

The Atlas Copco logo is located in the top right corner. It consists of a blue square containing two horizontal white bars, with the text "Atlas Copco" in a white, italicized serif font centered between the bars.

Atlas Copco

5 challenges

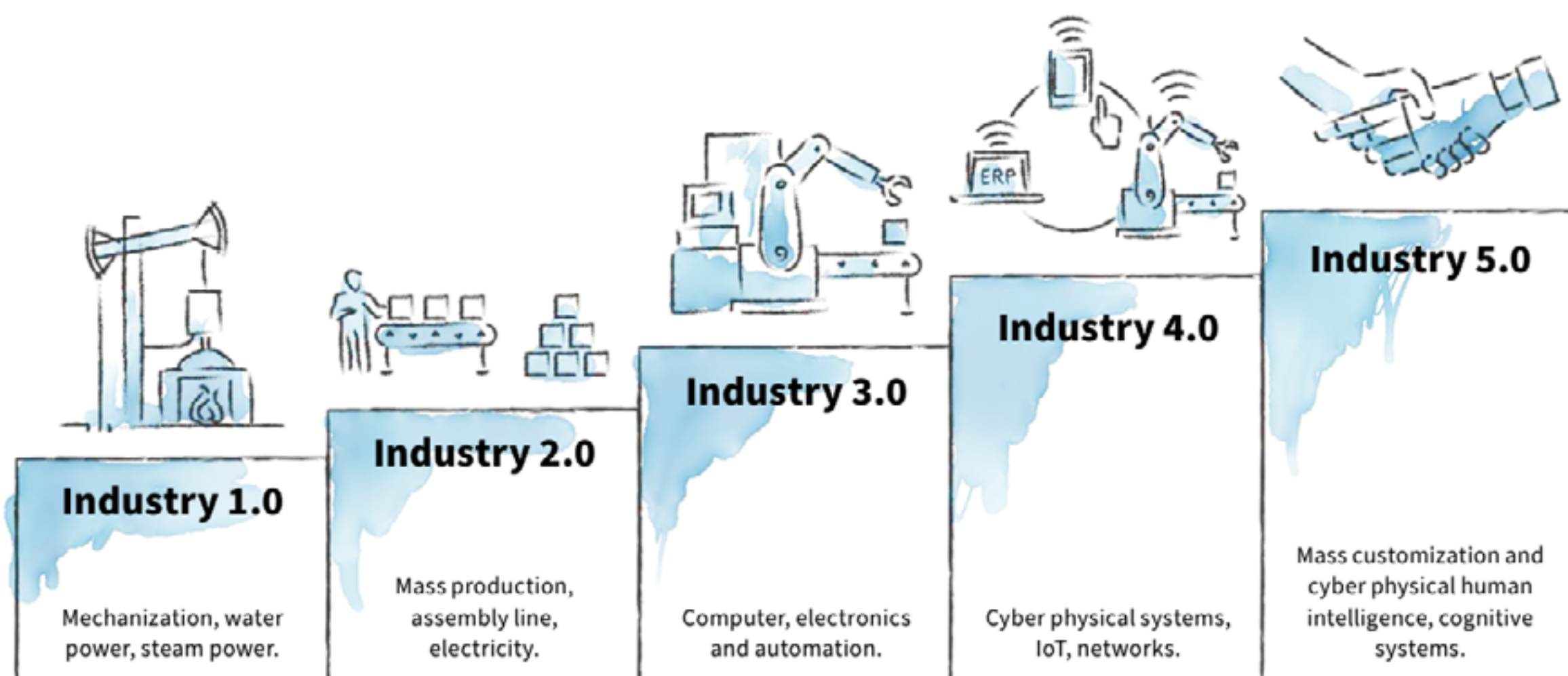
for industrial manufacturers today

Challenges and solutions, from
cyber security to sustainability

Key challenges for industrial manufacturers today

Regardless of their Industry 4.0 level of maturity, industrial manufacturers continuously face combinations of business-as-usual challenges but also unexpected unique challenges to address. When overcome, these technology solutions or operational adaptations can represent a major competitive advantage or even be yet another step on the way towards achieving Industry 5.0.

From cyber security to sustainability, here are some of the challenges and trends that are top of mind for industrial manufacturing leaders today.



1. Cyber Security

Challenge

As smart factory initiatives continue to gain ground among manufacturers, so do cyber security risks. Fully connected automation and control systems open the organization up to a multitude of security risks targeting **people, technology, processes and intellectual property.**

Many cyber-related incidents are in particular associated with the control systems used to manage industrial operations. These control systems make up the operational technologies (OT) that enable factory facilities to operate.



1. Cyber Security

Solution

Manufacturers need to be increasingly aware of cybercrime and take **proactive steps** to prevent it.

These steps include:

- training employees on the types of threats they might encounter and what to do in the eventuality of a cyberattack
- planning how to respond to threats and how to recover from an attack
- investing in a holistic cyber management program that extends across the entire business (IT and OT) to identify, protect, respond to, and recover from cyberattacks.



2. Environmental Impact

Challenge

The industrial sector, which includes the manufacturing industry, accounts for roughly **one fifth of global greenhouse gas emissions**. The industrial sector also consumes approximately half of the world's energy resources.

It's therefore clear that manufacturing companies need to use the Earth's limited resources in a more efficient way and minimize their carbon footprint.



2. Environmental Impact

Solution

Electrification is changing industrial manufacturing and the world around us. Driven by employees, customers, governmental authorities and other stakeholders, sustainability is on the agenda of many manufacturers.

Aside from playing an important role in reducing operational CO2 emissions, the electrification of industrial manufacturing can lower equipment maintenance costs and improve efficiency.



3. Measuring Sustainability

Challenge

Sustainability is quickly becoming **a question of survival.**

However, it is still in its infancy in many ways with regards to competing with traditional corporate metric drivers such as productivity, efficiency and flexibility. This is quickly changing but the question remains – how do you, in a world driven by KPIs related to productivity and efficiency, measure sustainability?




3. Measuring Sustainability

Solution

In the near future, **financial standards** enabling a ROI calculus of sustainability linked to traditional performance metrics will help industrial manufacturers measure the bottom line impact of sustainability on their balance sheet. This will also make it easier to find and evaluate new suppliers and partners.

Carbon pricing is another way of measuring a company's environmental impact. By capturing the external costs of emitting carbon and placing a fee on those emissions, the cost is placed back at its source. Carbon pricing provides a strong financial tool for shifting investments away from high-emission CO₂ based technologies and instead towards cleaner alternatives.



4. Procurement Complexity

Challenge

Purchasing processes among industrial manufacturers are becoming more complex, with more and more influencers and decision makers involved. **Decisions are delayed and investments postponed** or even never made.

A related phenomenon is buyer's remorse. When deciding on complex manufacturing investments, many companies are turning to uncoordinated digital online sources for information or even ordering. This can lead them to unknowingly and unintentionally choosing solutions which turn out to be unsuited to their needs.



4. Procurement Complexity

Solution

Profitability starts with effective procurement processes. Manufacturers need to partner up with suppliers that understand their customers from the start.

Suppliers should be able to **facilitate, simplify and coordinate the purchasing process** for their customers, making the buyer's journey easier and supporting customers with consistent information. This enables industrial manufacturers to make better and quicker investment decisions. Sales representatives should have customer purchase competence supported by self-service solutions or even automated purchase processes.



5. Supply Chain

Challenge

Factory shutdowns, shifted consumer behavior, difficulty forecasting demand, extreme weather, unexpected global events. If the last two years have proven anything, it is the need for industrial manufacturers to **secure their supply chain in unpredictable and unstable market conditions.**

While still recovering from the impact of the pandemic, supply chains are now being hit by rising inflation and wages, material and labor shortages and rising energy costs. Disruptions leave companies unable to secure the right materials for production, as well as making it hard to forecast demand, predict supply and meet delivery agreements.

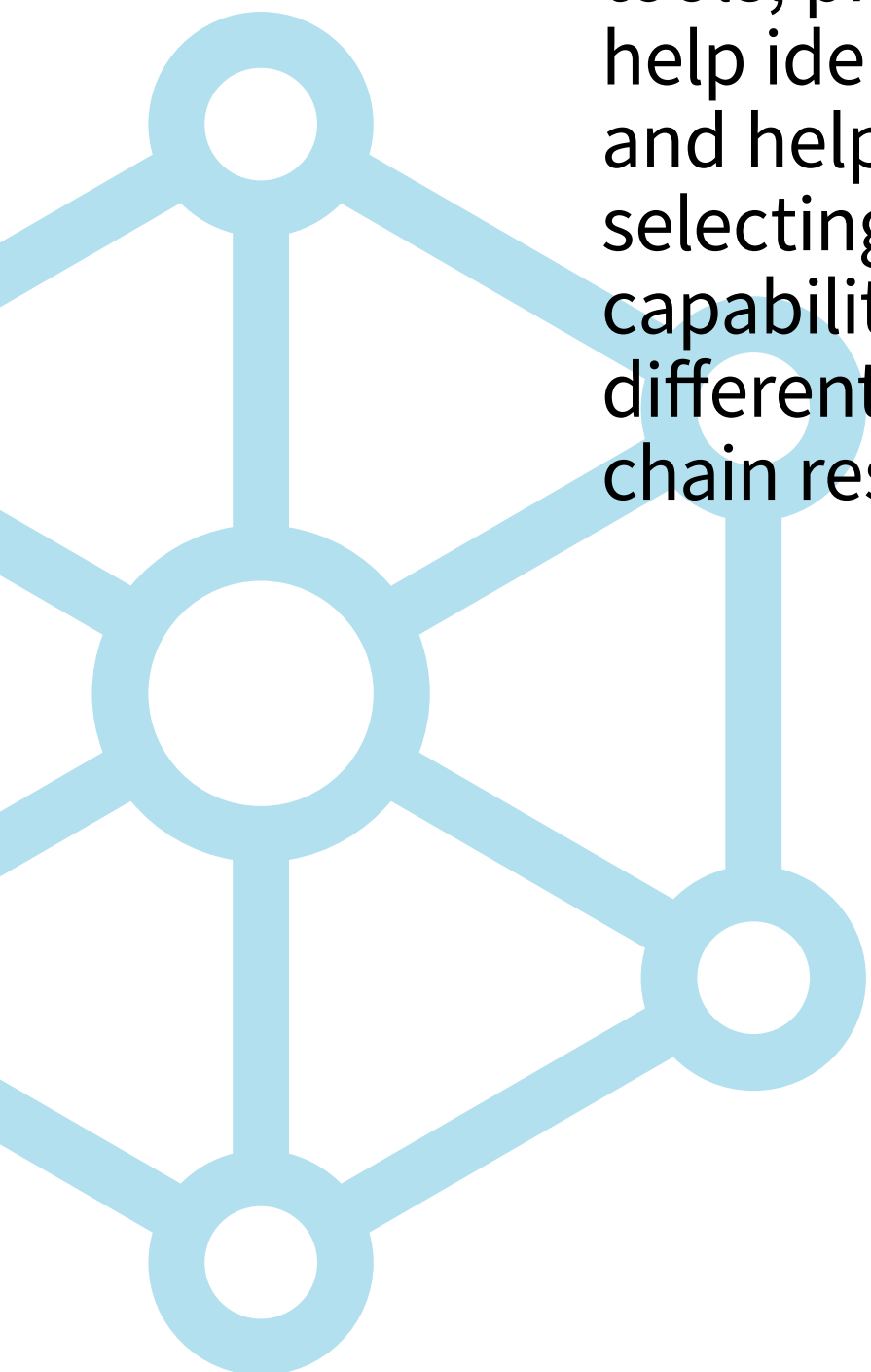


5. Supply Chain

Solution

There is an urgent need to speed up the digital transformation of supply chains through **integration, automation and connected ecosystems**. Digitalization drives flexibility, agility, transparency, and visibility throughout the supply chain and makes it easier to ensure continued operations.

One such digital technology many manufacturers are turning to in order to enhance and secure their supply chain resilience is **digital twins**: virtual representations of physical tools, processes or even entire factories. Digital twins can help identify inefficiencies and bottlenecks in supply chains and help manufacturers make informed decisions when selecting the right suppliers, facilities and transportation capabilities. They can also be instrumental in evaluating different scenarios to measure the organization's supply chain resilience.



An Integrated Partnership with a Vision

We are leading the market of industrial manufacturing in developing and adapting new technologies and can as an integrated partner help businesses transform their manufacturing processes.

[Learn more about smart manufacturing](#) and start solving your manufacturing challenges today.

