Vacuum Technique

Koen Lauwers, Business Area President

November 26, 2025

Atlas Copco Group

Agenda

1
Facts in brief

2
The market and business fundamentals

3
Strategy for growth, focus and priorities

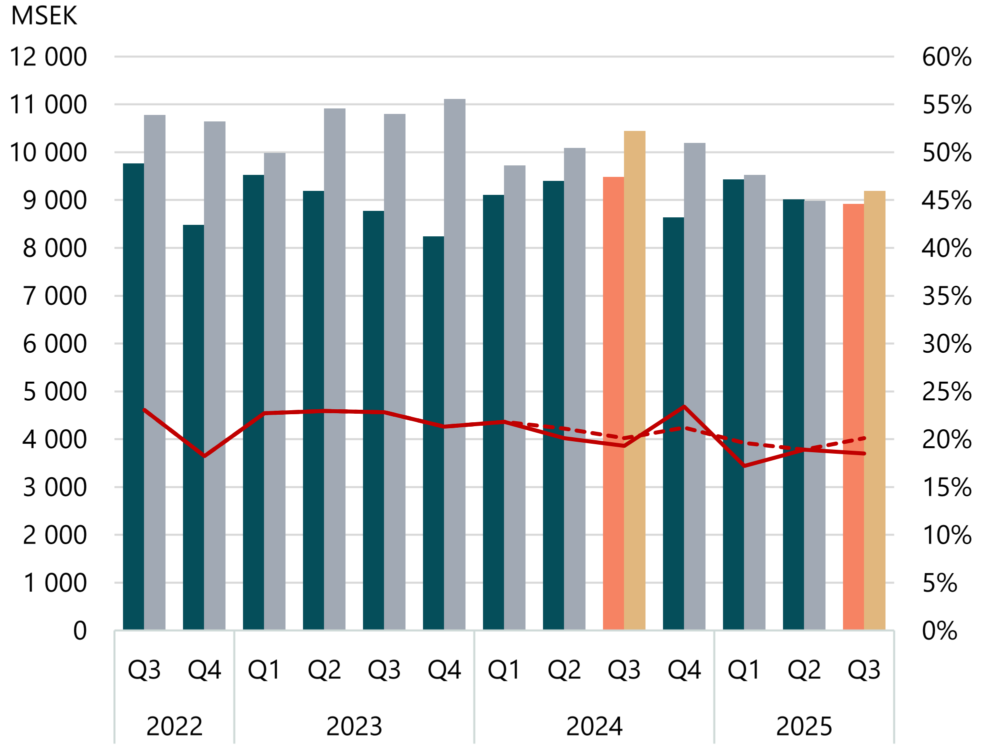
4
Summary

Facts in brief

Vacuum Technique

MARKET TRENDS AND DRIVERS

- $700B in 2025 → $1T by 2030*, driven by AI & data centers despite softer PC/mobile/automotive demand
- High-bandwidth memory (HBM) and advanced node adoption fuelling demand; vacuum technology is key enabler
- Service demand rising with better fab utilization; excess capacity in traditional markets and older nodes is slowing fresh capex
- Regional push for chip self-sufficiency
- Expanding further into scientific & industrial applications (quantum, space, electrification, energy)
- Customers prioritize lifecycle cost, sustainability, and digital services



*Source: Mc Kinsey, Gartner, World Semiconductor Trade Statistics (WSTS); analyzed and processed by Atlas Copco Group, Vacuum Technique business area.

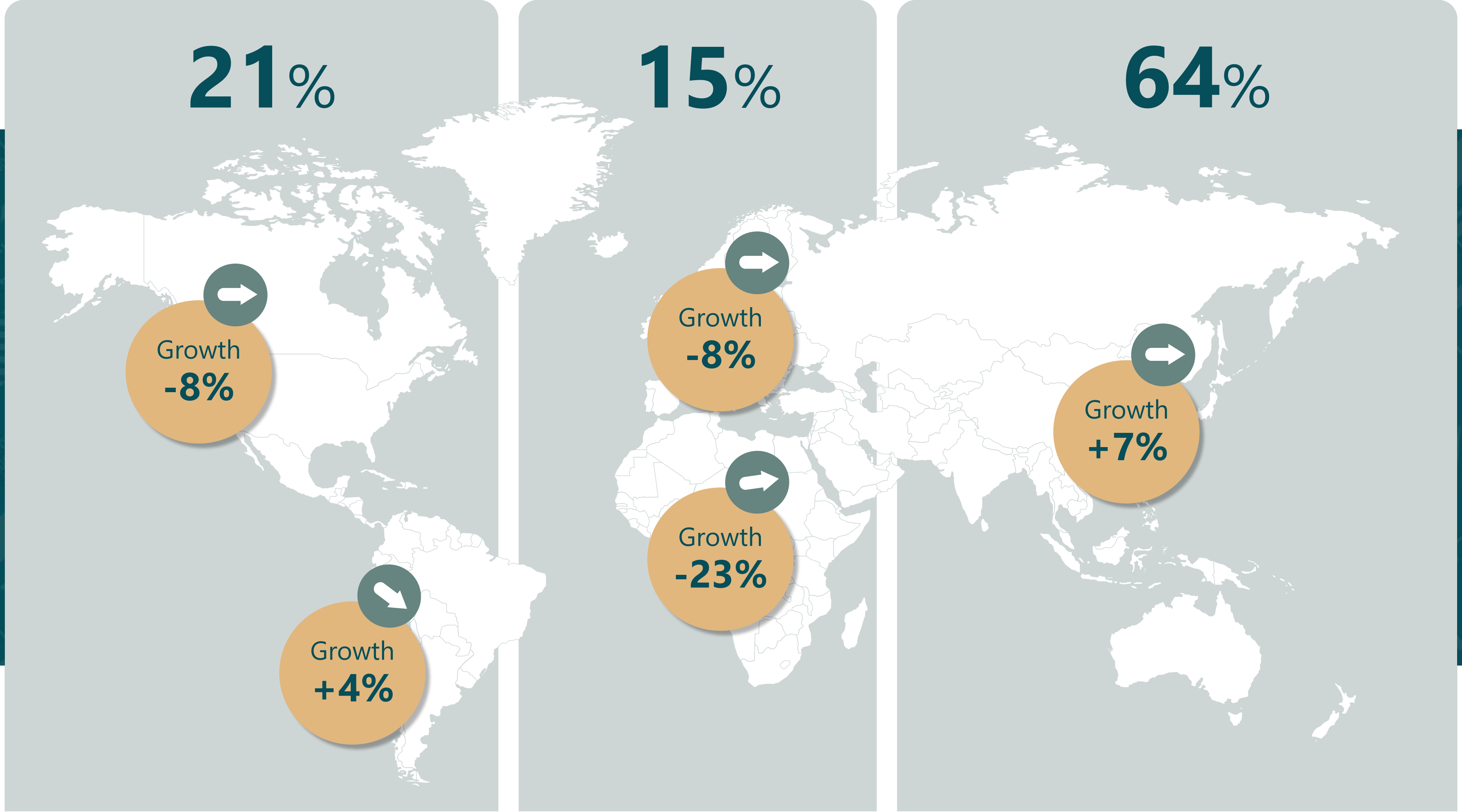
Atlas Copco Group

Geographical distribution and order development in local currencies

SHARE OF ORDERS YEAR TO DATE:

= Q3 VS. Q2

% = Q3 Year-on-Year



Atlas Copco Group

Supporting customers in all industries

Solutions where the pressure and / or temperature need to be below atmospheric conditions and / or the environment needs to be clean

- Semiconductor and flat panel display industries
- LED and solar glass
- Optical coating
- Scientific instruments used in life science
- Research institutes focused on renewable energy

- High-energy lasers
- Nanotechnology
- Quantum
- Space simulation
- Pharmaceuticals

- Chemicals
- Heat treatment
- Steel, metallurgy
- Lithium-ion batteries
- Food processing and packaging

Atlas Copco Group

Vacuum Technique – focused divisions to support our customers

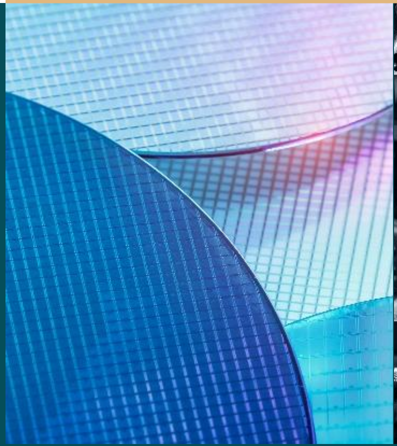
General Vacuum

Industrial Vacuum

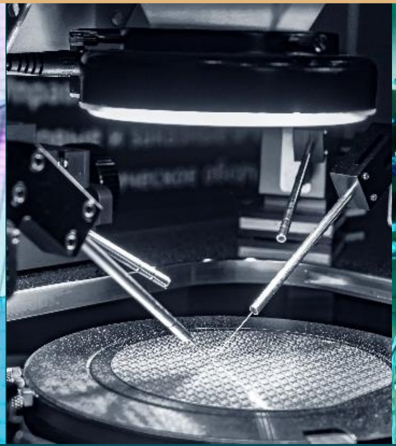
Scientific Vacuum

Vacuum Technique Service

Semiconductor and flat panel display industry



Semiconductor



Semiconductor Chamber Solutions

Semiconductor Service

The market and business fundamentals

Vacuum Technique

ELECTRONICS

- Market leader in semiconductor vacuum & abatement
- Strongly positioned at chipmakers serving AI markets
- Increased momentum in flat panel markets
- Strengthening global and vertical reach in adjacencies
  - e.g. cryogenics and leak detectors

PROCESS INDUSTRY

- Leadership in coating, metallurgy, electrification and energy, analytical and R&D vacuum markets
- Well-positioned for quantum and space simulation growth
- Advancing in chemical and pharmaceutical markets

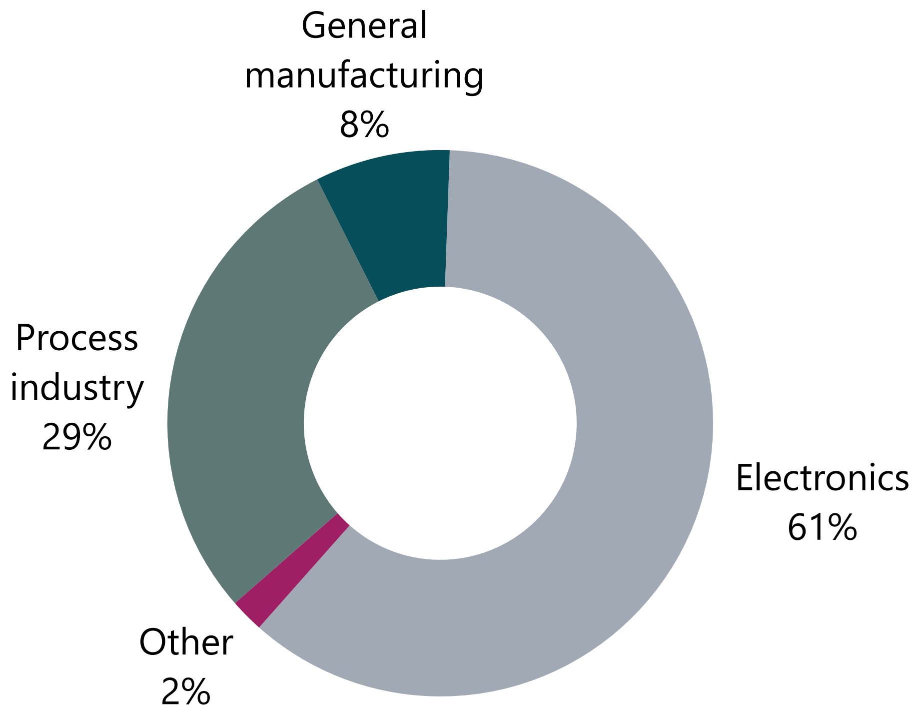
GENERAL MANUFACTURING

Industrial vacuum leadership strengthened through segment focus and geographic expansion, enabled by:

- Synergies with compressor customers and Atlas Copco channels
- Centralized vacuum innovation for energy savings and service efficiency
- Ongoing new product introductions

ORDERS RECEIVED BY CUSTOMER CATEGORY

September 2025 (12M)



Vacuum at the heart of wafer output

Stages of chip production

1 Design

Architectural design of the chip, simulate and verify functionality.

2 Wafer fabrication

Wafer fabrication drives the need for multiple tool vacuum chambers. The wafers remain in the fab for 2–3 months, under-going hundreds of steps under vacuum, making vacuum technology indispensable for advanced semiconductor production.

3 Wafer testing

Individual silicone wafers tested for defects and functionality.

4 Advanced packaging

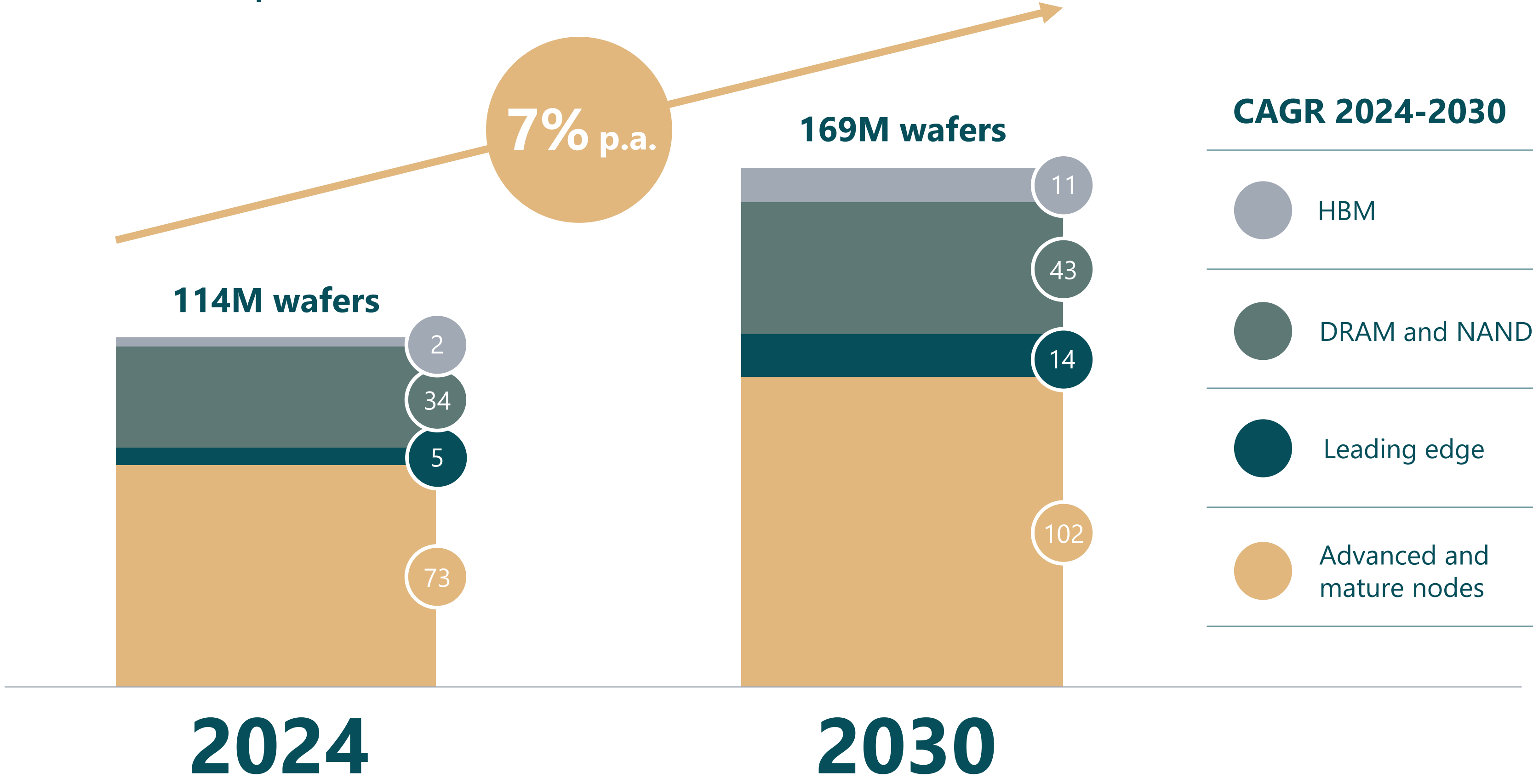
Advanced packaging also requires vacuum technology, but the process is far simpler. Fewer tools, fewer steps, and wafers spend much less time in production compared to front-end wafer fabrication.

5 Final testing & shipping

Packaged chips undergo final tests for performance and reliability before being shipped to manufacturers.

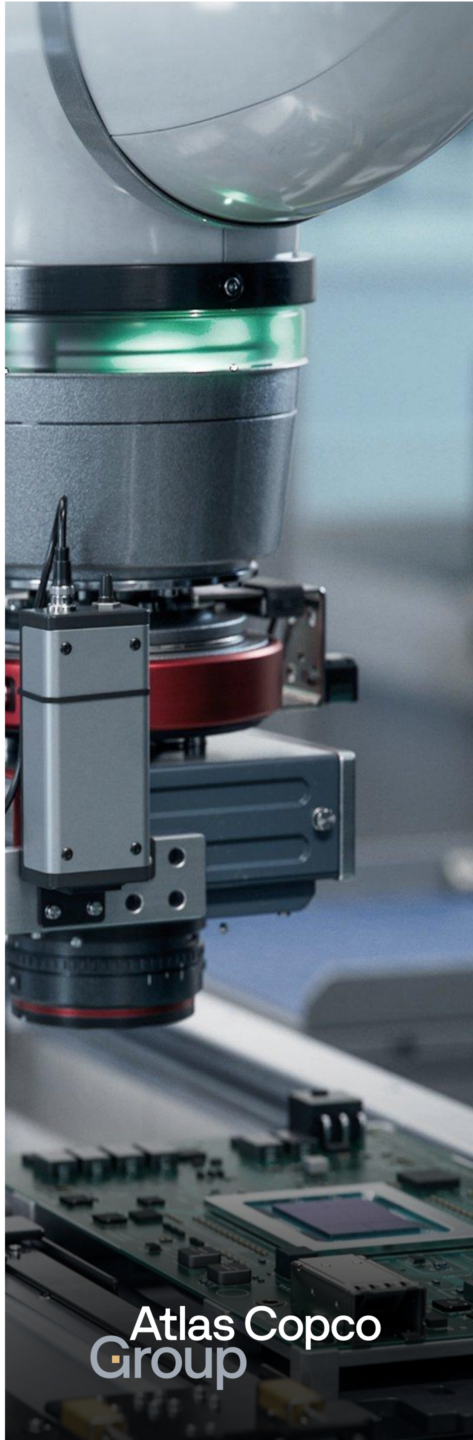
Wafer demand set for sustained expansion

Semiconductors wafer demand
Mn 300mm eq. wafers



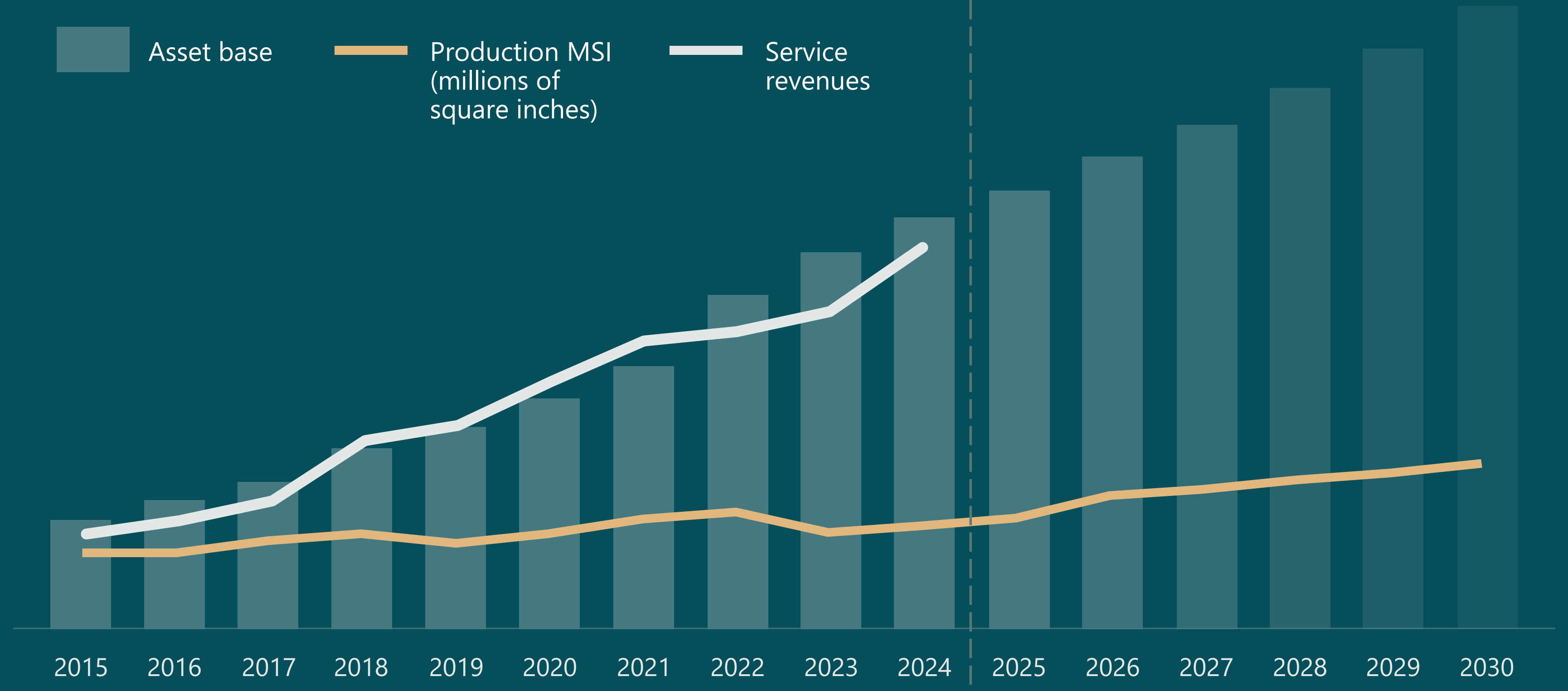
CAGR 2024-2030	
HBM	**32%**
DRAM and NAND	**4%**
Leading edge	**18%**
Advanced and mature nodes	**6%**

Source: Omdia, McKinsey



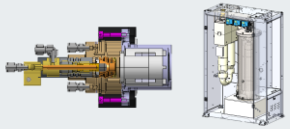
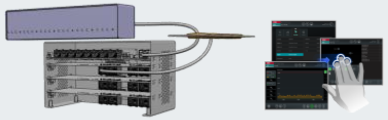
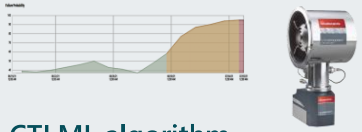
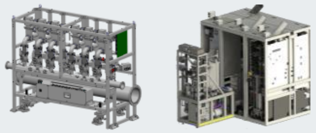
How wafer production drives our service revenues and asset base

– Our service revenues have a strong correlation with the global annual wafer production



Source: TechInsights, internal data; analyzed and processed by Atlas Copco Group, Vacuum Technique business area.

Products offering technology leadership

	Semi subfab	Semi clean room	Industrial	Scientific
Core products	 Pump, abatement systems	 Cryo, chiller, Maglev TMP, valves	 Screw, claw, vane, MSR	 Scroll, TMP, MSR, leak detectors, gauges
Environ-mental	 Electric abatement, NOx reduction	 Cryo energy reduction, green refrigerants	 Hex@, Hex@Grid	 Low energy scroll, MSR
Digital products	 EdCentra, ToolSynx	 CTI ML algorithm + EdCentra	 C4.0, Genius, Smart APPs	 Smart Hub, Evolve
New applications	 Distributed systems, gas recycling	 Cryo chuck cooling	 LRP, mobile, vapour recovery	 Quantum, fusion, space, MRI

Atlas Copco Group

Strategy for sustainable profitable growth, focus and priorities

Strategy for growth, focus and priorities

1 Leading in critical technology growth segments

2 Local for local

3 Innovation

4 Service-led growth

5 M&A and adjacent growth

Strategy for growth, focus and priorities

1 | Leading in critical technology growth segments

2 | Local for local

3 | Innovation

4 | Service-led growth

5 | M&A and adjacent growth

Positioned to capture fast-growing markets

Semiconductor HBM and advanced nodes

Fueled by AI and data centers

Driving demand for pumps and abatement, with strong reliance on **EUV lithography**. Our roadmap is fully aligned with next generation EUV technology and uniquely enabling **hydrogen recirculation** through our advanced EUV vacuum systems.

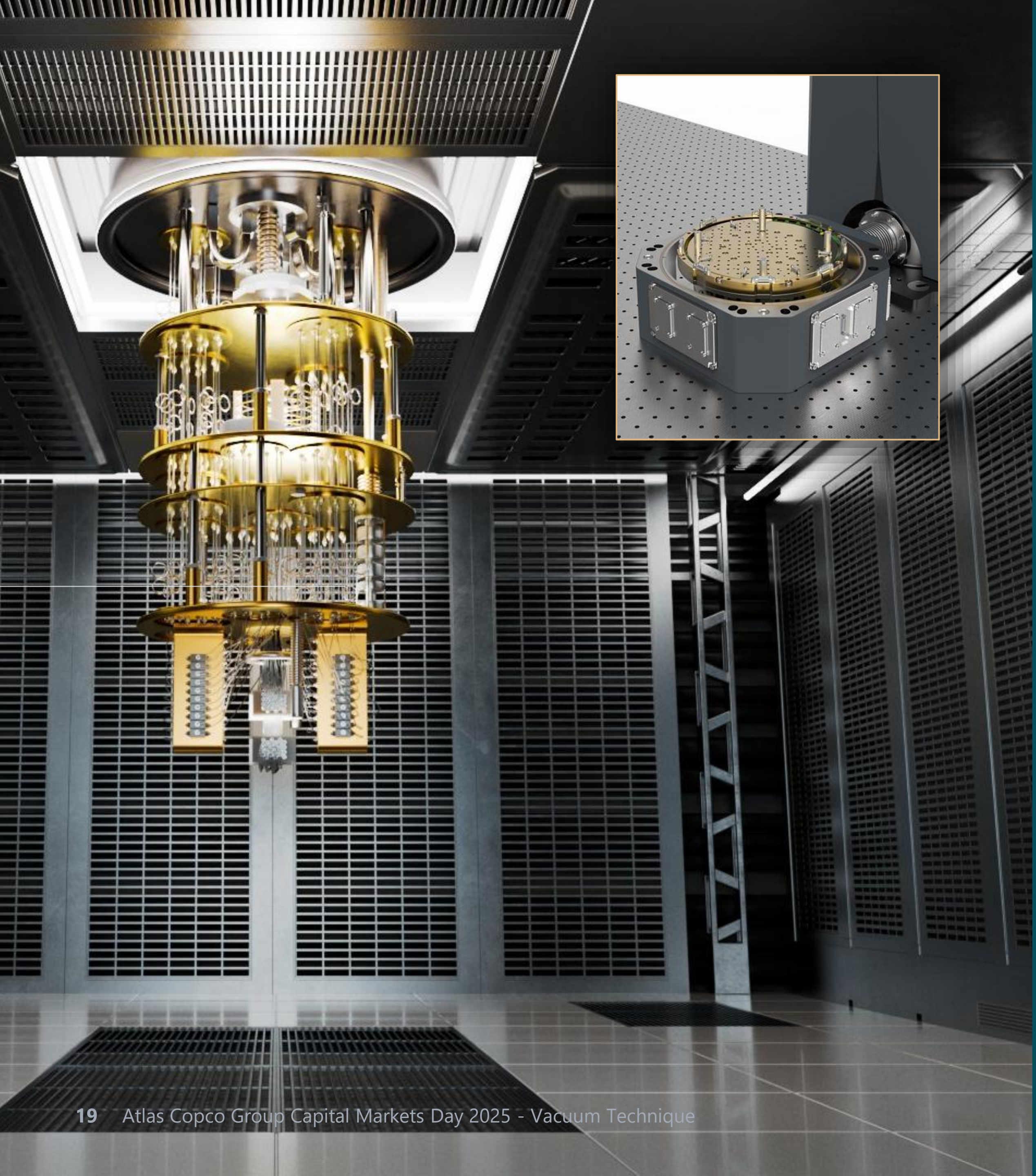
Atlas Copco Group

Positioned to capture fast-growing markets

Space commercialization

We're helping space companies test and build better equipment with **advanced vacuum and cooling technologies**.

Atlas Copco Group



Positioned to capture fast-growing markets

Unlocking the potential of quantum computing

Our **vacuum and cryogenic solutions** enable the **ultra-precise environments** needed to make quantum breakthroughs possible and position us as a key supplier for quantum CAPEX investments.

We have unique solutions operating on pilot installations on all QC technologies

Positioned to win—whatever quantum technology prevails

QC Technology	Temp. Req.	Cryo-Tech	Gas	Pressure range (mbar)
Superconducting Qubit	20 mK	Dilution Cryogenic System	He-3	0.05 - 1000
Semiconductor Spin Qubit	100 mK	Dilution Cryogenic System	He-3	0.05 - 1000
Photonic Quantum	2 K	L-He4 Cryogenic System	He-4	31 - 1000
NMR QC	4 K	GM / Pulse-Tube Cooler	He-4	31 - 1000
Ion-Trap & Neutral Atom	~300 K	None (Room Temperature)	—	UHV (10^{-11} - 10^{-09})

Atlas Copco Group

Positioned to capture fast-growing markets

Sustainability with mechanical vapor recompression technology

We're investing in energy-saving tech that helps process industries reuse heat and cut costs and waste.

Atlas Copco Group

Strategy for growth, focus and priorities

1. Leading in critical technology growth segments
2. Local for local
3. Innovation
4. Service-led growth
5. M&A and adjacent growth

Atlas Copco Group

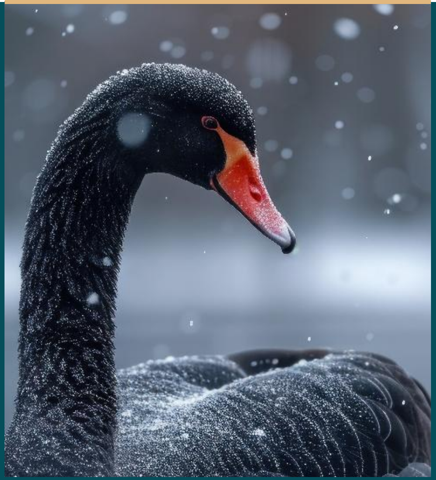
Global trends

Geopolitics

Digitalization

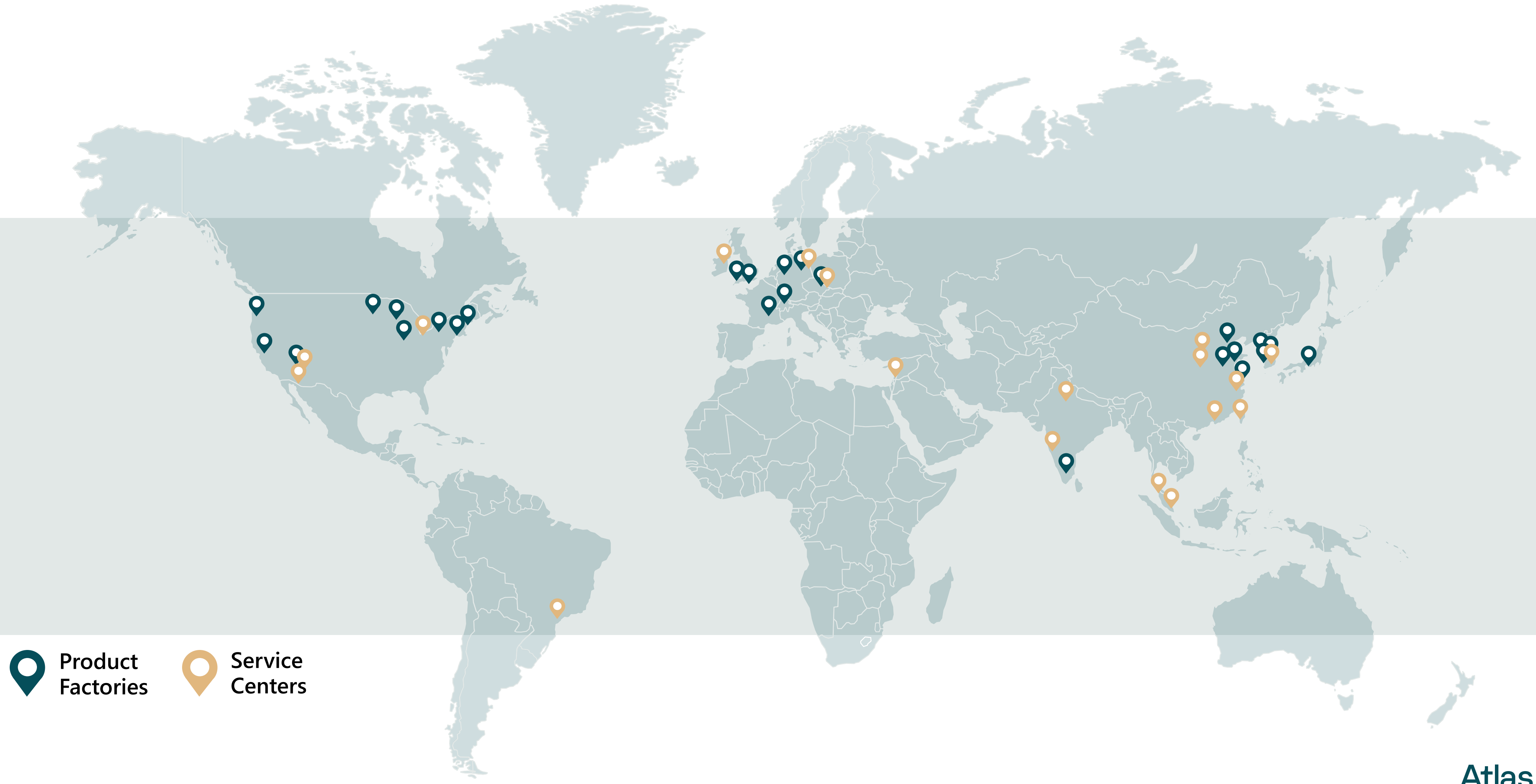
Energy transition

Black swans



Grey rhinos

Vacuum Technique – a truly global footprint



Atlas Copco Group

In the past years, we have strengthened our geographical resilience and are prepared to scale with demand

Enhanced capacity expansions in the U.S.

Accelerated localization in Asia

Atlas Copco Group

Strategy for growth, focus and priorities

1. Leading in critical technology growth segments
2. Local for local
3. Innovation
4. Service-led growth
5. M&A and adjacent growth

Atlas Copco Group

Semiconductor and flat panel display – product development and innovation for the subfab and clean room

New products driving growth

Semiconductor subfab

Ganymede

Next generation of harsh duty dry pumps with improved performance, reduced footprint and lower power consumption.

EUV Vizeon

Next generation of EUV pumping systems with improved performance, reduced footprint and lower power consumption.

Non-Fuel Abatement

Leverage non-fuel abatement product and technology of the joint venture (Shareway) to the global market.

Hydrogen Recovery System (HRS)

Hydrogen recovery system used on EUV to recover & recycle hydrogen to extremely high purity levels.

Ganymede

Next generation dry pumps

- Multiple pilot units successfully deployed across leading fabs
- Proven performance in demanding process environments
- Trusted by major industry players
- Early and extensive operational experience through pilot program ensuring stability and confidence
- First customer orders secured

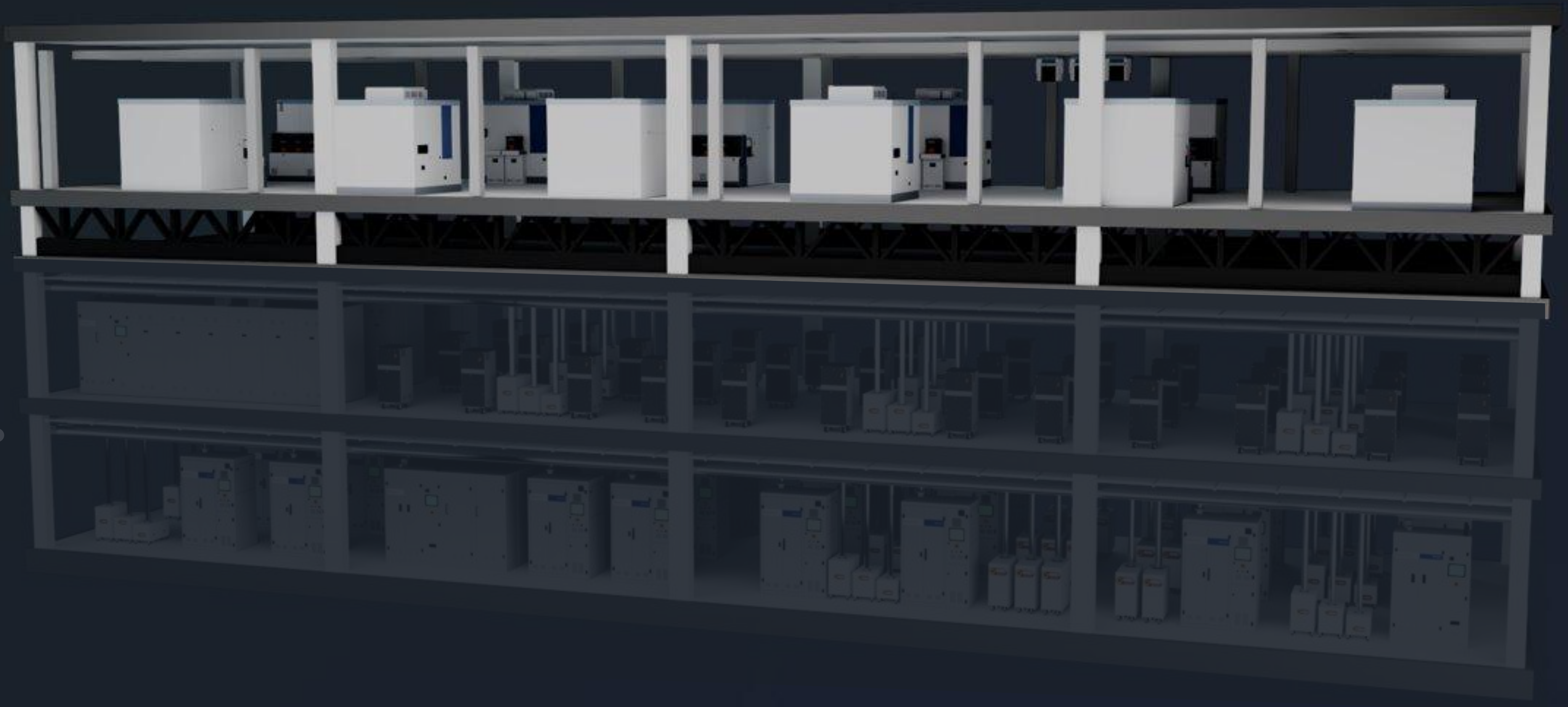
Next-gen semiconductor dry pump platform to replace current range & meet future application needs.

Atlas Copco Group

Semiconductor and flat panel display – product development and innovation for the subfab and clean room

Clean room

Subfab

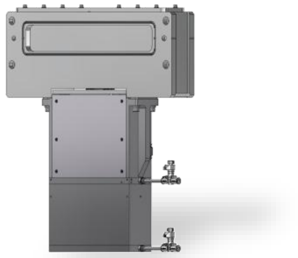


New products driving growth

Semiconductor clean room

5k Turbo-molecular pump

Securing our capability to enable Etch, PVD and Deposition processes with increased yield at minimal footprint.



Vacuum Valves, i.e. Real-L-Motion

Engineered for ultra-clean transitions, reducing particle generation and ensuring maximum process purity.

XVS Cryogenics portfolio

Enabling future Implant processes through improved temperature, vacuum stability and superior energy efficiency.

Atlas Copco Group

5k turbo-molecular pump

- Multiple pilot units successfully deployed across leading fabs
- Proven performance in demanding process environments
- Trusted by major industry players
- Early and extensive operational experience through pilot program ensuring stability and confidence
- First customer orders secured

Enables more productivity in semi conductor chambers, with increased yield at minimal footprint.

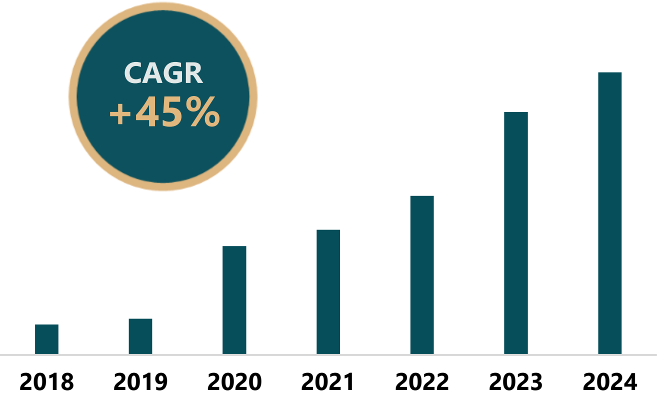
Atlas Copco Group

Innovation is the key driver for profitable growth

Industrial vacuum

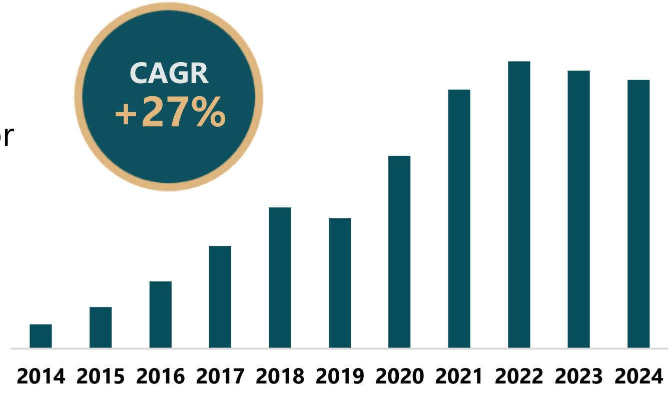
Liquid ring pump technology

- Organically and through acquisitions
- Leveraging existing sales channels, application expertise and global footprint



Centralized vacuum for energy savings, footprint and ease of service

- Mostly organic growth, built on proven compressor development principles
- Highly synergistic with compressor technology and Atlas Copco's global channels



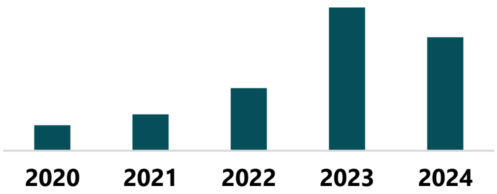
Atlas Copco Group

Recent product launches enable growth

Scientific vacuum

Vacuum and cryogenic cooling to enable quantum

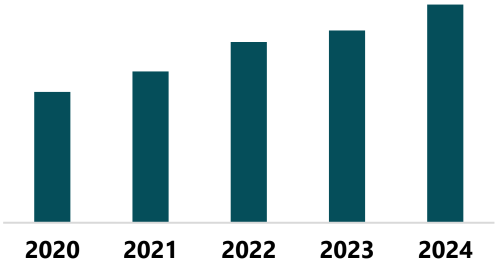

Cryo & Cooling



CAGR +45%

Leak detection global portfolio

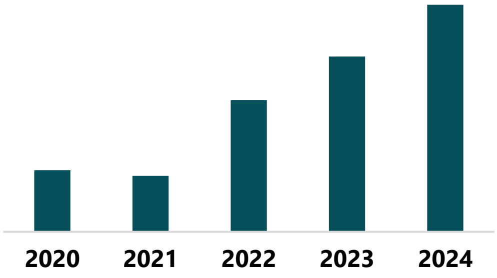

Leak Detectors



CAGR +14%

Capabilities for space simulation


Space



CAGR +39%

Atlas Copco Group

Strategy for growth, focus and priorities

1 Leading in critical technology growth segments

2 Local for local

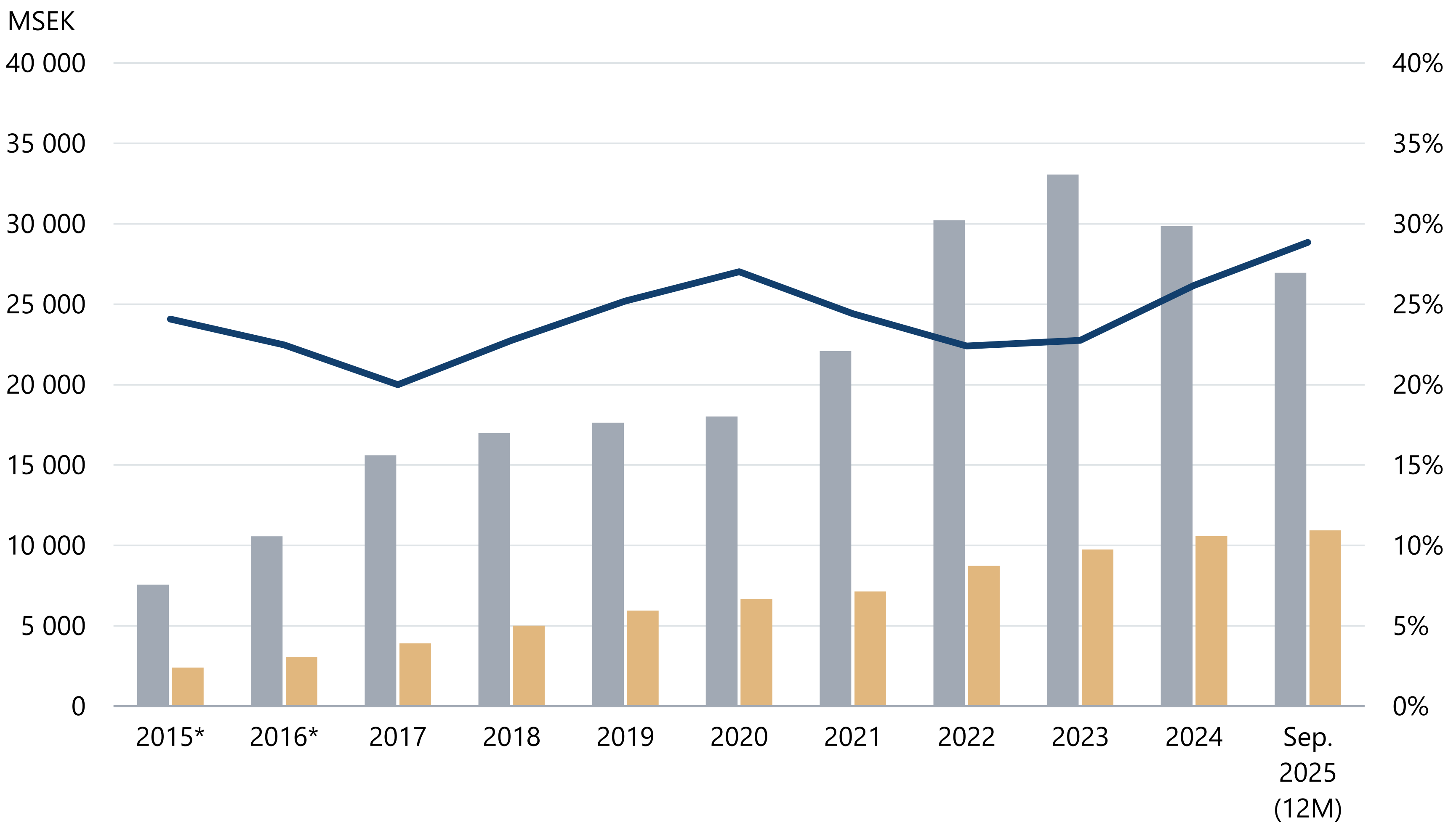
3 Innovation

4 Service-led growth

5 M&A and adjacent growth

Atlas Copco Group

Growth in equipment and service – Vacuum Technique



CAGR Equipment **14%**

CAGR Service **17%**

Equipment revenues, MSEK

Service revenues, MSEK

Service, share of revenues, %

CAGR refers to total growth
2015 – September 2025
(FX and structure included)

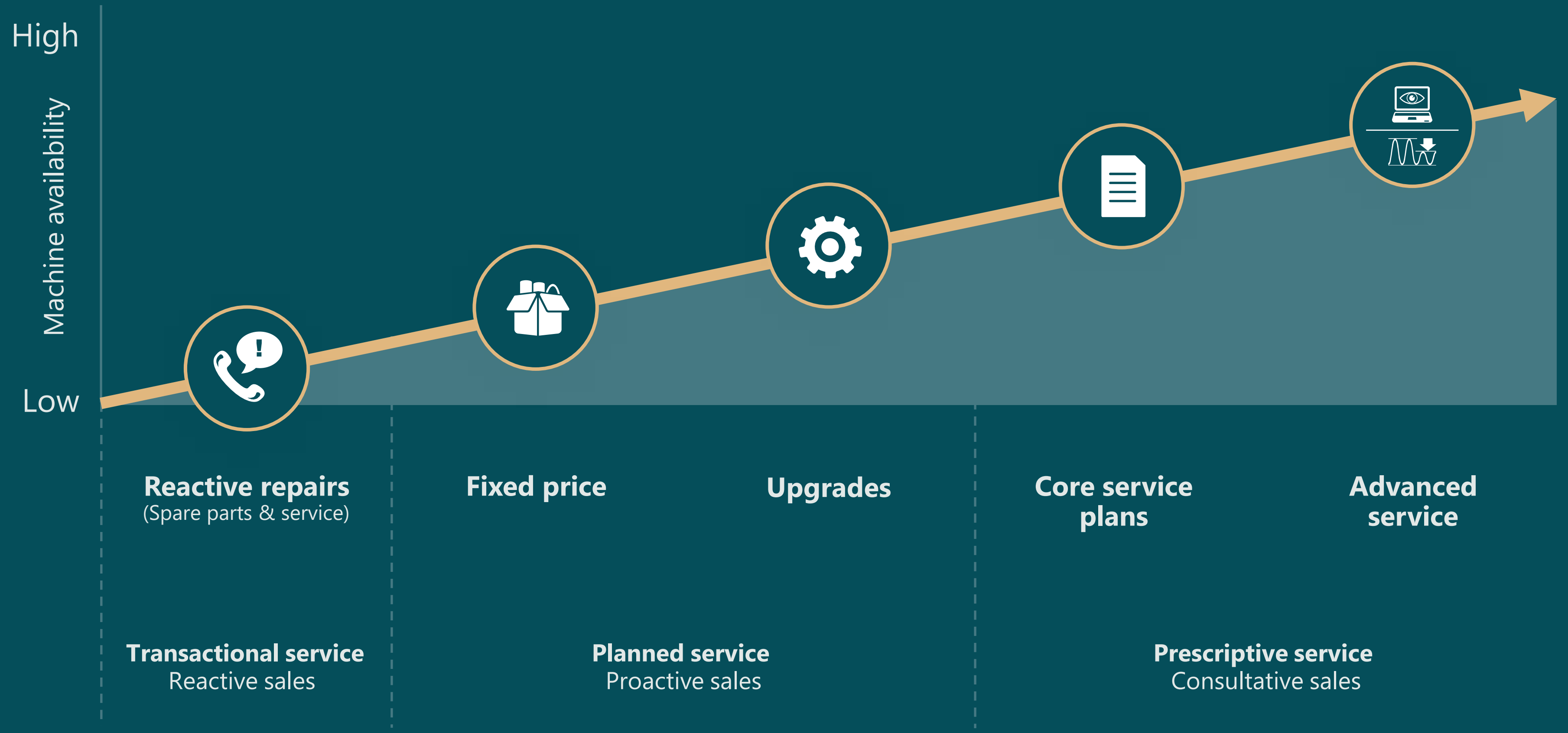
* Figures for the years 2015-2016 are best estimated numbers, as the effects of the distribution of Epiroc and restatements for IFRS15 are not fully reconciled.

Atlas Copco Group

Executing our service transformation strategy

Strategy

To move from reactive to **planned prescriptive service** by climbing the service ladder across the entire customer base



Executing our service transformation strategy

Strategy

To move from reactive to **planned prescriptive service** by climbing the service ladder across the entire customer base

- Driving operational excellence through digitalization
- Product & service Capacity excellence
- Scaling service contracts to accelerate advanced service growth
- Driving growth through tailored value propositions
- Commercial enablement

Strategy for growth, focus and priorities

1 Leading in critical technology growth segments

2 Local for local

3 Innovation

4 Service-led growth

5 M&A and adjacent growth

Atlas Copco Group

Continue with successful acquisitions

– Selected end markets (close to core and adjacencies) and critical for customers' operations

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025 (Sep. YTD)
General Vacuum		IVS Innovative Vacuum Solutions	Leybold				Dekker Vacuum Technologies Schroeder Equipment	Ehrler & Beck Arpuma	NVE HHV Pumps	CVS Eng. Chinco 昌阳精工	Meisa Noi 诺益科技 esa service AVT Services	
Semiconductor and flat panel display industry	Edwards		CSK			Brooks's Semi Cryogenics			Ceres Technologies	Trillium	Presys	NST Shareway

Atlas Copco Group

Future-proofing with intentional talent management

Talent management & development

- Increased visibility of high potential and critical talent
- Targeted talent development programs (Mastery in Operations, Service Masterclass, Engineering Excellence)

Early careers

- Strengthening diverse early talent pipelines for sustainable growth and competitive edge

Leadership

- Equip leaders to have meaningful performance, development and career conversations
- Provide effective leader transition support
- Promote psychological safety and human centred leadership

China

- Deliver High Potential Talent program to give key talent international exposure
- Robust succession and pipeline for critical roles
- Improved leadership capability
- Increased readiness to deliver M&A roadmap

Summary

Summary

- Enabling customers in the general industry and in the semiconductor and flat panel industry
- Vacuum and abatement solutions at the heart of wafer output in semiconductor manufacturing
  – Strong focus on wafer fabrication
- Market driven by
  - Investments in the semiconductor and flat panel industry, wafer production
  - Investments in traditional and new industrial and scientific applications
- Positioning ourselves into emerging scientific & industrial applications (quantum, space, electrification, energy)
- Focus on innovation to secure leadership in critical technologies
  – Key driver for long term profitable growth
- Strong focus on service with two dedicated divisions (growth and resilience)
- Well-positioned to meet global trends
- Truly global operational footprint
- Growth through developing the core and adjacencies (organic and potential acquisitions)

Atlas Copco Group

Technology that transforms the future

“Some statements in this presentation are forward-looking, and the actual outcome could be materially different. In addition to the factors explicitly discussed, other factors could have a material effect on the actual outcome. Such factors include, but are not limited to, general business conditions, fluctuations in exchange rates and interest rates, political developments, the impact of competing products and their pricing, product development, commercialization and technological difficulties, interruptions in supply, and major customer credit losses.”