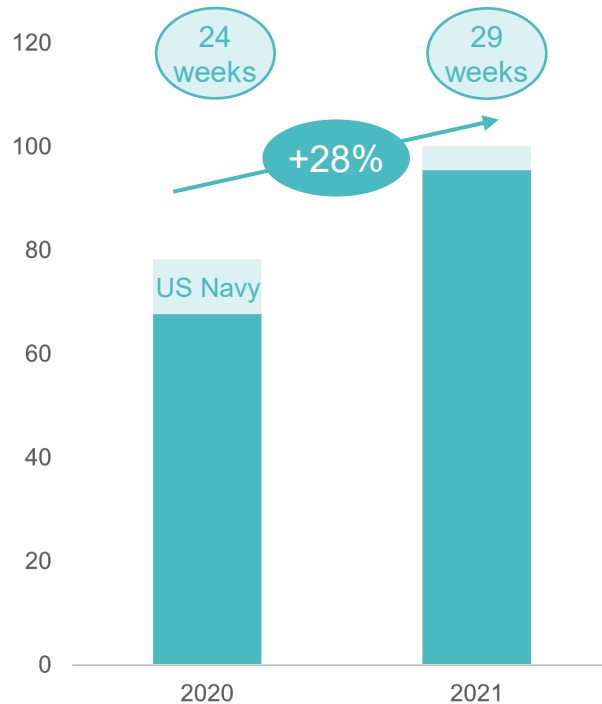
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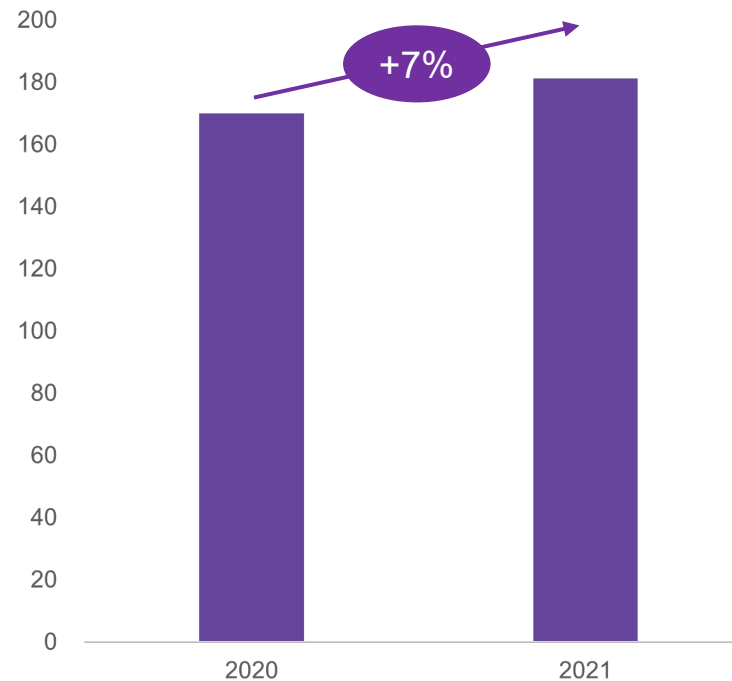
ETS financial performance

Demand growth ahead of sales

Year End Order Book (£m)



Revenue (Organic, £m)

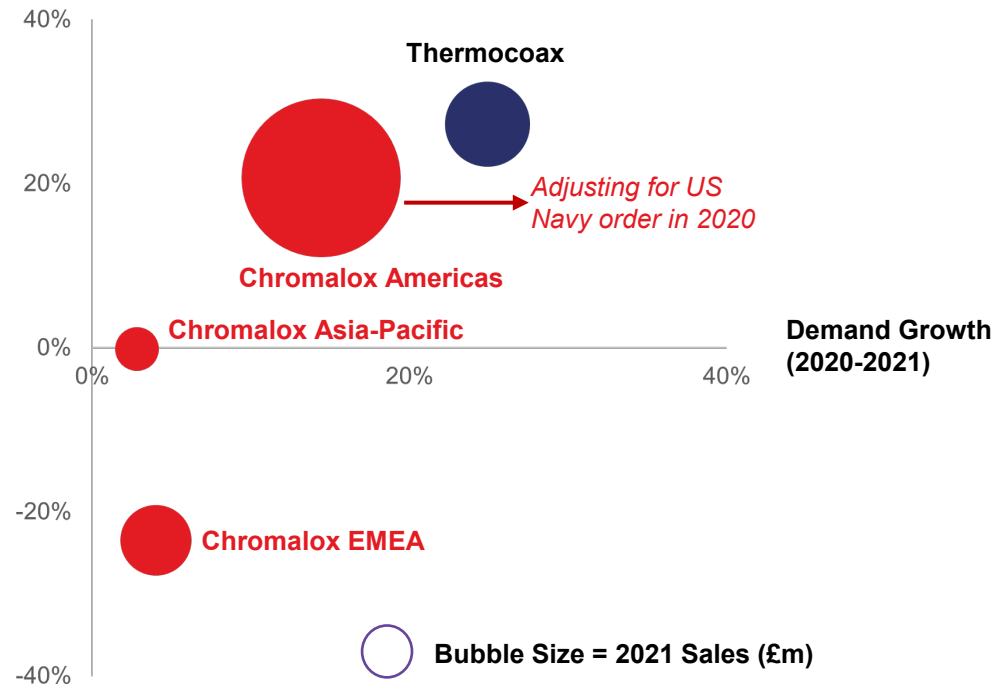


- Strength of demand reflected in year end order book, growth of >40% (adjusted for US Navy order in 2020)
- Significant demand growth in Thermocoax driven by semiconductor sector
- Growth in Chromalox limited by Ogden capacity and shipment constraints in 2021

Margin performance by Business

Profitable growth in Thermocoax and Chromalox Americas

Average Adj. OP
Margin (2020-2021)



- Thermocoax margins already above Group average levels and demand growth strong
- Chromalox Americas a large, growing business and achieving 20% margin objective
- Chromalox APAC improvement opportunity through embedding Group sales approach
- Chromalox EMEA performance impacted by profitability of site in Soissons, France

Actions regarding Soissons

Process Update

- Announced formal consultation process with trade unions to address financial challenges at Soissons; negotiations on-going
- Consultation expected to complete in August based on legal framework; should be followed by validation by the French labour administration
- In the event that the consultation results in collective dismissals, we expect key aspects of the process to be completed by end December 2022
- 61 colleagues impacted by announcement; we continue to provide them with support

Financial Impact

- Costs relating to the process expected to be removed from 2022 Adjusted OP margin
- Operating losses of 2022 will be reflected in the ETS margin; no change to guidance

Summary

- Demand for ETS solutions remains strong and order books are at record highs
- Key businesses are already at or above Group level margins
- We are addressing the loss making situation in Soissons and the capacity constraints in Ogden
- We will continue to see impact on 2022 financial performance as we work through these initiatives
- We expect to achieve an improved ETS margin performance in 2023

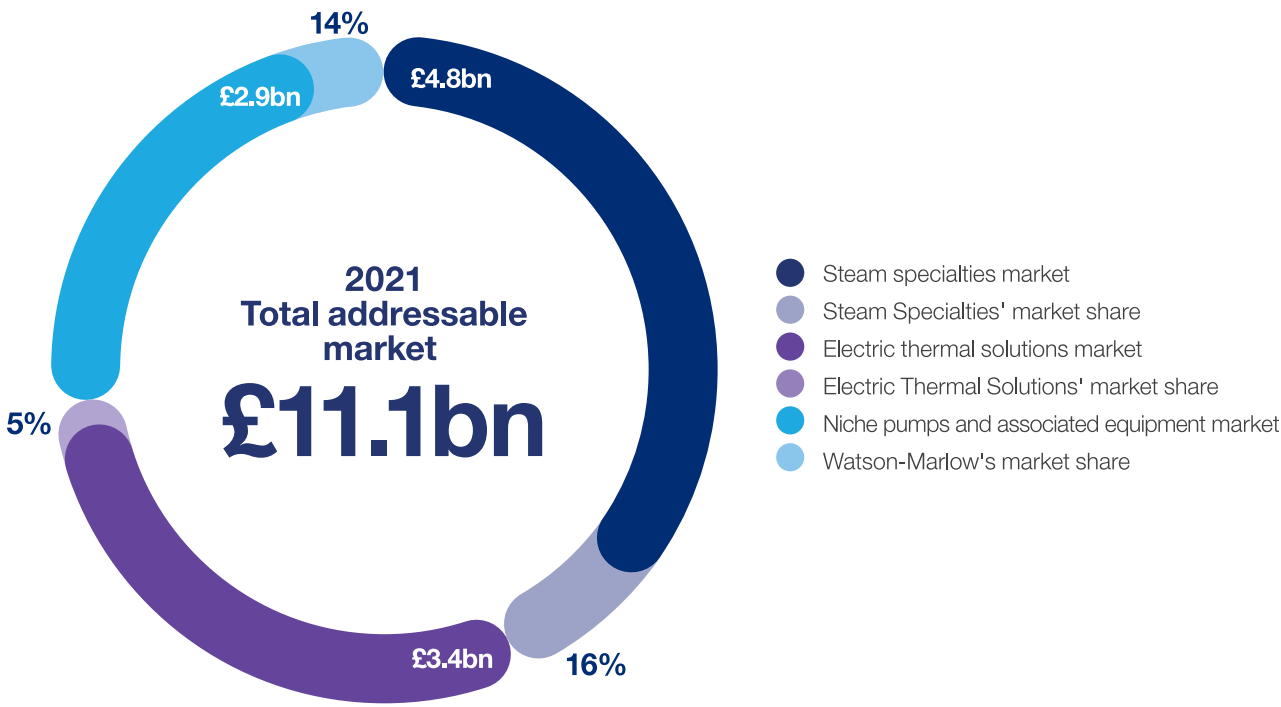
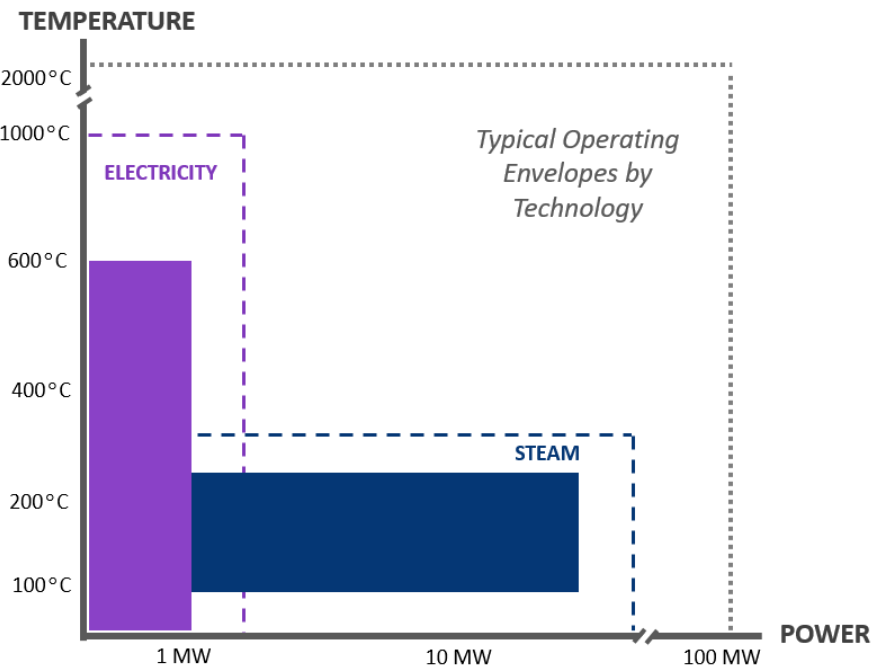
ETS Strategic Fit

Nicholas Anderson
Group Chief Executive



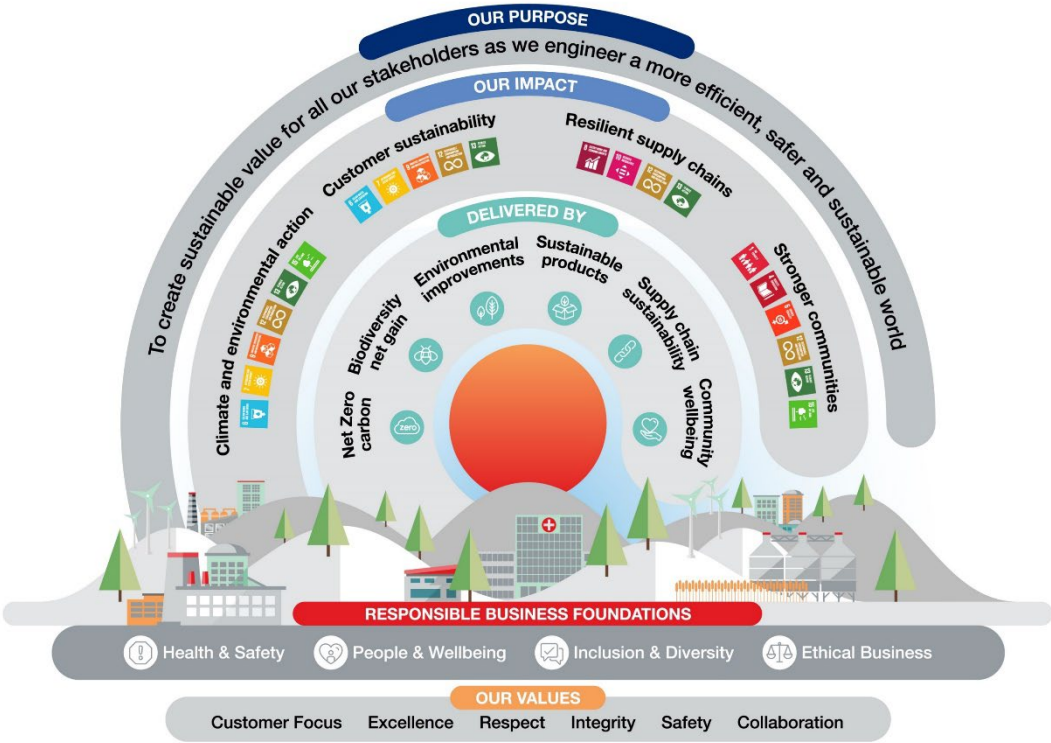
Why ETS fits with Steam Specialties

Attractive, complementary market to Steam Specialties

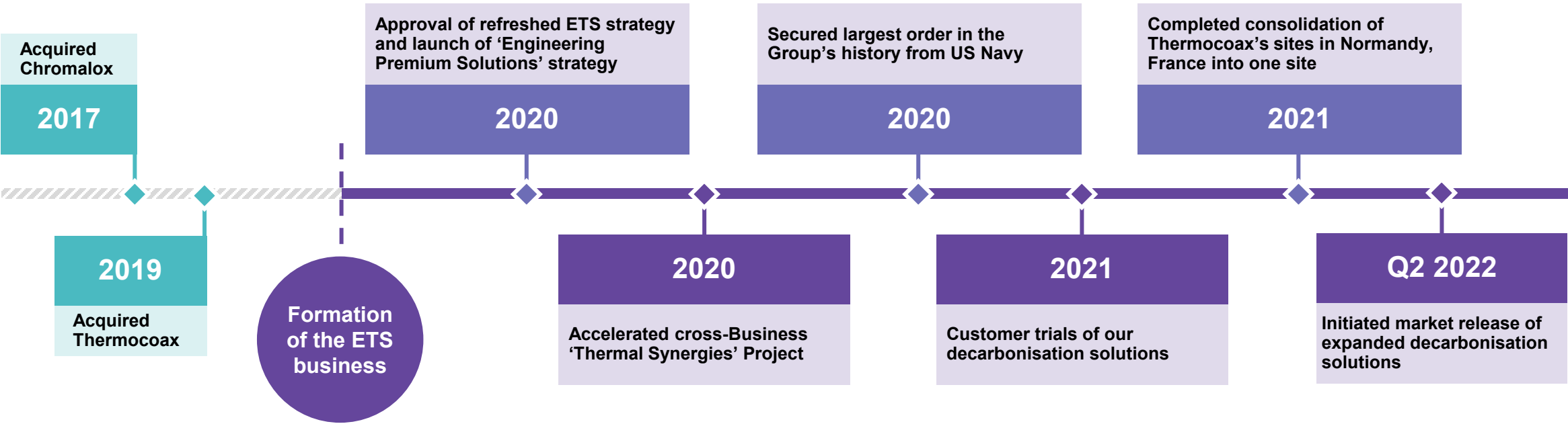


Why ETS fits with the Group Business Model

Fit with our Group business model and One Planet Sustainability Strategy

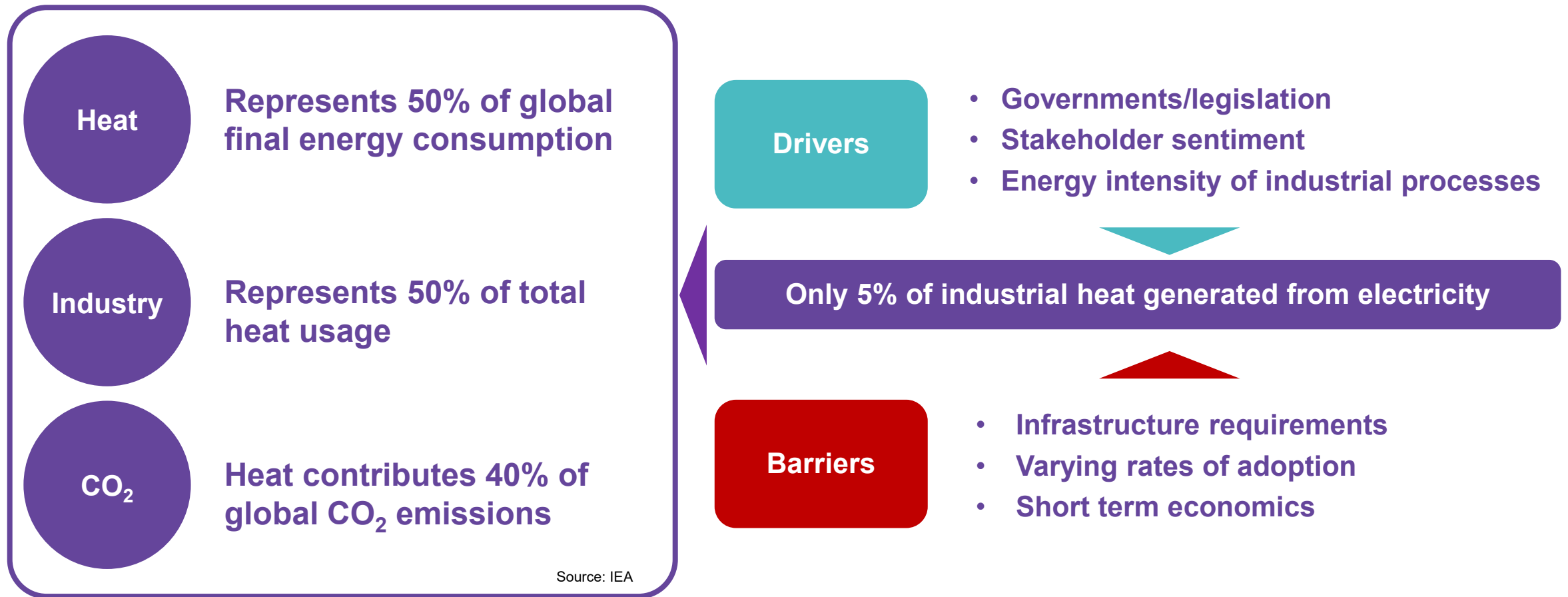


Progress in ETS to date



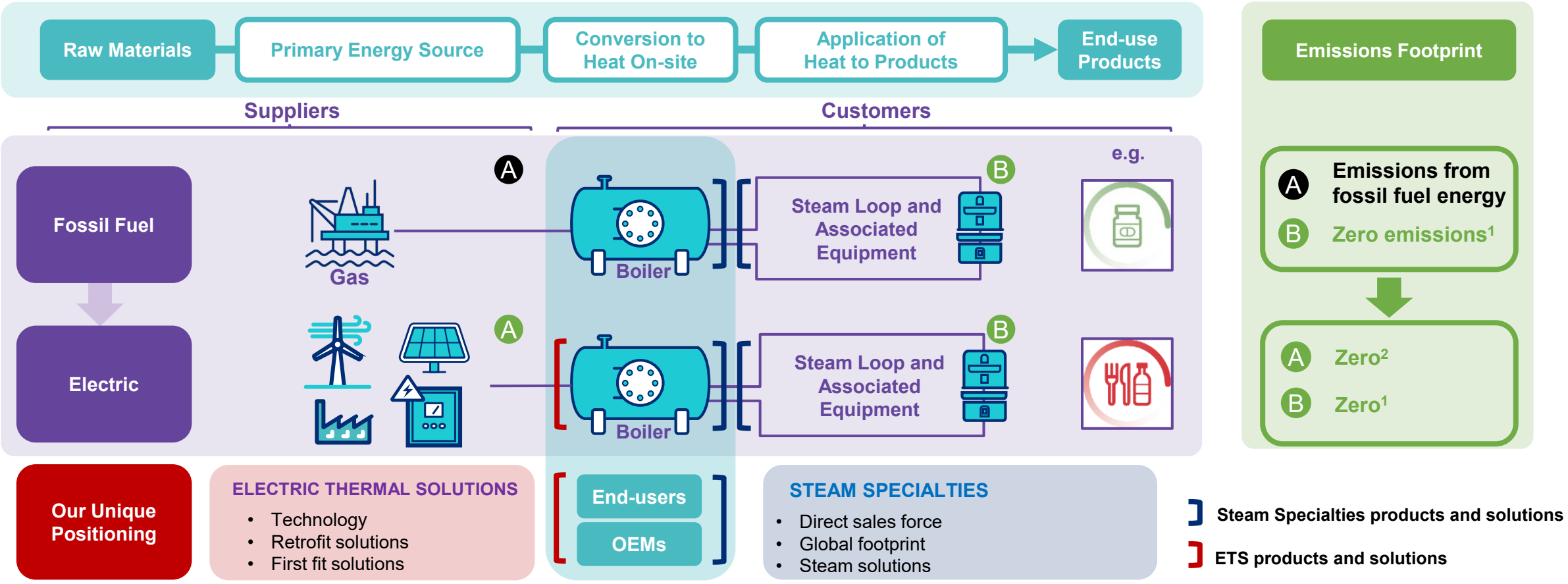
Drivers of the decarbonisation opportunities

30+ year opportunity



Decarbonising steam generation

Our unique position



1. Steam system does not generate any direct emissions; 2. If power sourced from renewables or green energy contracts

Implications for our growth

From the drive towards decarbonisation

- Industrial electric heating market is complementary to our Steam Specialties market
- ETS provides access to a significant addressable market with headroom for growth
- ETS has a clear fit with our business model and supports our One Planet Sustainability Strategy
- Decarbonisation will be an additional growth driver for decades to come
- Our Group is uniquely positioned to capitalise on these long-term growth opportunities

Supporting sustained growth greater than 2x IP long into the future

Introducing ETS

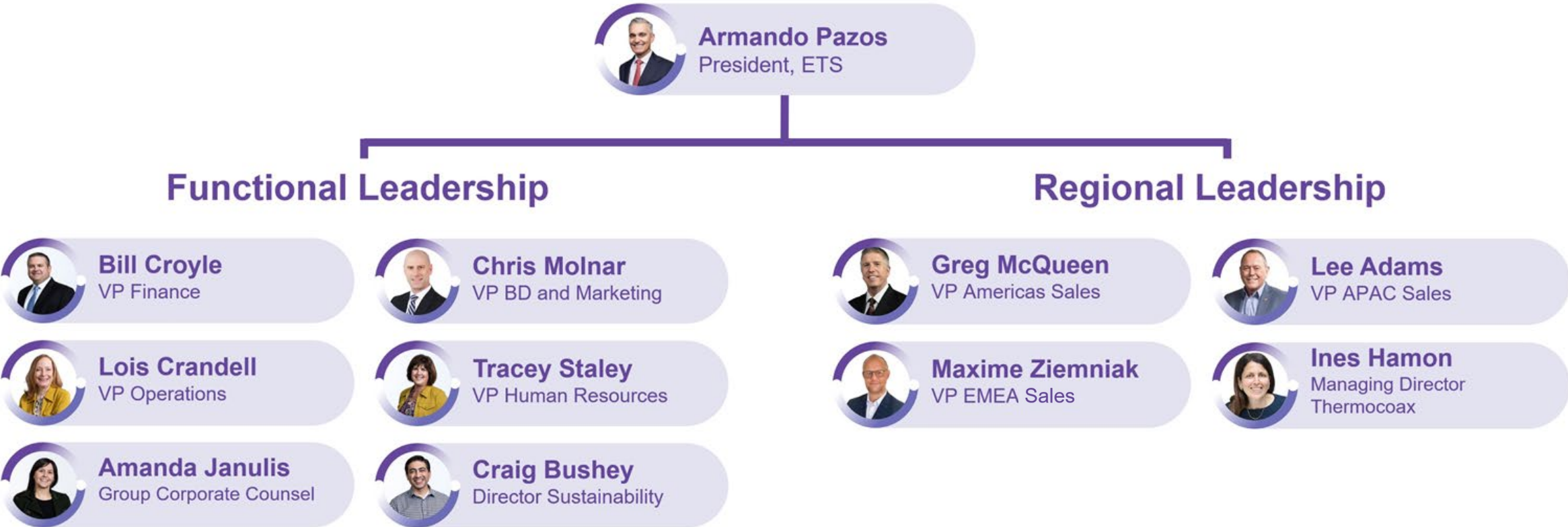
Our Business Overview.

Armando Pazos

President, Electric Thermal Solutions



An experienced leadership team



Introducing ETS

Key topics to cover

Our Businesses

Competitive Landscape

Our Technologies and Products

Opportunities for Growth

Solutions, Sectors and Coverage

Leveraged through our Group and Strategy

Electric Thermal Solutions

What we do

Uses: electric heating for mission-critical industrial processes, freeze protection for pipes, valves and tanks, and component heating

Products: Industrial Heaters & Systems; Heat Tracing; Component Technologies; Mineral insulated cable

Benefits of Electric Solutions: easy to incorporate, install and maintain; high temperatures; efficient, reactive power control; no emissions at point of use

Delivering: efficient thermal energy management and control solutions for improved industrial processes



Heat and Control

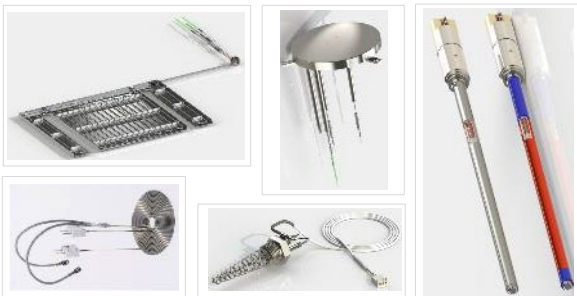


Packages



Pre-fabricated engineered packages for process heating and temperature management

Heating



Sensing



Highly customised and engineered mineral insulated cable for heating and sensing applications

Customers' first choice for premium engineered electric thermal solutions in sustainable applications

Introducing our three product segments



Industrial Heaters & Systems

Complex process heating solutions for mission critical industrial processes. Including our Medium Voltage technology solutions.



Component Technologies

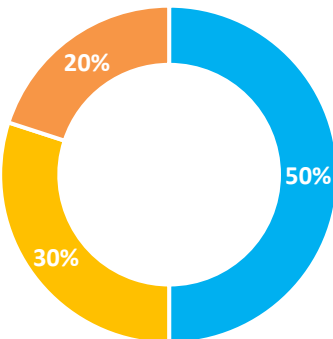
Discrete heating and sensing solutions for industrial equipment manufacturers to enable optimal performance of systems.



Heat Trace

Thermal management solution for piping, valves and tanks for freeze protection and temperature maintenance.

2021 Sales by Product Segment



- Industrial Heaters & Systems
- Component Technologies
- Heat Trace

Product segments by sector

Examples of where our products are utilised

TEMPERATURE HEATING SOLUTIONS



COMPONENT HEATING SOLUTIONS



BUILDING AND CONSTRUCTION



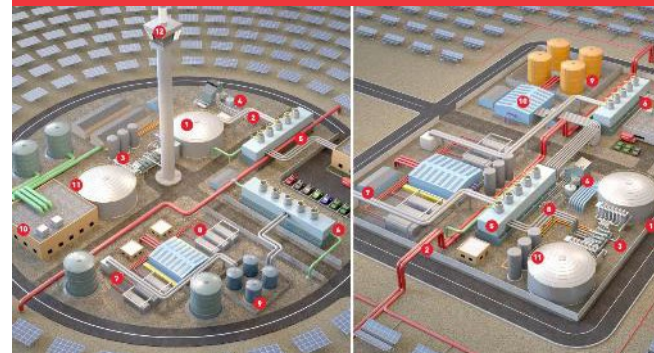
POWER GENERATION



PHARMACEUTICAL



SOLAR



Geographic coverage

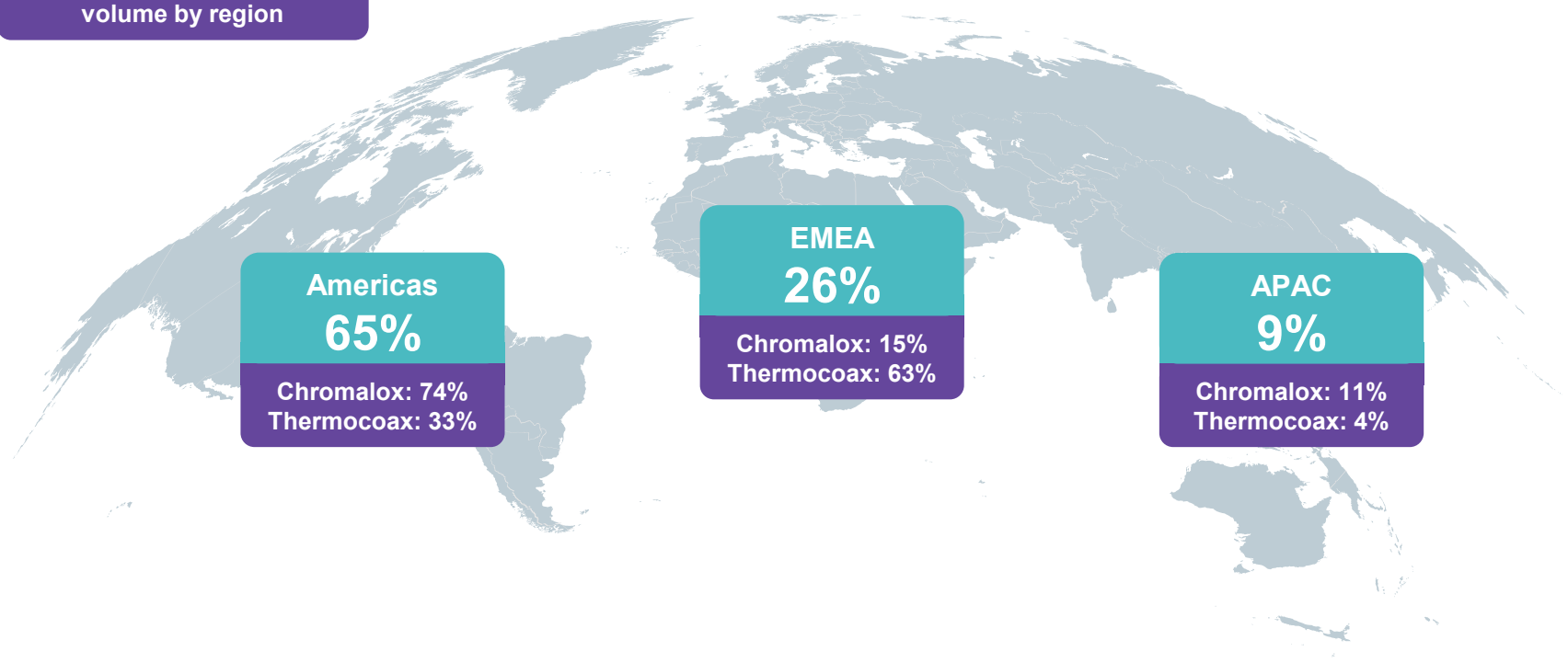
2021 sales by region

ETS key facts:

- Over 1,500 colleagues
- Over 165 direct sales & service engineers
- Direct sales presence in 19 countries
- Serving customers in 98 countries
- Greater presence in the Americas vs. EMEA and APAC

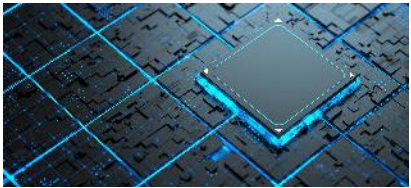
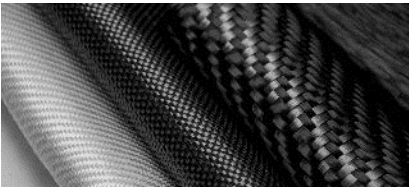
ETS volume mix by region

Chromalox & Thermocoax volume by region



Strategic sector focus

Four strategic sectors with ten subsectors



Sector	Energy Transition	Materials	Advanced Technology	Health and Nutrition
Subsectors	 Sustainable Energy  Nuclear  Oil & Gas Processing	 Building & Construction  Engineered Chemicals  Composites & Plastics	 Semiconductor  Aerospace & Defence	 Pharmaceutical & Biotechnology  Food & Beverage

Providing critical solutions to mission critical industrial processes

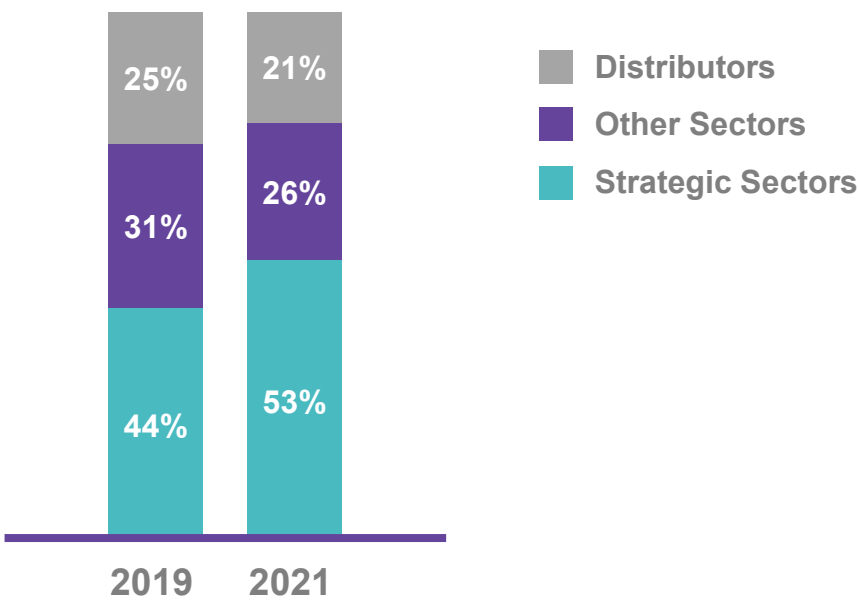
Implementing our strategy

Shift in sales by sector and channel



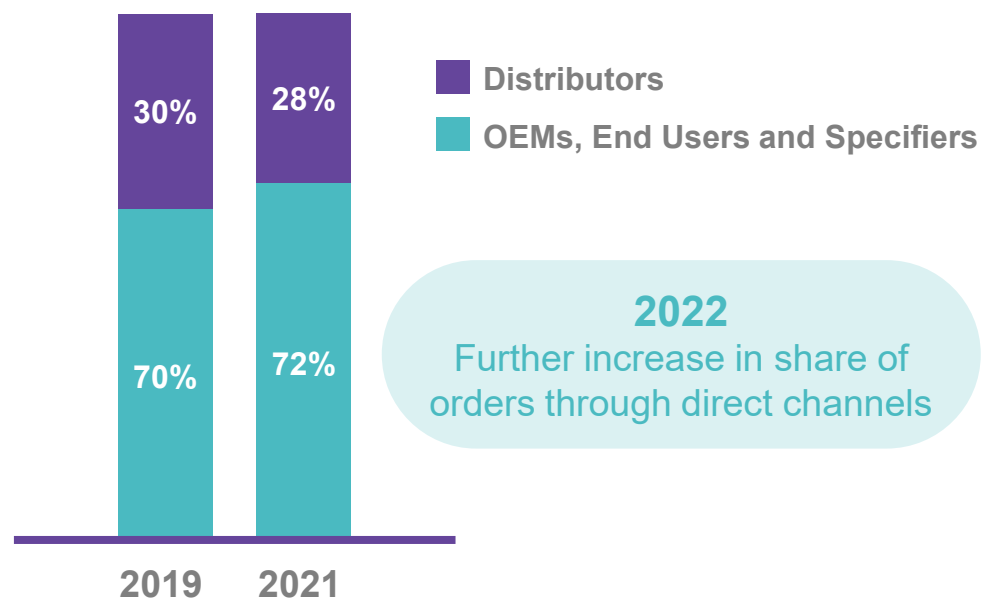
Increased focus on strategic sectors

Sales by sector



Increased focus on direct sales

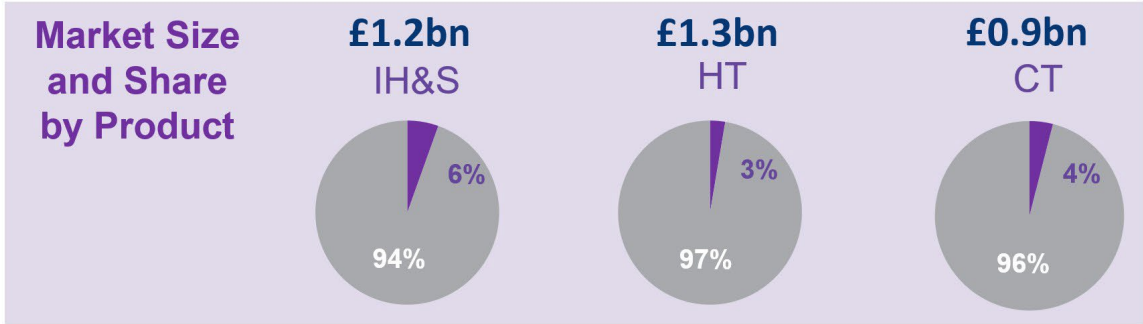
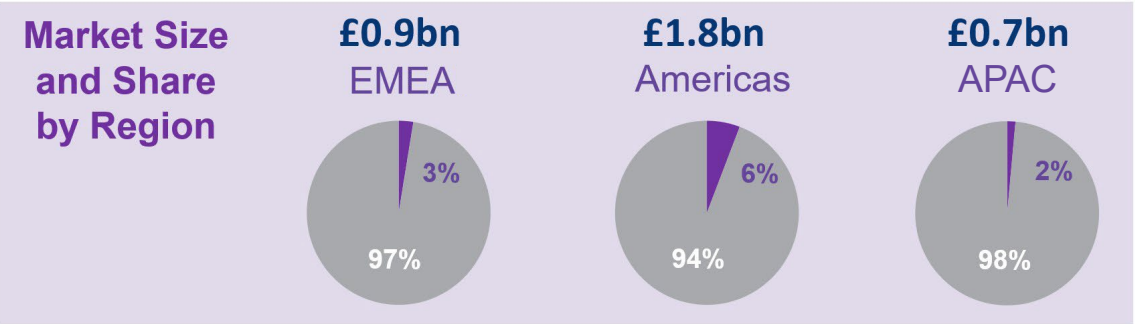
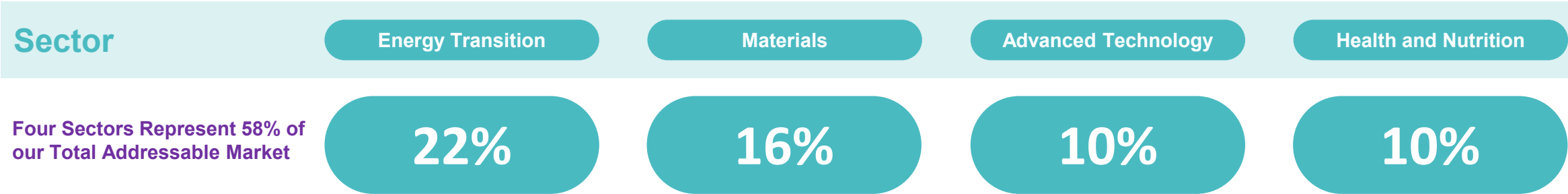
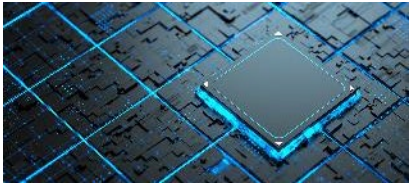
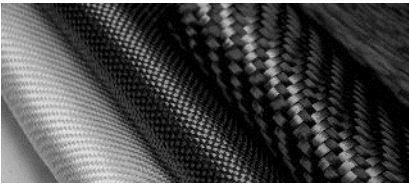
Sales by channel



2022
Further increase in share of orders through direct channels

Market dynamics

Global addressable market for ETS is £3.4 billion



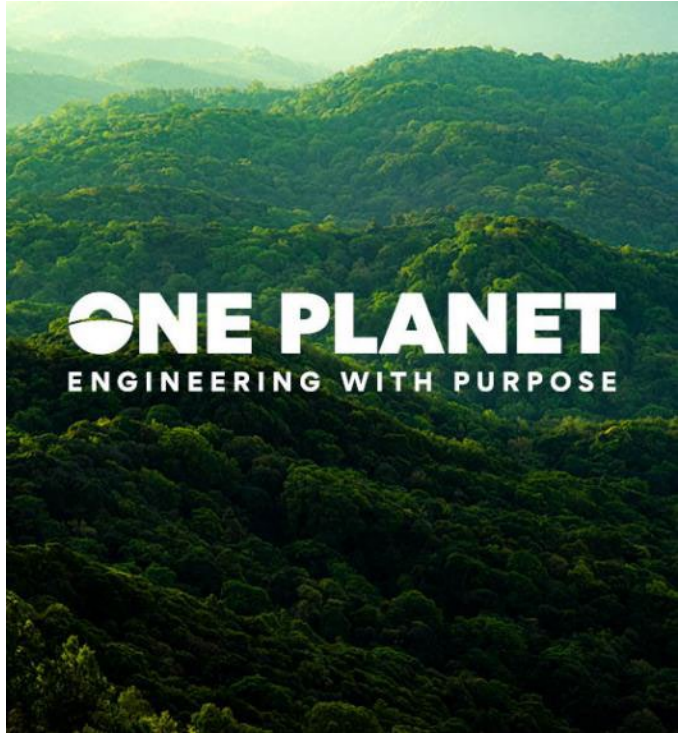
Fragmented competitive landscape

Our competitive advantages



Leveraging the strength of our Group

Accelerating ETS from a strong foundation



Delivering through our strategy and people

Engineering Premium Solutions

Our Vision

To be our customers' first choice for premium engineered electric thermal solutions in sustainable applications.

Our Mission

To participate in our customers' success with superior performance, expertise, and partnership in mission critical electric thermal solutions.



Why ETS is differentiated

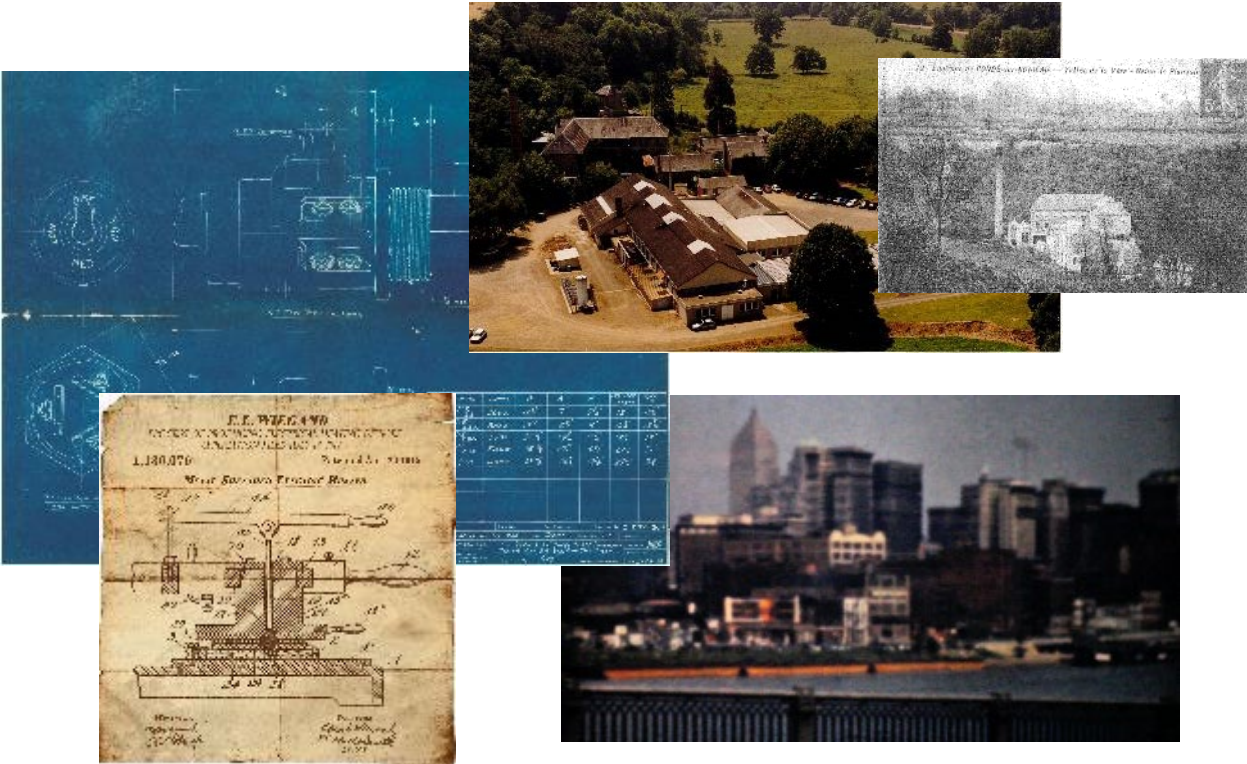
Our unique capabilities.

Christopher Molnar
VP, Business Development, ETS



A history of meeting customers' changing needs

Through a culture of innovation and problem solving



CORE COMPETENCIES:

- A deep understanding of our customers' challenges
- Very broad knowledge about our customers' processes
- Unparalleled engineering expertise in our industry
- Recognised as the highest performing solutions

APPLIED TECHNOLOGY PLATFORMS:



Material and Welding Sciences



Thermal and Fluid Dynamics



Customised Computer Modeling

COMPONENT TECHNOLOGY PLATFORMS:



Metal Sheath Heating



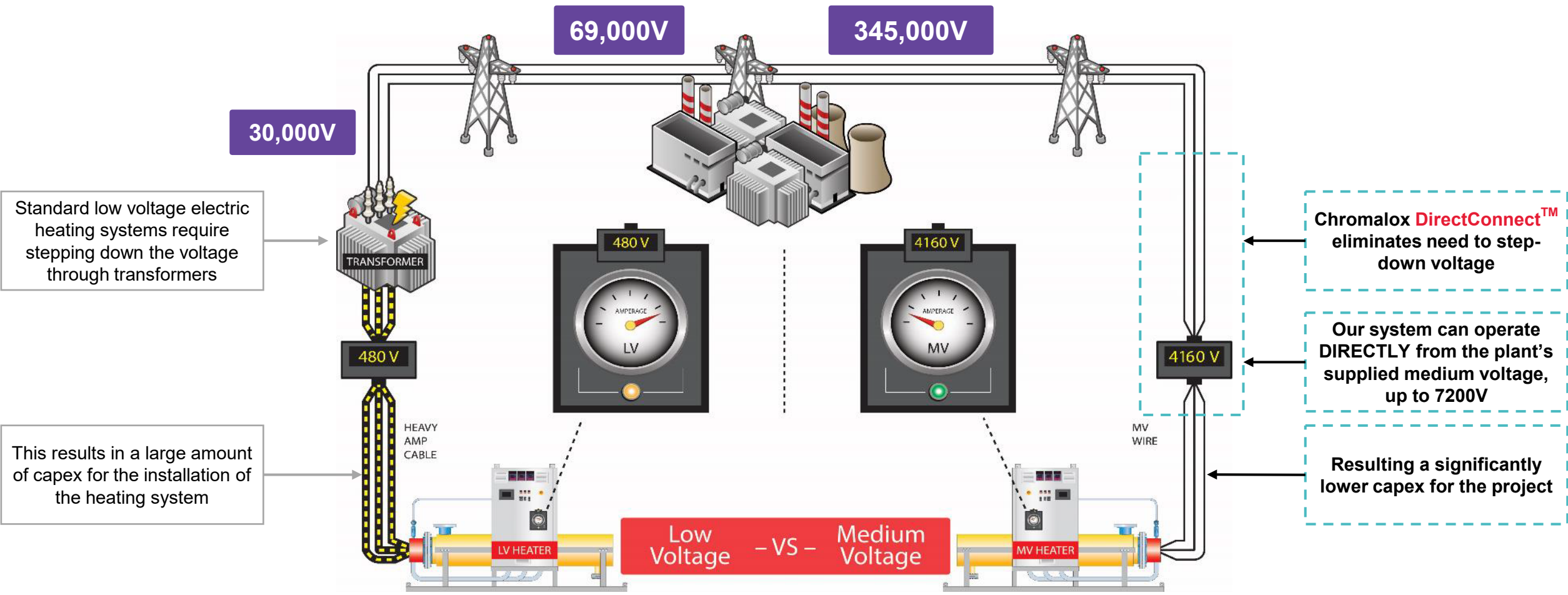
Polymer & Specialty Heating



Integrated Temperature Control

Technology spotlight: DirectConnect™

Patented Medium Voltage technology



Technology spotlight: DirectConnect™

A 2.5MW system delivers cost and efficiency benefits

Step-down transformers are a significant initial capex costs and generate significant power loss



Capex, installation labour, and long-term maintenance/risk is much higher for the transmission system

Traditional Low Voltage Solution

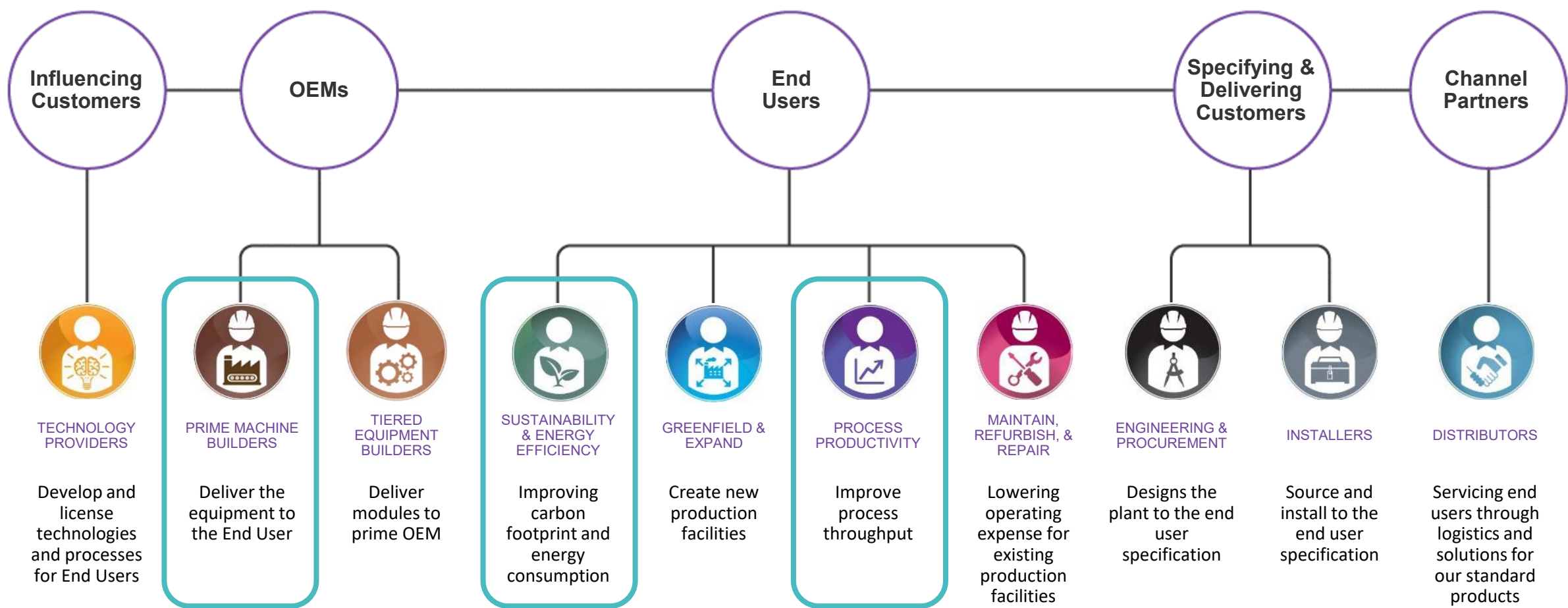
Significantly lower capex costs and increased energy efficiency through MV



Medium Voltage technology

A focus on solving our customers' problems

Through our Customer Value Propositions (CVPs)



Delivering against customer objectives

Enabling OEM Prime Machine Builders to deliver world-class capabilities

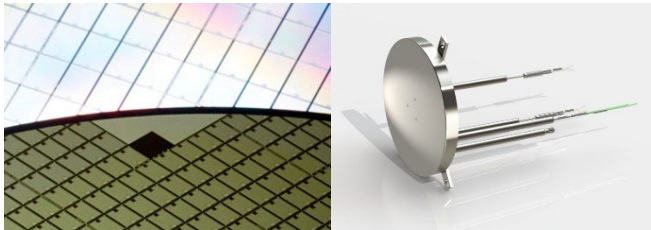


PRIME MACHINE
BUILDERS

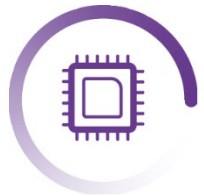
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Wafer Vacuum Heaters

Unmatched two-dimensional thermal uniformity that maximises the processing yield of semiconductor wafer/chip production



 THERMOCOAX



Semiconductor



Maxizone Elements

Precise thermal profiles and temperature control produce the highest quality solar panels, maximising their operational efficiency



 CHROMALOX
Advanced Thermal Technologies

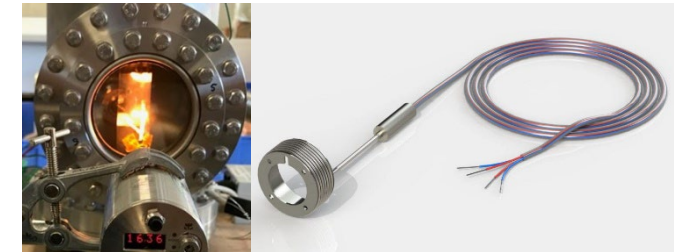


Power

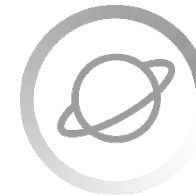


MI Cable Thruster Coil

Unparalleled reliability to perform in the most extreme environment - the vacuum of space - to maintain critical satellite orbits over our world



 THERMOCOAX



Aerospace & Defence



Delivering against customer objectives

Maximum productivity and performance for Mission Critical End User applications

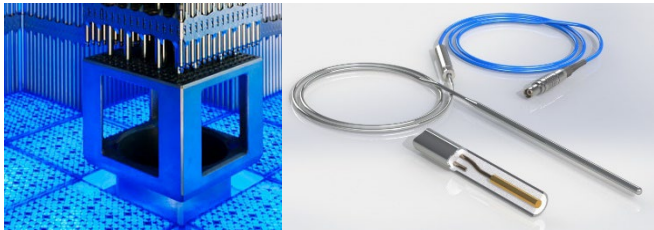


PROCESS
PRODUCTIVITY

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Neutron Flux Detector

Ability to perform at peak performance under intense and long-term radiation to precisely monitor neutron and gamma radiation inside the reactor core



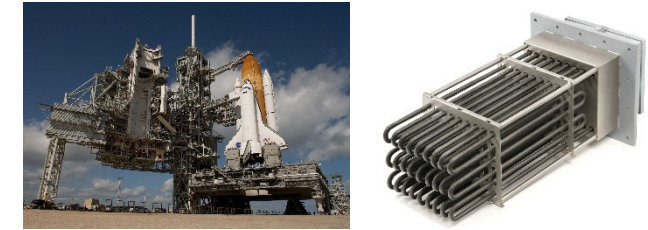
Pressuriser Heaters

Consistent, dependable operation over a 40 year life and millions of cycles to help modulate and control the rate of reaction in a nuclear power plant



Nitrogen Purge Systems

Trusted to perform the mission-critical safety function of evacuating explosive gases from the pad prior to ignition, essentially enabling a “go for launch”



 THERMOCOAX



Power



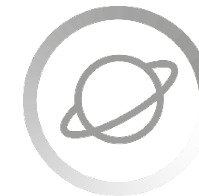
 THERMOCOAX



Power



 **CHROMALOX**
Advanced Thermal Technologies



Aerospace & Defence



Delivering against customer objectives

Improving energy efficiency and reducing the carbon footprint for End Users

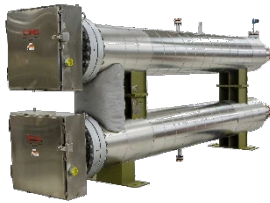


SUSTAINABILITY
& ENERGY
EFFICIENCY

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Defrost & Regen Heaters

Increased energy efficiency in LNG Liquefaction through MV technology produces a higher round-trip efficiency for the production plant and maximised output to market



Hot Water Network Solutions

Decarbonisation of district heating through DirectConnect™ and Heat Trace electric systems and renewable power enables true net zero operation of an entire city block



Electric Steam

Leveraging our MV electric heating systems and renewable power for carbon-free steam production, higher energy efficiencies, and lower energy consumption across all industries

TargetZero



Oil & Gas



Building & Construction

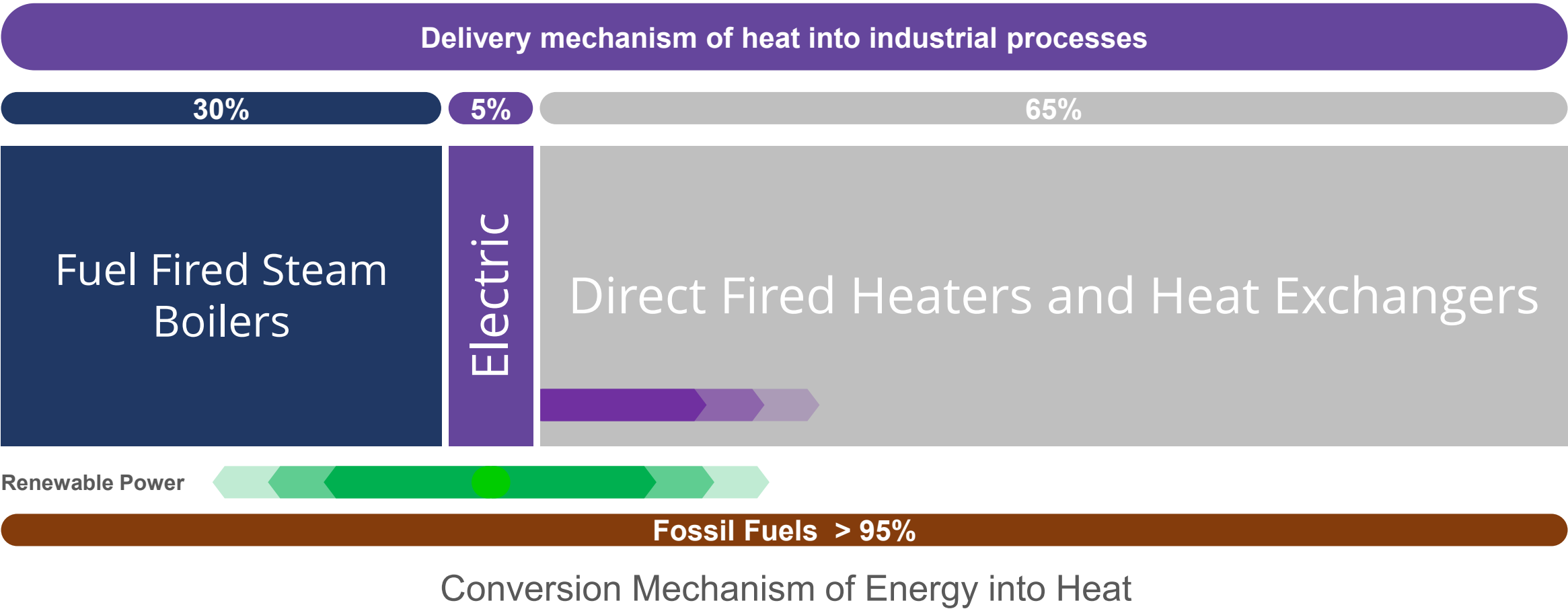


Food & Beverage



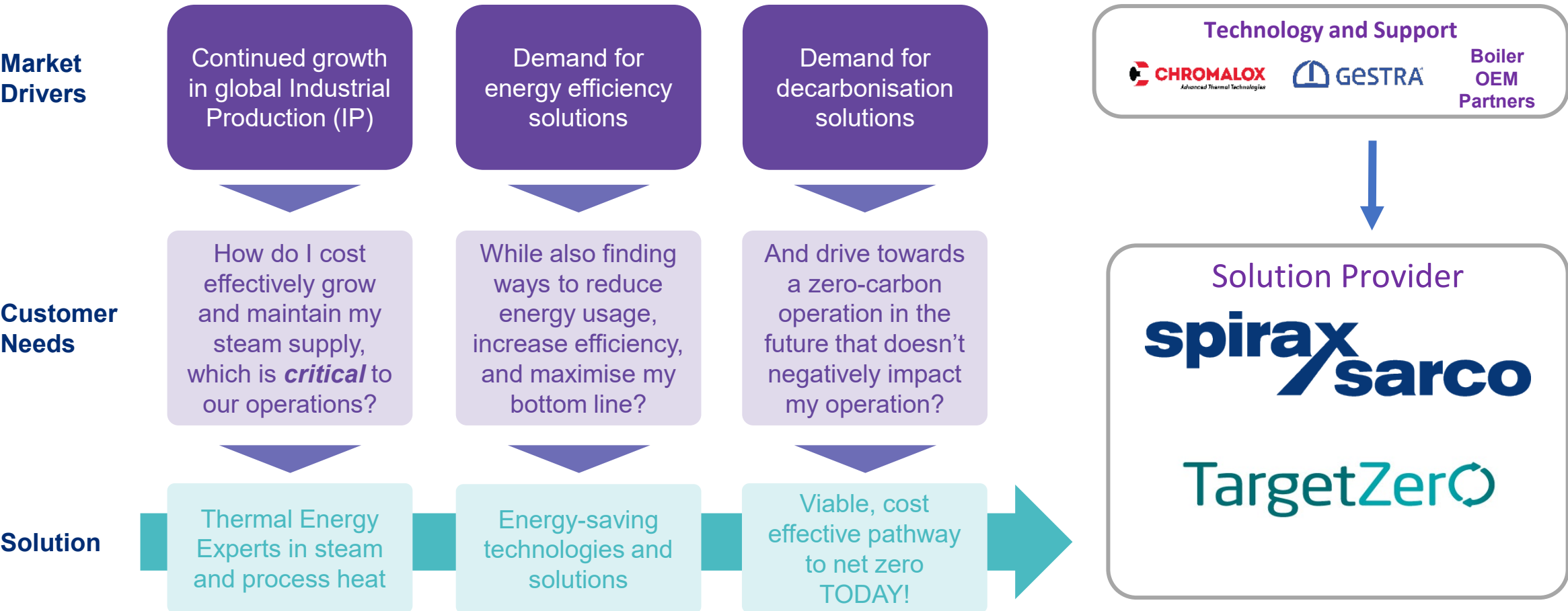
The ETS opportunity for sustainability

Significant addressable market creation



TargetZero – solutions for steam decarbonisation

Customer value propositions and general ‘go to market’ approach



TargetZero

Steam decarbonisation solutions by Spirax-Sarco Engineering



SteamVolt

LV & MV First Fit Boiler Solution
OEM Boiler electric heat and control technology



ElectroFit

LV & MV Retro Fit Boiler Solution
Conversion of fossil fuel fired boilers to electric.



Steam Battery

Thermal storage capable of generating steam from renewable / off peak electricity

~500k boilers installed base growing at ~4% per annum

SteamVolt

Electrification of steam – replacing fuel-fired steam generation with zero emission MV technology

Energy efficient, large capacity electric steam generation for industrial applications.

- The solution for first fit installation or replacement of retired fleet
- Average order size £200-300k



SteamVolt – case study

Electrification of steam – replacing fuel-fired steam generation with zero emission MV technology

Public University in Canada to become carbon-neutral by 2040.

Replace 20MW of campus' gas-fired steam system with DirectConnect™ MV technology and renewable power.

Will reduce powerhouse emissions by 30%.



ElectroFit

Electrification of steam – in-situ retrofit of existing fuel fired boilers

Decarbonises steam generation while retaining existing infrastructure and minimising disruption.

- Suitable for retrofit of installed base
- Most suited to fleet aged <20 years (~90% of existing fleet)
- Average order size £100-200k



ElectroFit – case study

Electrification of steam – in-situ replacement of existing fuel fired boilers

Beverage producer in Turkey to use 100% renewable power by 2030.

Leverage existing 2.3MW of power for steam generation in existing boiler and infrastructure.

Maximise return on decarbonisation investment.



Steam Battery

Electrification of steam – maximising efficiency

A flexible approach to storing and utilising renewable electrical energy.

- Estimated opportunity of one Steam Battery for every seven electric boilers
- Average order size £200-300k



Steam Battery – case study

Electrification of steam – maximising efficiency

Steam training centre in UK drives towards net carbon zero goals.

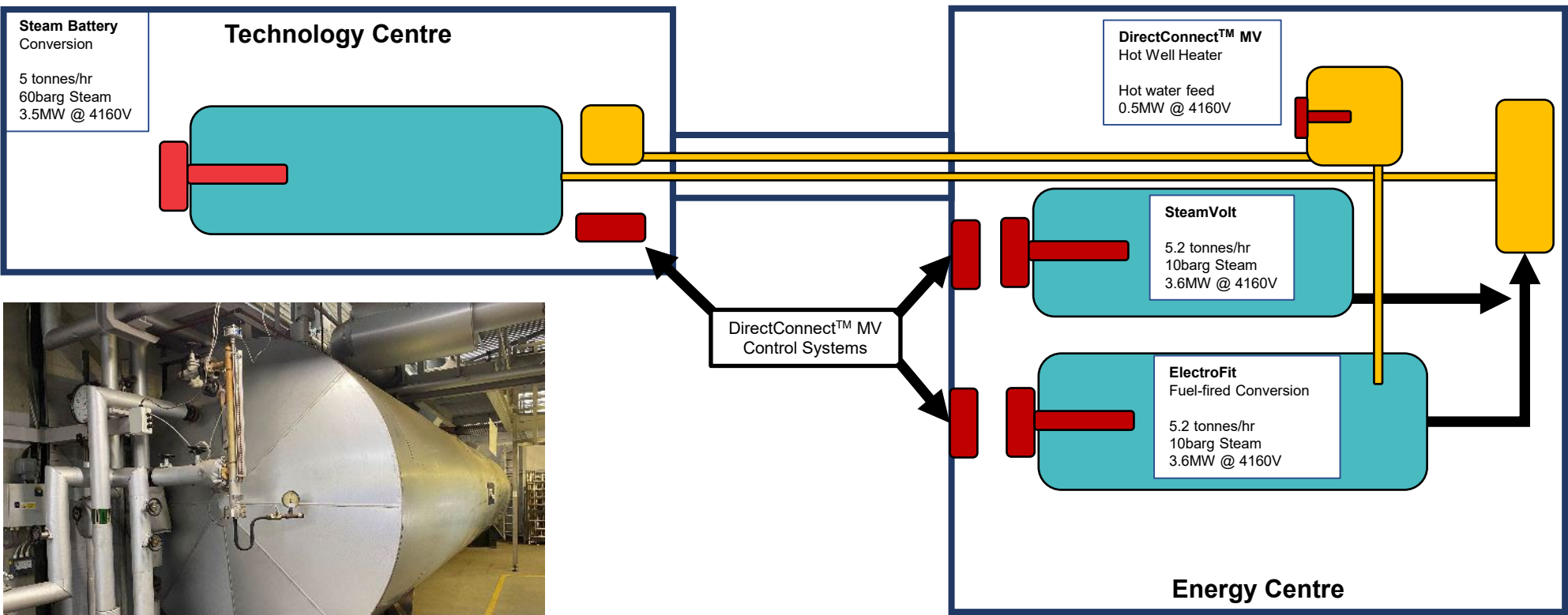
Utilisation of on-site solar and off-peak power to generate low/no carbon steam.

Lower energy demand and higher efficiency through thermal energy storage.



Project Clear Sky

Decarbonisation of UK manufacturing site – all three technologies in play



Drivers of growth

**Investment in Capacity and
Operational Excellence.**

Armando Pazos
President, ETS



Global manufacturing footprint



Manufacturing facility transformation activities

Investing in our future



Normandy, France

Manufacturing of highly engineered, customised, premium mineral insulated cables and sensors designed for extreme performance in specialised, mission critical OEM applications.



Nuevo Laredo, Mexico

Specialises in Component Technologies and standardised, higher-volume products. Such as boilers, immersion heaters, comfort heaters, strip and rings, mica band, tubular, and cartridge heaters.



Ogden, Utah- USA

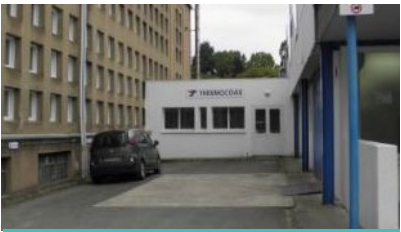
Vertically integrated manufacturing of large flange heaters, circulation heaters, and integrated systems. Leading our Medium Voltage solutions targeting the decarbonisation of steam and industrial process heating.

Manufacturing transformation

Thermocoax Normandy transformation completed in 2021



 **PLANQUIVON**
4,200 m²



 **SAINT-GEORGES
DES GROSEILLERS**
3,600 m²



 **ATHIS VAL-DE-ROUVRE**
1,000 m²



 **SAINT-GEORGES
DES GROSEILLERS**
1,800 m²



Thermocoax - 12,000 m²

- Capacity expanded by 13% with room for further capacity expansion
- Investment in state-of-the-art equipment
- Safety improvements and efficiency gains through improved flow based on LEAN principles
- Solar panels installed to reduce carbon emissions, biodiversity initiatives including beehives

Manufacturing transformation

Chromalox Nuevo Laredo transformation completed in 2020



From 10,700 m² to 14,700 m²



- Capacity expanded by 30% enabling transfer of some product manufacturing from Ogden to relieve some of the constraints there
- Room for further capacity expansion as demand increases
- Investment in state-of-the-art equipment
- Safety improvements and efficiency gains through improved flow based on LEAN principles
- Solar panels installed to reduce carbon emissions
- Grey water recycling introduced

Ogden transformation plan

Matching the standards of Normandy and Nuevo Laredo



Current State:

- Ogden specialises in the manufacture of our leading Medium Voltage solutions, utilised in the decarbonisation of industrial process heating.
- Achieving efficiency gains through LEAN improvements and investing in state-of-the-art equipment is important to support current and future demand.
- Plant needs to double production output based on incoming orders and current demand.



Future state:

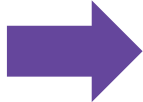
- Use LEAN principles to eliminate waste and create flow to increase capacity of existing facility.
- Evaluate expansion plans to continue to grow capacity for Medium Voltage strategy.
- When we expand our footprint in Ogden, sustainable design will be at the forefront (eg) installation of solar panels and utilisation of geothermal for heating and cooling.

Becoming the benchmark for sustainable manufacturing

Our key investments and plans to decarbonise our facilities



Investment in onsite Renewable Energy (solar panels) in Nuevo Laredo, Heidelberg and Normandy



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Passenger vehicles driven for one year



2,156,357

Miles driven by an average passenger vehicle



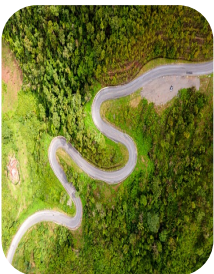
103

Homes' energy use for one year



1,986

Barrels of oil consumed



Net zero Roadmaps for all supply locations to drive energy reduction



Eliminating fossil fuels and transitioning to Green Energy Contracts and Electric Vehicles

ONE PLANET
ENGINEERING WITH PURPOSE

Transformation roadmap

Our journey to 2030

ETS manufacturing facilities



Operations in 2030 will be:

- Using LEAN principles to drive flow within the plant
- More automated with modern equipment
- ISO 14001 (Environmental) and ISO 45001 (Safety & Health) certified
- Net zero (Scope 1 & 2)

- Completed
- In progress
- Planned

ETS in summary

Our strategy is delivering

- Group synergies creating value and driving growth
- Deep customer knowledge and engagement supports increased margins
- Unmatched breadth of products and solutions deployed through strategic sector focus
- Committed to operational excellence, manufacturing transformation and geographic expansion
- Strong demand for our solutions; well positioned for future growth
- Decarbonisation opportunity is significant
- We are uniquely placed; leveraging our patented Medium Voltage technology
- Investing in Ogden to support our future growth in decarbonisation

What ETS will deliver

Our plan for sales and
margin growth.

William Croyle
VP, Finance, ETS



Foundations for future growth

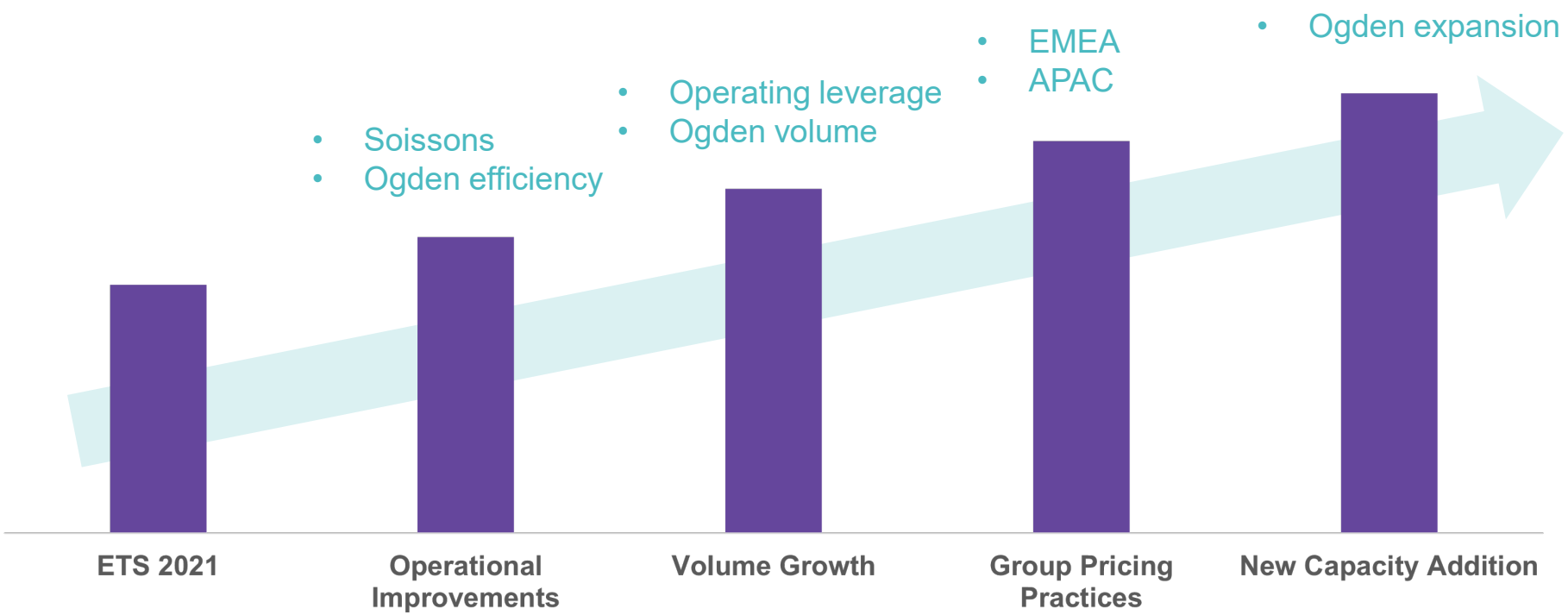
Investing in innovation, people and sustainable operations

	New product development capability	• Lab expansions and increased testing capability • Medium Voltage technology development • 3D printer upgrade to support rapid prototyping
	Commercially driven Research and Development	• R&D incorporated into business development to focus on key projects • New Director of Technology and Innovation • R&D headcount increased from 11 to 15 since 2019 (2 funded by Group)
	Supporting function capacity to enable growth	• 34 new positions added since January 2021, across sales, sustainability, finance, HR, IS, engineering • Employee cost impact in 2021 of ~£2.5m
	Modernising and expanding our manufacturing capacity	• Consolidation of 4 sites in Normandy into a state-of-the-art new site (including ~£4m to fit out the new site) • Transfer of higher volume, less complex product range from Ogden to Nuevo Laredo

Margin evolution

Pathway to Group level margins

Adjusted Operating Profit Margin (%)



Outlook

Strong sales and growth; margin improvement 2023 onwards

Sales Growth



- Demand Growth above rate of Steam Specialties
- Increased sales through operational efficiency

Margin



- Conclusion of loss-making activity
- Benefits of operational gearing and plant throughput

Capex



- Investments related to safety and sustainability
- Step-up in capex to fund Ogden capacity increase
- Investment in ERP to support future growth

Cash Conversion



- Broadly flat in near-medium term as capex steps up
- Reverts to Group levels post Ogden and ERP investment

Re-cap



Re-cap

Our key messages

- We are a resilient Group with attractive long term growth prospects
- ETS is fundamentally a growing and high margin business
- Near term focus on delivering operational improvements and driving increased capacity
- Continued investment in the organisation and operations to deliver Group level growth and margins
- Significant addressable market growth from decarbonisation, over at least a 30 year period
- A key driver of our long term ability to deliver growth greater than 2xIP

Thank you

