Vacuum Technique

Capital Markets Day 2019

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Agenda

1. Facts in brief
2. The market and business fundamentals
3. Strategy for growth
4. Summary

Facts in brief

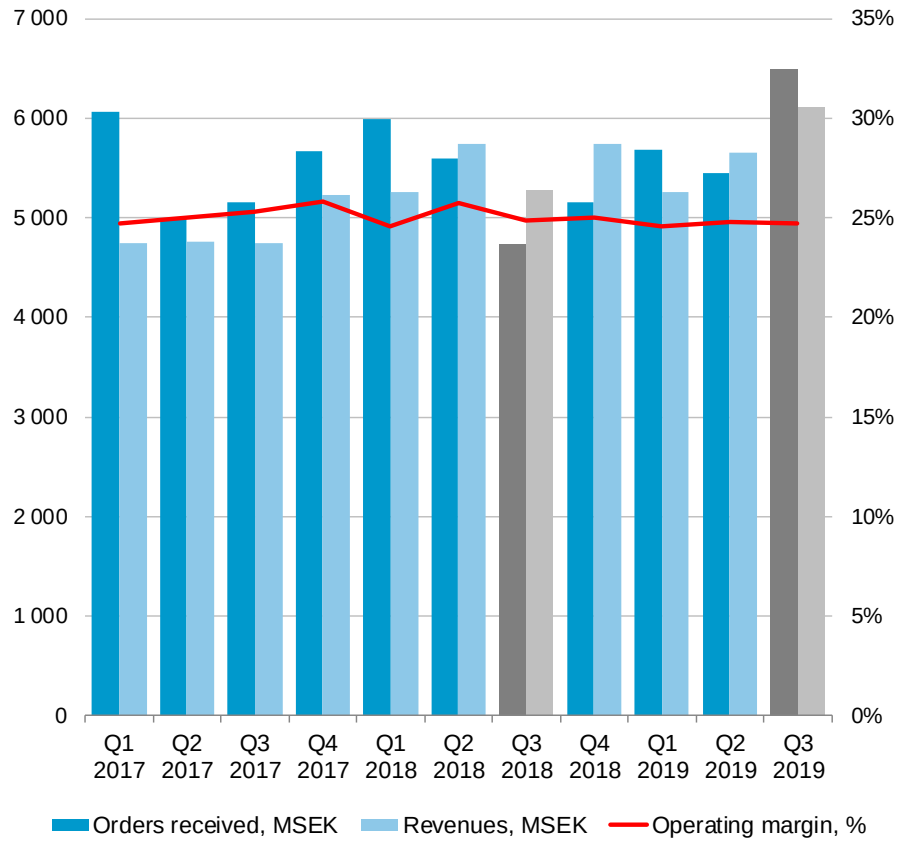
Vacuum Technique

ROCE
23%

Growth drivers

- Climate change (Drive for efficiency, batteries)
- Miniaturization (Moores law)
- New industrial production processes
- Digitalization (IOT, 5G, VR, AI…)
- Sophisticated healthcare
- Service 24/7 (Connectivity)
- Global to local investments

Orders, revenues and operating margin

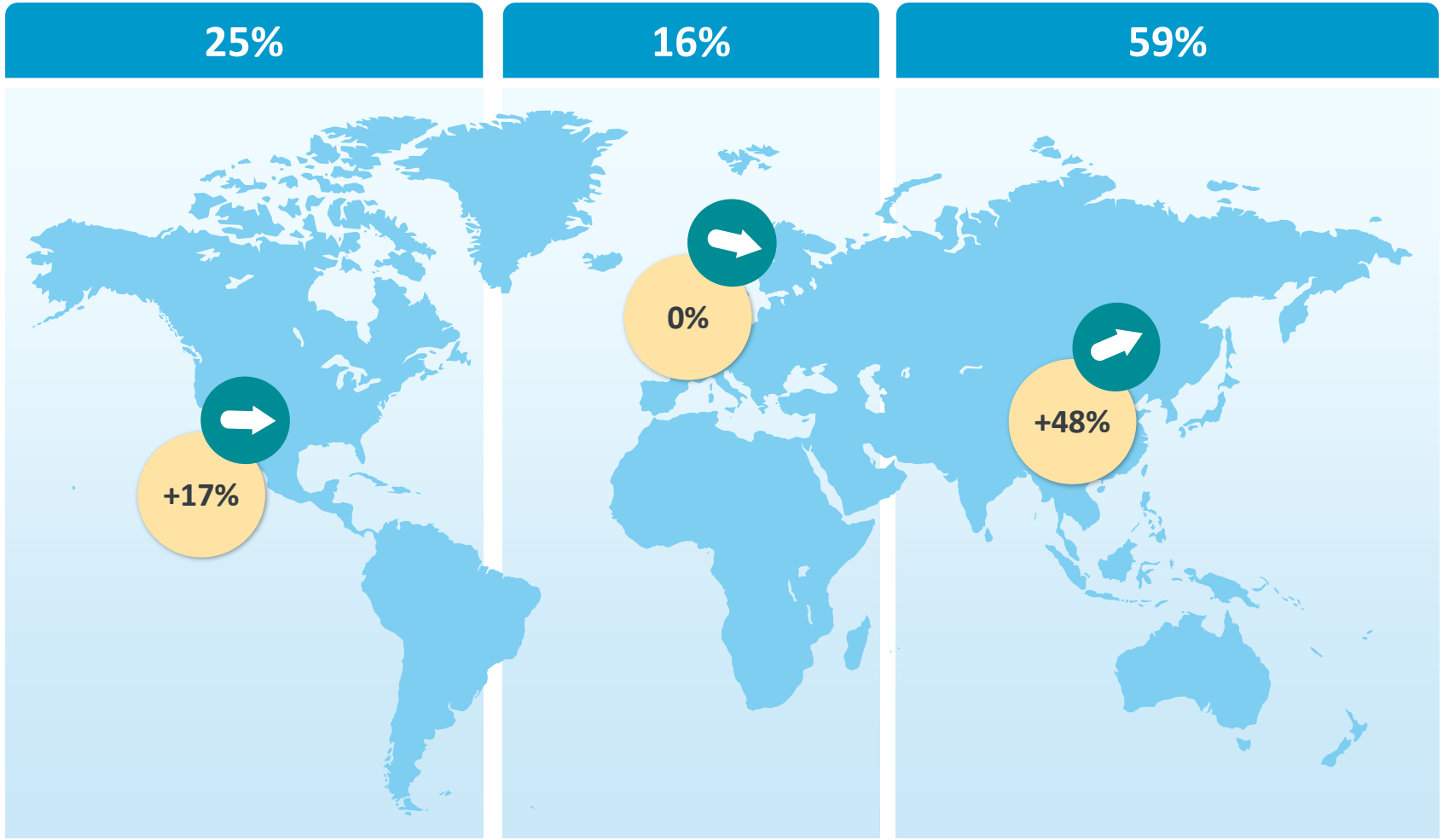


Orders received – Local currency Q3 2019

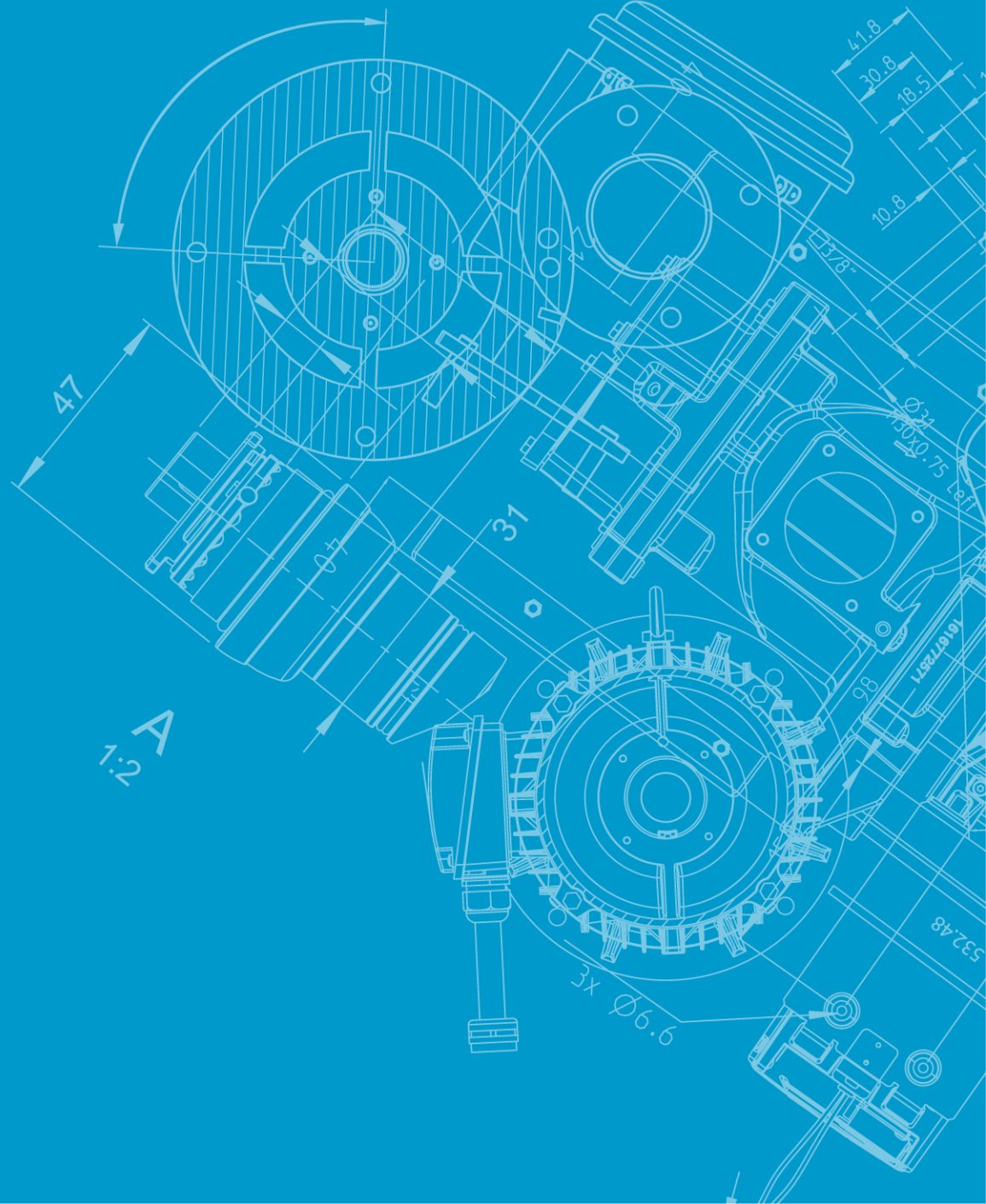
SHARE OF ORDERS
RECEIVED YEAR TO DATE:

= Q3 VS. Q2

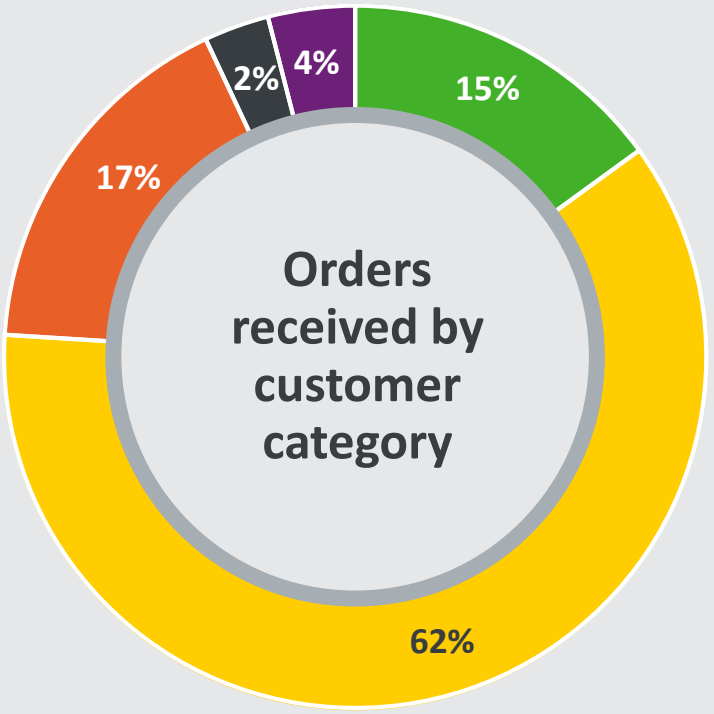
% = Q3 Year-on-Year



The market and business fundamentals



The markets we operate in



General manufacturing

- Market leader in the global steel degassing industry.
- Increasing applications due to new industrial processes.

Electronics

- Consumers demand ‘electronics as necessity’.
- Presence in all semiconductor fabs.
- Semiconductor technology advances and manufacturing capability are critical.

Process industry

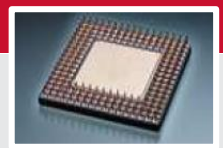
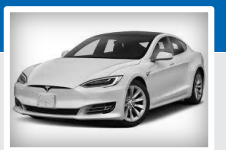
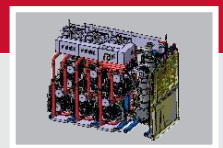
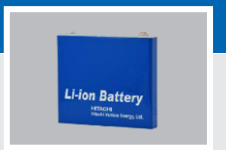
- Taking market share across the process industry – food, chemical, metallurgy.

Other – Scientific

- Enabling progress in space simulation.

Service

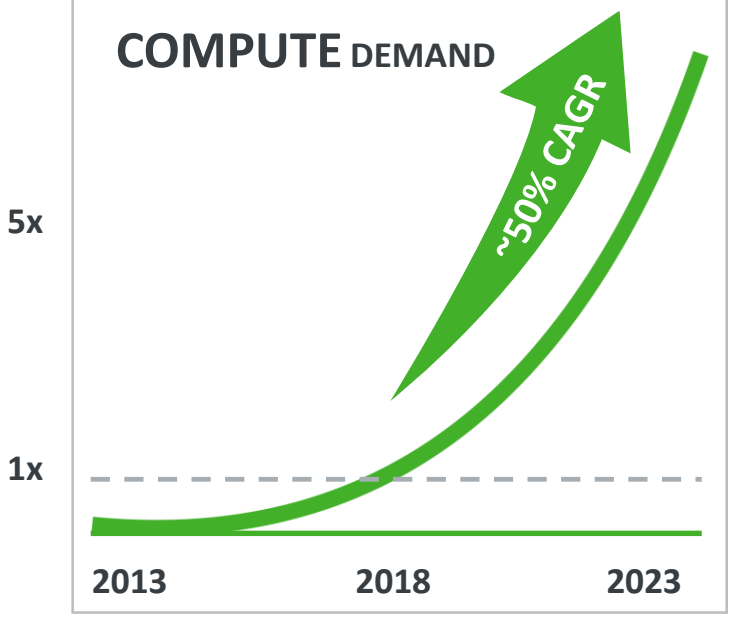
Vacuum – a growing market

	Miniaturization	Climate Change	Data Economy	Healthcare	Transportation	User interface
Global/ Technology trends	 • Moore's law • Low power use • 3D structures	 • Exhaust regulations • CO_2 footprint	 • Connectivity • AI • Machine learning	 • Personalised medicine • Life sciences	 • Autonomous driving • Electric cars • Hyperloop	 • Foldable Oled • Electronics as necessity
Customer Applications	**Vacuum intensity**  • EUV • Minimal foot-print systems	**Energy / Legal**  • LED & Solar • Efficiency • Abatement performance	**Processing power**  • Quantum computing • Memory • Edge Computing	**Data Analysis**  • MRI • Wearables • Mass spectrometers	**Electrical**  • Lithium-ion batteries • Electric vehicle applications	**Connectivity**  • Mobility • 5G • VR

Data growth estimates and driving forces

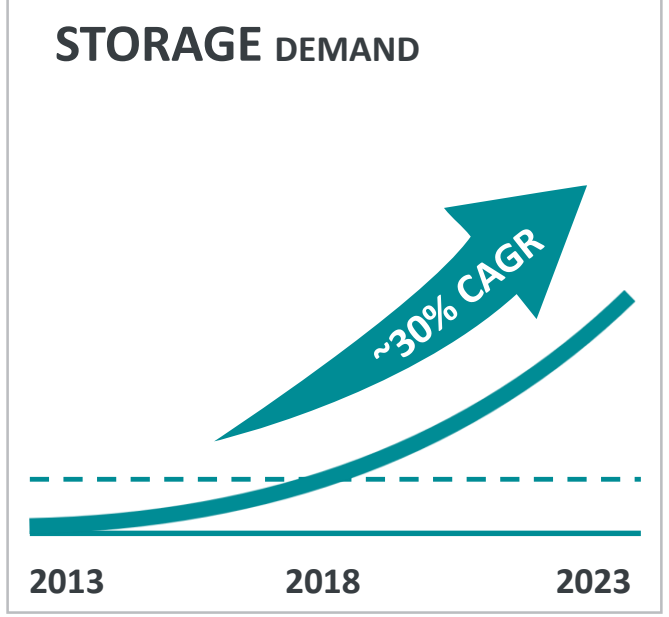
DATA GROWTH DRIVES COMPUTE, STORAGE, NETWORK DEMAND

PROCESS EVERYTHING



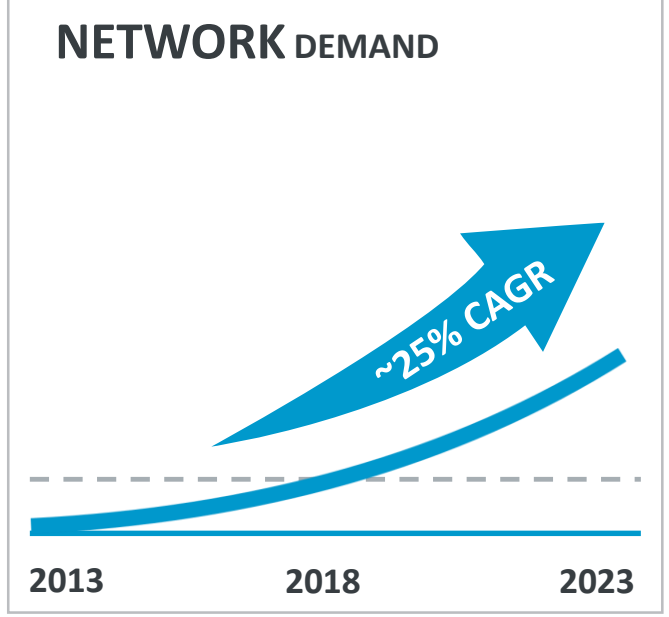
Compute Demand Data Centers (MIPS)

STORE MORE



Stored Data, Data Centers (ZB)

MOVE FASTER



Global Internet Traffic (ZB)

Sources: Global Internet Traffic; Cisco VTNI Forecasts (2016,2017,20180. Stored Data, IDC Data Age 2025 (2018). Compute demand, Intel analysis. Processed and analysed by Atlas Copco.

Extensive and innovative product offering across applications

Atlas Copco GHS central vacuum system

Edwards Ezenith integrated vacuum & abatement system

Leybold steel degassing vacuum system

Edwards nXRi multi stage roots

EUV

Edwards CTI & Edwards Polycold cryo pumps and coldheads

Market trends and driving forces

Battery production

Hyperloop

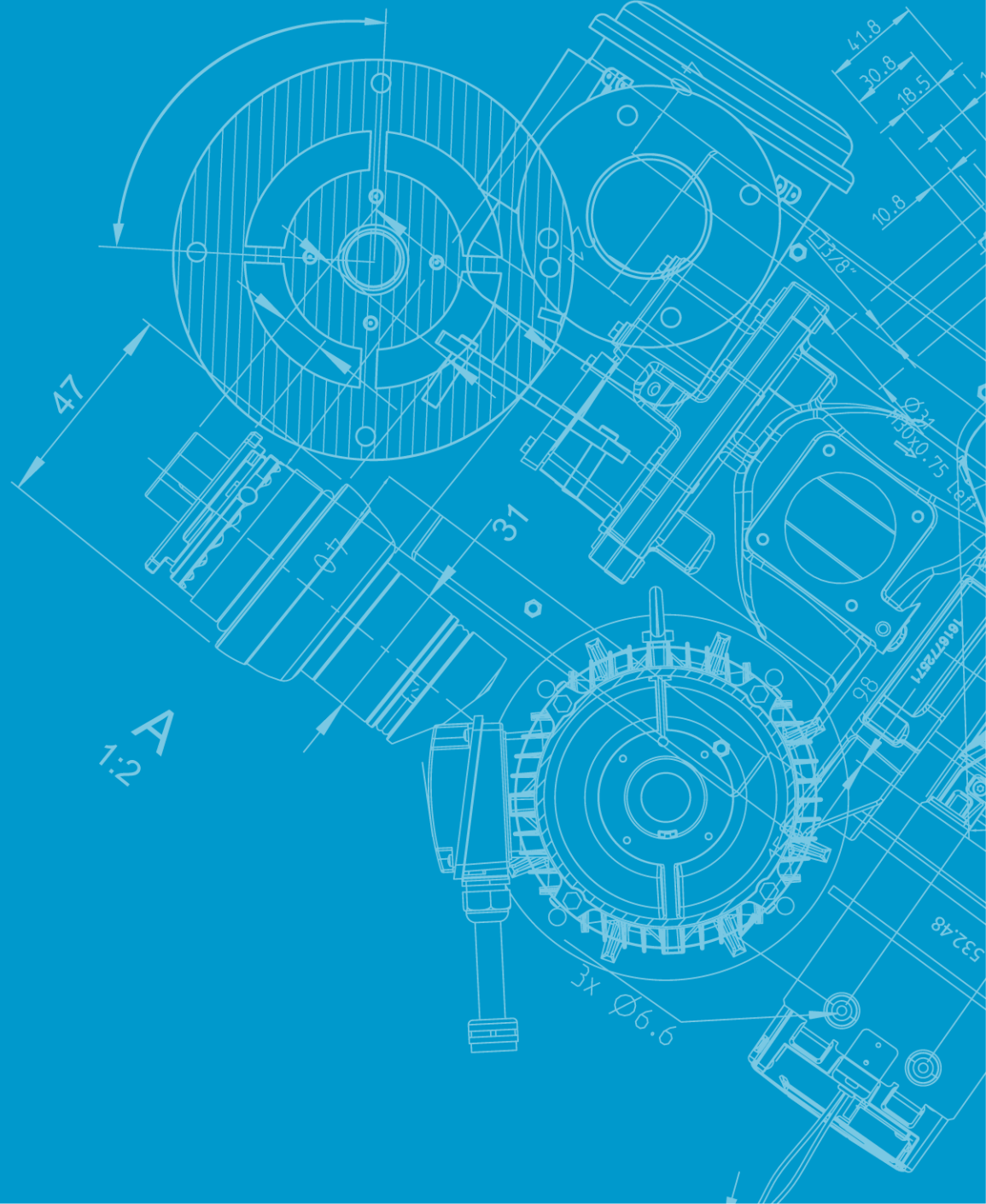
Automotive electronics

Technology in healthcare

Quantum computing

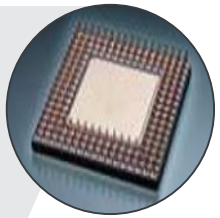
Freeze drying

Sustainable profitable growth



Strategy for profitable growth - Summary

Miniaturization



Product innovation

Growth in general vacuum

Service

Opportunities in China

People

Cryogenics

Agility and resilience

Product offering from rough to ultra high vacuum

Extensive pump range

Vacuum systems

Accessories

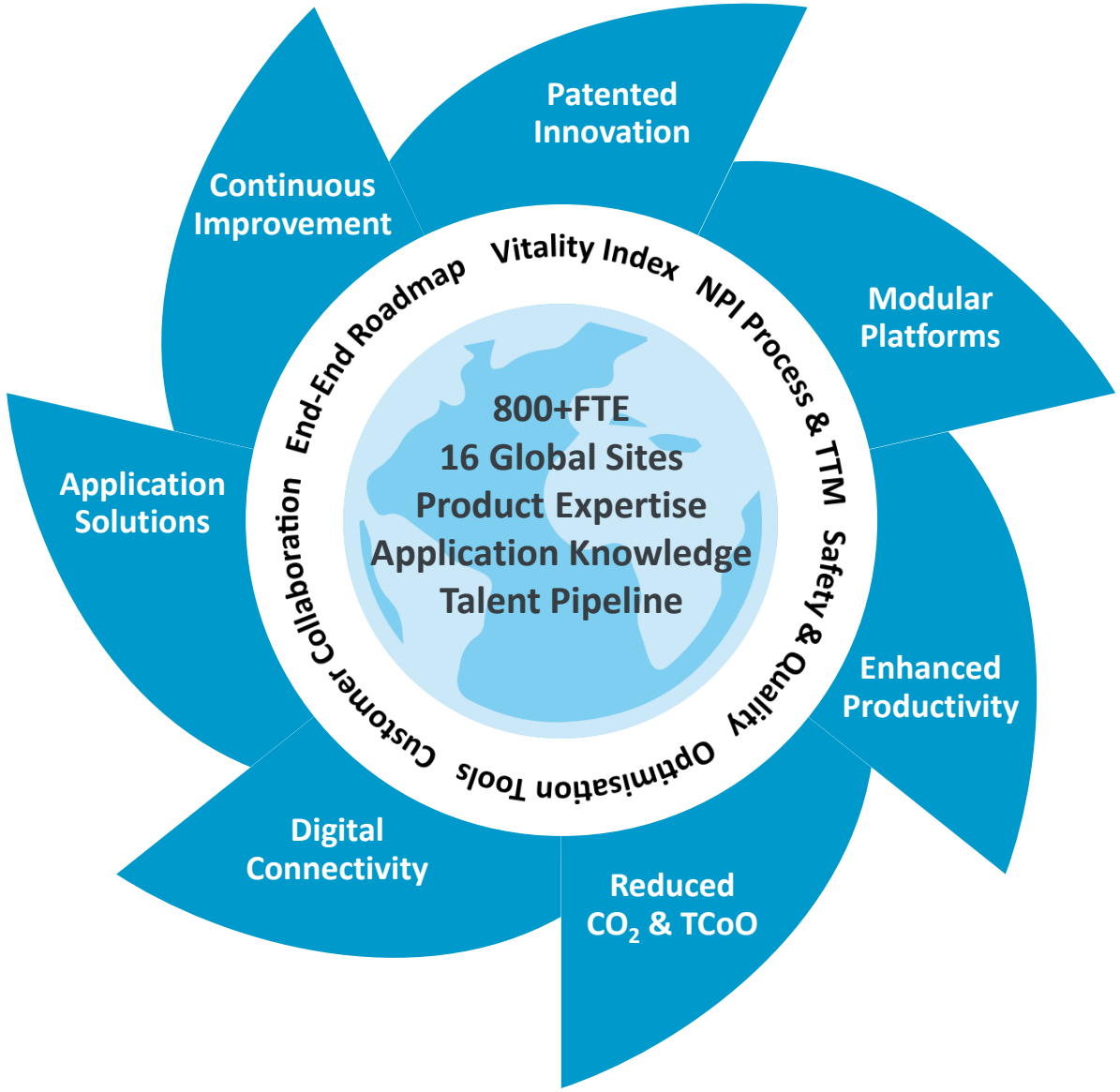
- Product coverage 70%
- Multi brand strategy
- Modular design
- Customer applications
- Innovation centers
- Localized systems delivery

Strategy for profitable growth – Innovation

People

Processes

Product



Recent product launches

Continuous focus on innovation with more than 20 new products launched in past year

Industrial & Scientific

Leybold – Novadry

Edwards – EDO, dry scroll

Atlas Copco – DSS dry scroll

Edwards – EXDM

Leybold – TURBOVAC MAGiNTEGRA MAG2207iS

Edwards – nXR50/80i Multi Stage Roots

Semiconductor

iXH XCEDE

iXM XCEDE

New Atlas high flow environmental technology

iForest EVO

Cryogenics

MaxCool 2000

Cryogenics

Cryo

- PVD coating and Ion implant processes
- Oled evaporation and encapsulation
- Industrial coating
- Space simulation

Polycold

- Industrial coating
- Sample cooling
- Wafer chuck cooling
- Cryogenics refrigerators: MRI scanners
- Dilution refrigerators: quantum computing

Miniaturization – Support technology investments

- **Pumps working in extreme harsh conditions**
  - Temperature: cooling + heating
  - Corrosive gasses used: XCEDE coating
  - Deep etch and deposition
- **Enhanced lithography**
  - EUV: H2 pumping and recycling
- **Footprint reduction**
  - Matching envelope of the tool
  - Integrated systems
- **Foreline temperature management**
  - Controlled TMS
- **Meeting all legislative requirements**
  - Abatement with exhaust control
  - NOx management

Growth in general vacuum

- **New products**
- **New processes**
  - Lithium-ion batteries
  - Steel degassing
  - Food processing
  - Centralised installations
  - Point of use mass spectrometry
- **New territories**

China

- **Sales capability**
  - Highly technical application knowledge
  - Global Semiconductor understanding
  - Customer proximity
- **Service Capability**
  - Investments in hub capacity
  - Training centres
- **Investments**
  - Qingdao factory
  - Shanghai Innovation Centre
- **Product Capability**
  - Integrated systems
  - Environmental solutions

Talent framework aligned to career levels

VT business area Early Careers

VT business area Programs progresses participants towards business leadership roles

Atlas Copco Programs from GM-1

Strategy for profitable growth – Service

Vacuum Technique Service

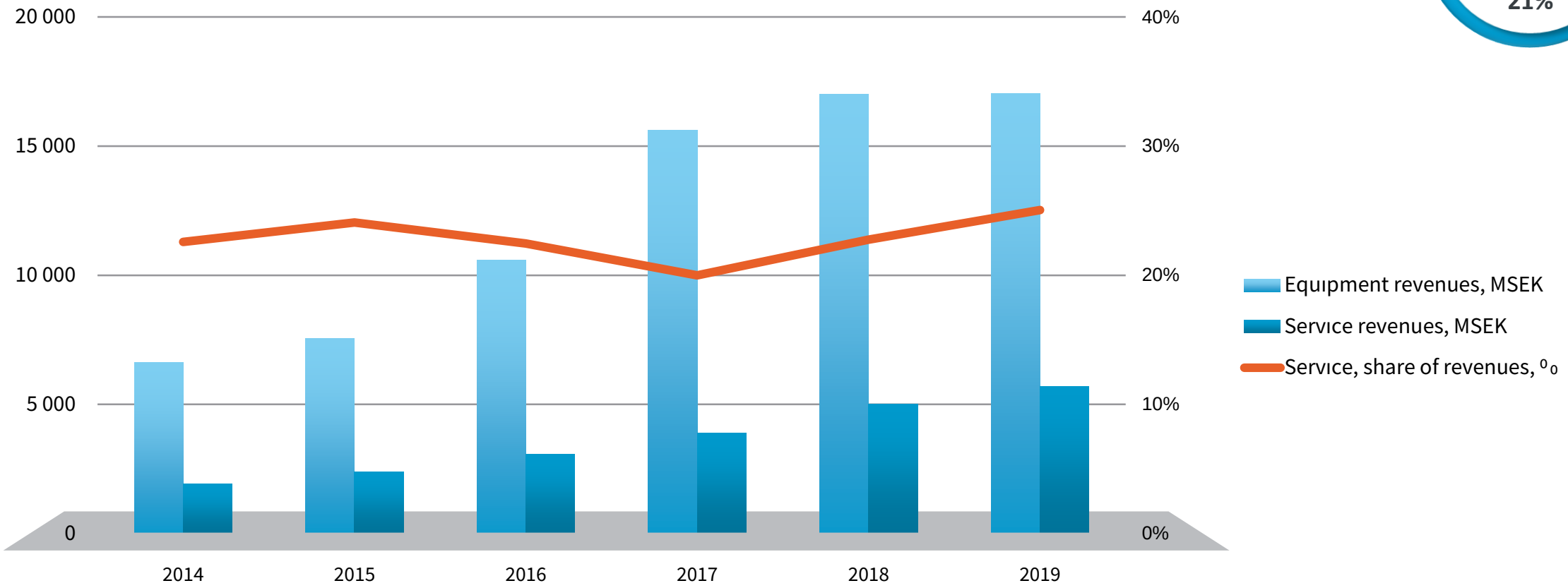
- Leading edge technology & advanced service solutions to maximize customers' uptime providing low total cost of ownership in general vacuum applications.
- Convenience, quality & customer value.
- Mission to be present in every customer’s service experience.
- Supporting efficiency in processes and enterprise systems.

Semiconductor Service

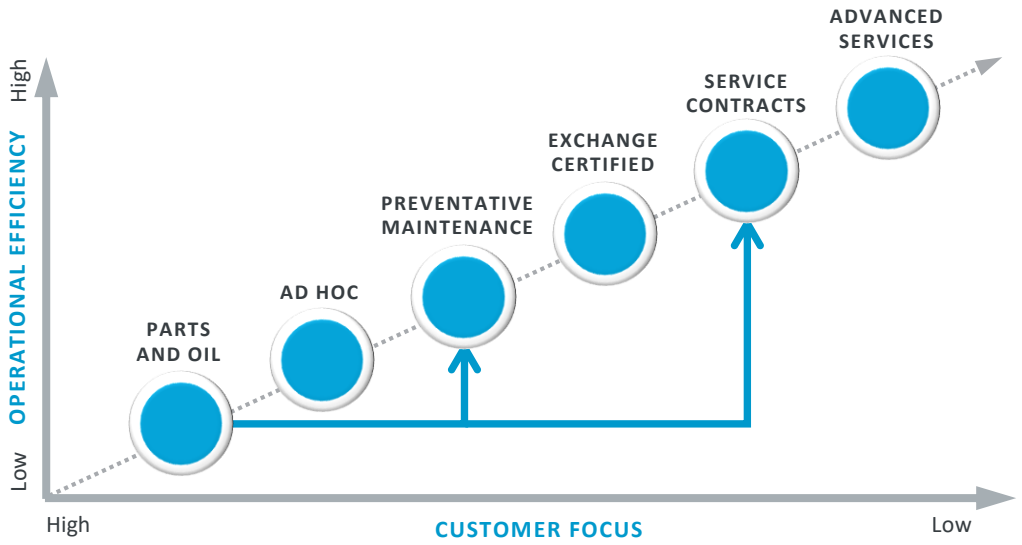
- Supports the process vacuum and environmental needs our customers depend on in the semiconductor, display, LED and PV solar industries.
- Provide and support customer-based data-driven outcomes, with the clear aim of maximising customer throughput and uptime.
- Field Service, Service Product Management and Service Technology Centres.

Vacuum Technique – Service

CAGR
Service
24%
Equipment
21%



The evolution of our offer



VEasy Quoter

Connectivity

Tailored service products

Competitor service

OEM contracts

Increased sales presence

Multi-branded service hubs

Strategy for profitable growth – Agility & resilience

Cost of sales management

- Product cost reduction
- Insourcing of subcontracted manufacturing
- Flexible workforce

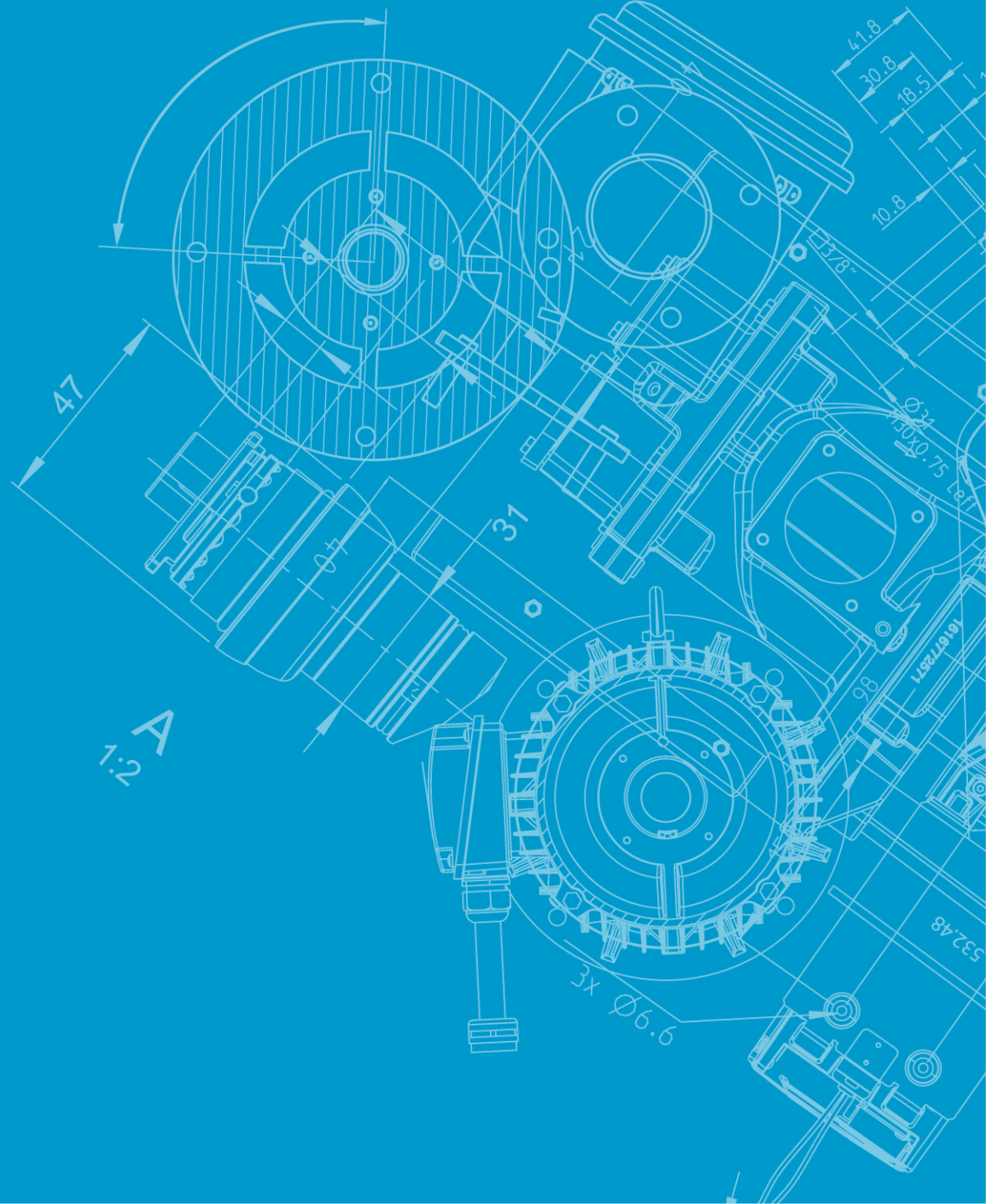
Growth initiatives

- Service development
- Continuous investment in R&D
- Investment in growth markets

Optimize efficiencies

- Mergers of multi-branded factories, service centers, financial support services
- Sales & administration cost management
- Discontinued old, low-margin products

Summary



Summary – Vacuum Technique

- Accelerated technology development and product innovation
- Integration of new acquisitions
- Expand coverage in general industry – products and service
- Semi presence in focused markets – customer proximity
- People – talent development and gender diversity
- Continue to build agile structures and processes
- Further focus on resilient business models

Atlas Copco

atlascopcogroup.com

Forward looking statements

“Some statements herein are forward-looking and the actual outcome could be materially different. In addition to the factors explicitly commented upon, the actual outcome could be materially and adversely affected by other factors such as the effect of economic conditions, exchange-rate and interest-rate movements, political risks, the impact of competing products and their pricing, product development, commercialization and technological difficulties, supply disturbances, and major customer credit losses.”