



LARS-HENRIK JÖRNVING / VP GLOBAL INDUSTRIAL DEVELOPMENT

SUSTAINABLE PRODUCTION WITH POWER FROM LEAN AND DIGITALISATION

TECHTANK DAY 2024 / 240425 Sölvesborg

SCANIA

SCANIA IS A WORLD LEADING PROVIDER OF TRANSPORT SOLUTIONS

Together with our partners and customers we are driving the shift towards a sustainable transport system.





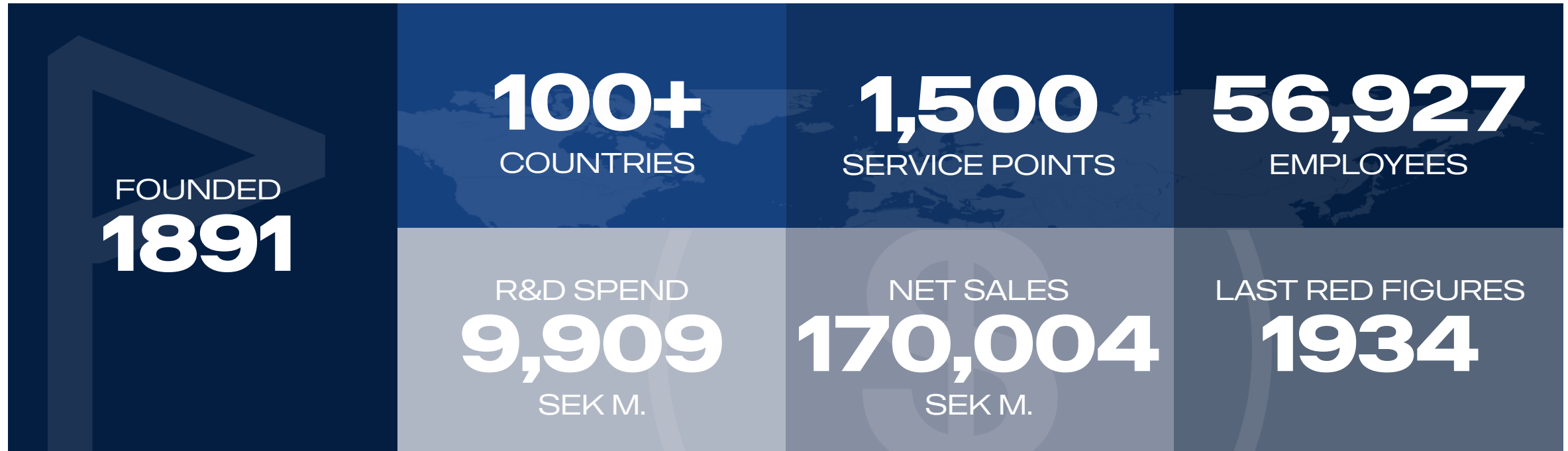
OUR PURPOSE

Scania's purpose is to drive the shift towards a sustainable transport system, creating a world of mobility that is better for business, society and the environment.





SCANIA IN BRIEF



2022



LONG HAULAGE



CONSTRUCTION



DISTRIBUTION



SPECIAL PURPOSE



URBAN



TRAVEL



POWER SOLUTIONS



NETWORK & SERVICES



USED VEHICLES



Agenda

- Sustainability at Scania
- Sustainable Production
- Safe Working Environment
- Long Term Competitiveness
 - Commitment and Participation
 - SPS – Scania Production System
 - Continuous Improvements
- Environmentally friendly production
- Digitalization and Automation



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An aerial photograph of a dense forest of tall, thin evergreen trees. The ground is covered in snow, and a dirt road with visible tire tracks winds through the center of the forest. The lighting suggests a bright day, with shadows cast by the trees.

Driving the shift – towards a sustainable transport system

Scania's aim is to drive the shift towards a sustainable transport system, creating a world of mobility that is better for business, society and the environment.

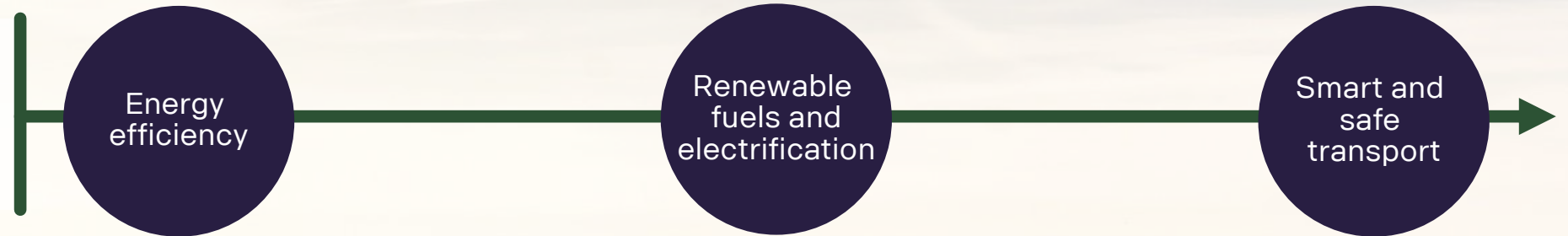




SUSTAINABILITY AT SCANIA

Sustainable transport

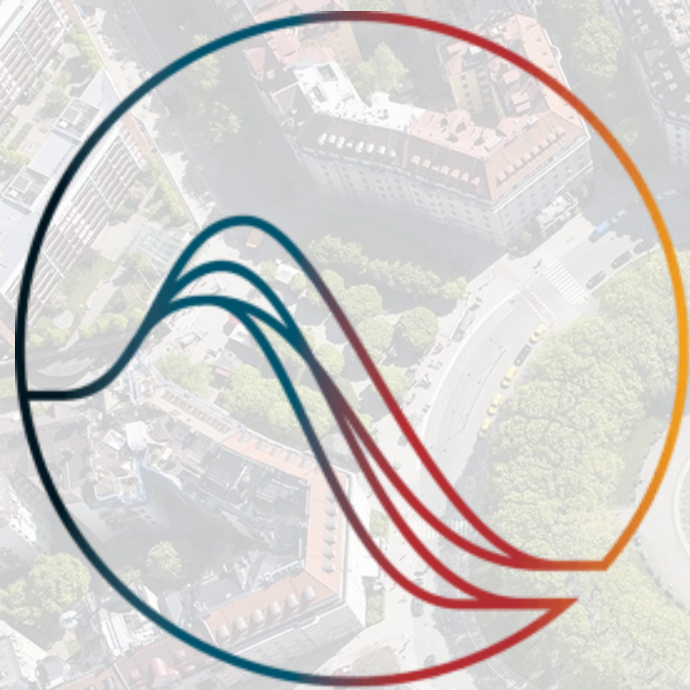
Doing the right things



Responsible business

Doing things right





SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



SCANIA'S COMMITMENT - SCIENCE BASED TARGETS



Paris agreement 2015



Targets approved as “science-based”
– in line with what is necessary to
meet the goals of the Paris Agreement



Aligning corporate carbon
reduction targets with
climate science



Companies committed
(August, 2020)

PARTNER ORGANISATIONS



WORLD
RESOURCES
INSTITUTE





SCANIA'S SCIENCE BASED TARGET

50%

CO₂ reduction from our operations by 2025 (2015)

Tonnes CO₂e

SCOPE 1&2

1,5°C

20%

CO₂ reduction from our products by 2025 (2015)

CO₂e/km WTW

SCOPE 3



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THREE AREAS AT THE SAME TIME



For a long time we have worked with people, planet and profit successfully but **separately** now it's time to think in all three dimensions at the same time



Sustainable production means

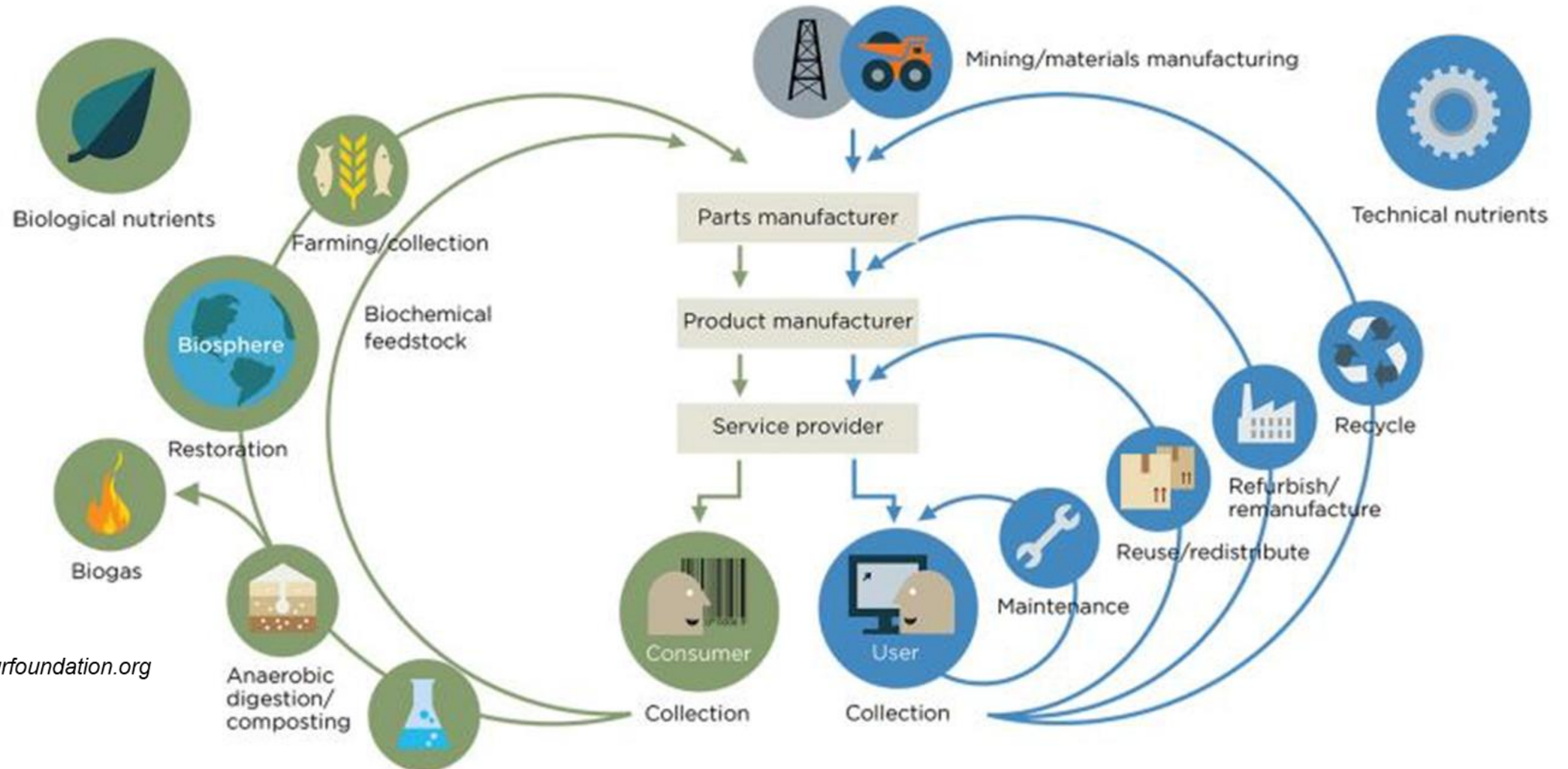
All aspects of sustainability must be considered

- People
 - the products we buy must be responsibly produced and we create safe and healthy workplaces, communities and consumers
- Planet
 - we minimize the use of different types of resources while minimizing waste and different types of emissions
- Profit
 - we keep costs down to remain competitive and create conditions to continue investing in the development of our products



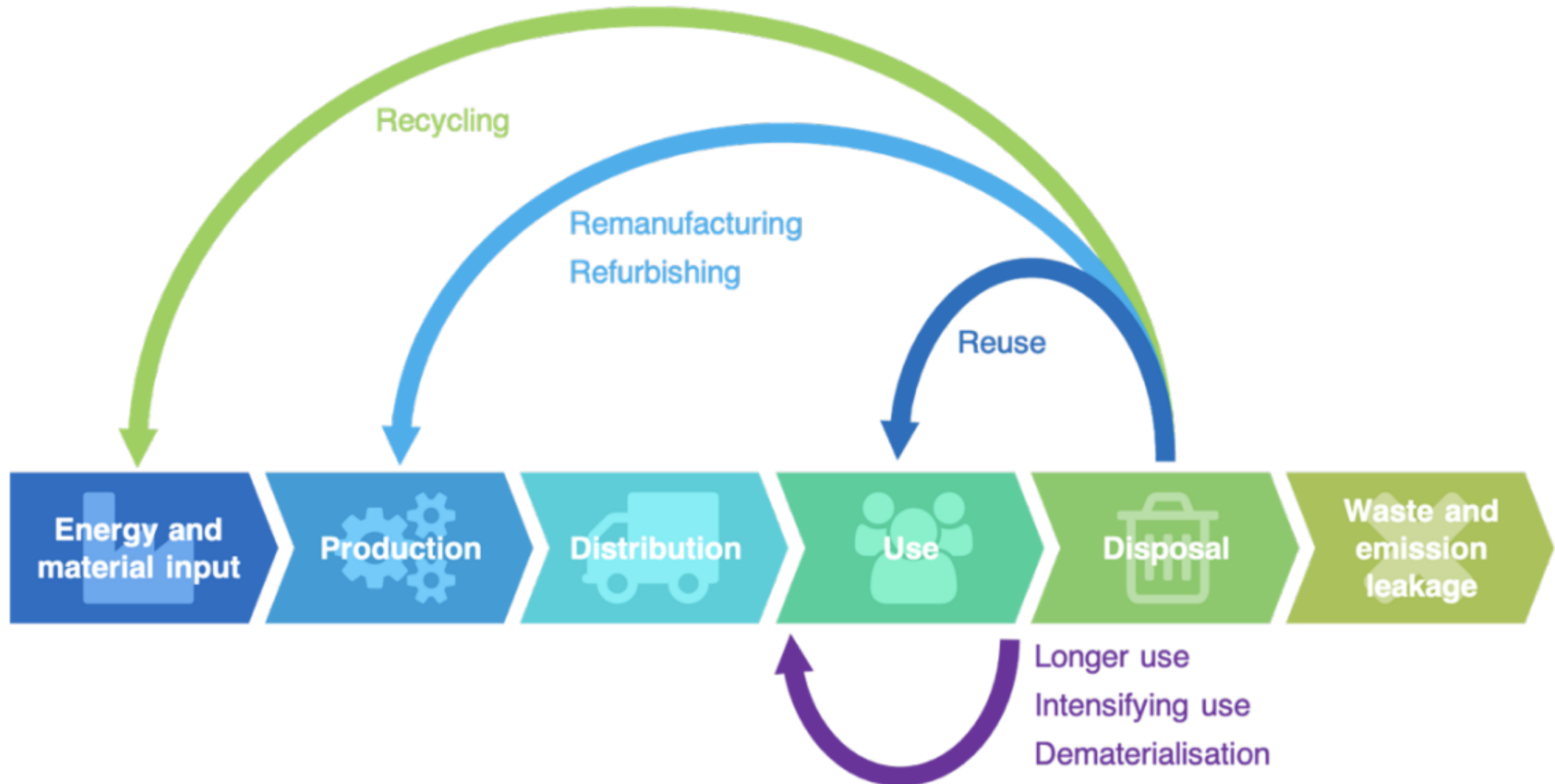
From linear to circular

- a great opportunity for the Swedish manufacturing industry



www.ellenmacarthurfoundation.org

Circularity in industrial production



SuPr

A national node for sustainable production

SuPr combine leading R&D actors within Sustainable Production.

We work together to initiate and implement new sustainable solutions within Swedish manufacturing industry.

Södertälje Science Park



Examples of existing research and development partnerships within SuPr





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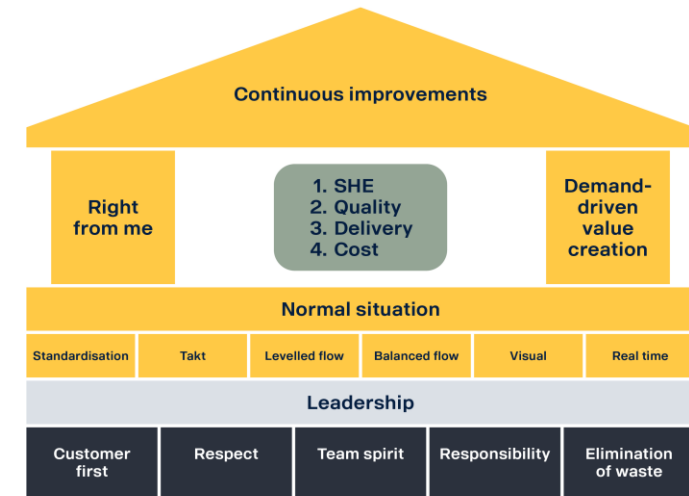


SCANIA PRODUCTION SYSTEM

Leader in sustainable transport

Reference in work environment

- Safety is our top priority, and we continuously improve our operations
- Everyone understands their own responsibility and is committed to contribute
- All employees are engaged, react, act on deviations and risk observations
- By learning from experiences we also have a proactive approach
- We strive to reach our vision of zero accidents to create precondition for a safer and healthier workplace.
- We are the role model for handling safety, when introducing product change, new technologies and future challenges





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OUR PEOPLE DRIVE THE FUTURE

Everyone who works for Scania, no matter what their job is, contributes to our continuous improvement with their experience, knowledge, ideas and potential.





OUR CORE VALUES

Customer first



Our customers are the starting point of everything we do

We are only successful when our customers are successful, and we cooperate closely with them to understand their current and future business.

We provide tailored solutions that deliver value, are sustainable and profitable, today and in the future.

Respect



We respect each individual, their skills and opinions

We treat others with respect and expect to be treated with respect. We listen and understand. Everyone can contribute, and has the potential to grow and learn over time.

Respect is the foundation of all processes, all improvements, and all value creation.

Team spirit



We all win when we work as a team

We work as one team towards a common goal, united by a joint purpose.

A team includes everything from the smallest group of colleagues, through each brand, up to the TRATON Group itself and our partners. Together we succeed.

Responsibility

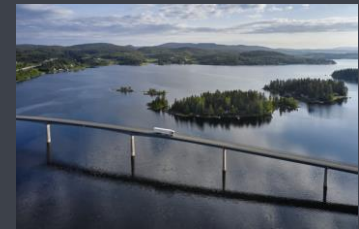


We take responsibility for society and environment

We always act with integrity and look beyond our immediate areas of responsibility, considering the long-term impact of our actions.

We take responsibility both as a group and as individuals.

Elimination of waste



We minimise unnecessary cost by eliminating waste

With a strong focus on continuous improvements, from strategic step changes to operational every-day changes, we ensure high-quality output and efficiency in all areas.

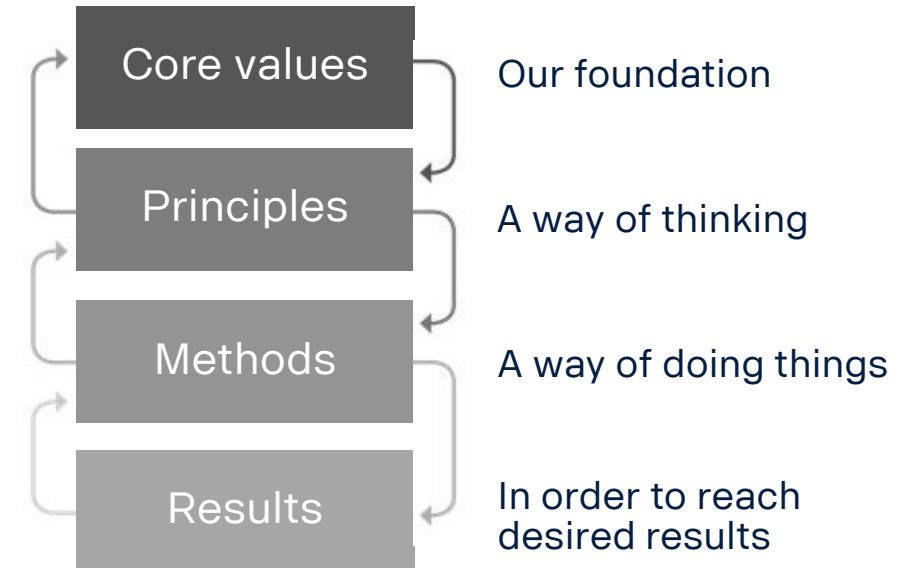
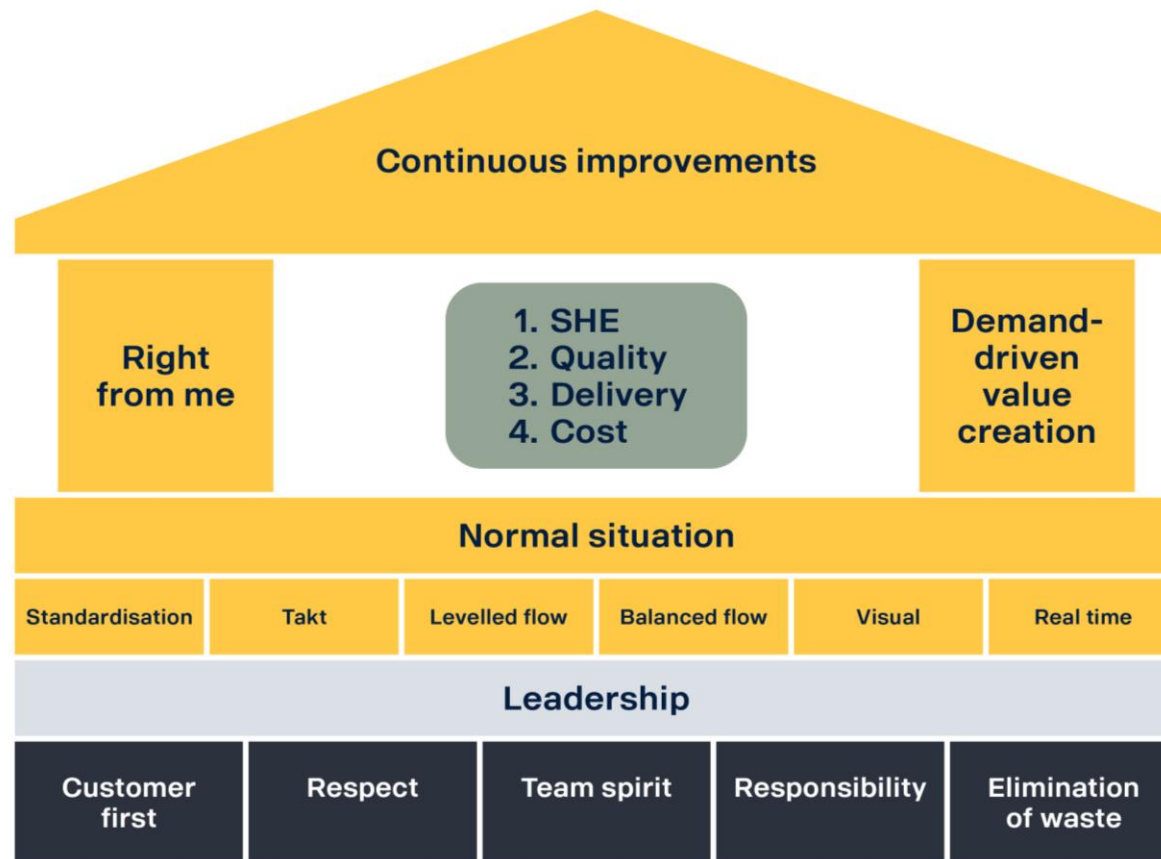
We find and remove all activities that have no value to our end customers and seek to minimise the negative impact of our operations and products.



SCANIA PRODUCTION SYSTEM (SPS)

Leader in sustainable transport

Thinking model



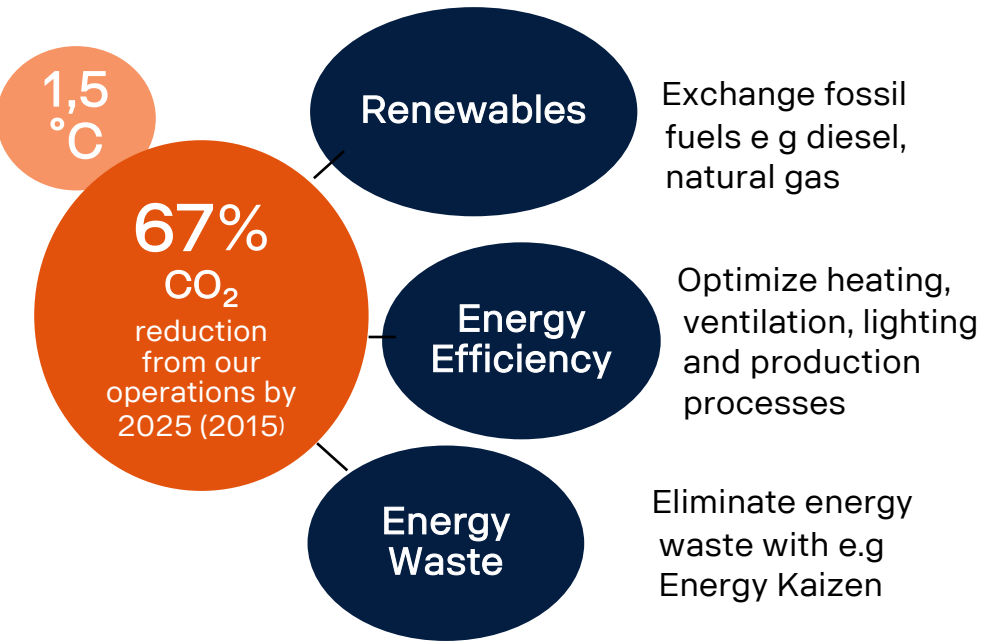


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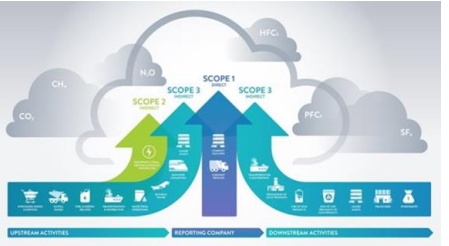
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ENERGY ROADMAP P&L



Tonnes CO₂e
SCOPE 1 & 2

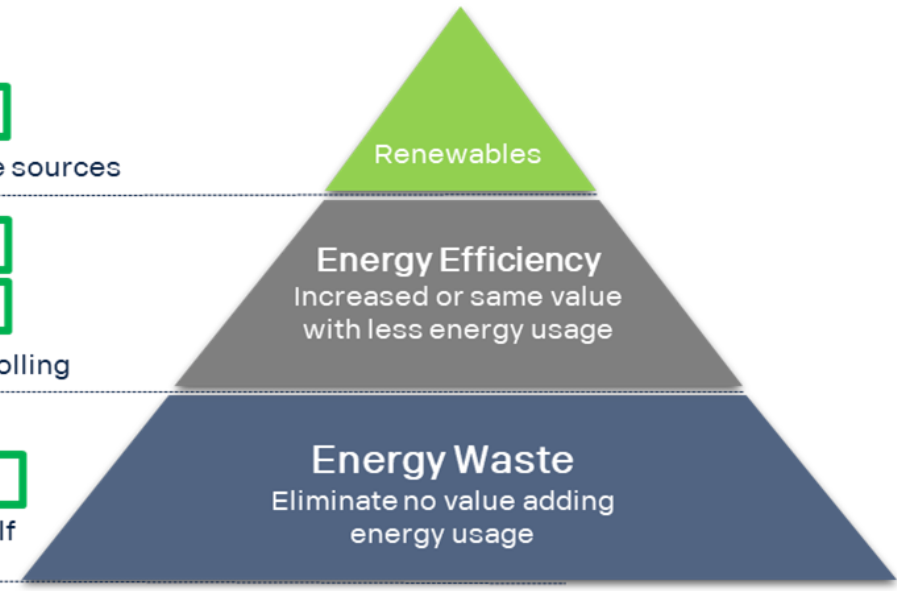


Energy use
25% less energy in industrial operations by 2025 (2015)

- Guideline SolarPV@Scania**
Investments, electricity from renewable sources

- Onepager LED lighting@workshops**
- Method "Energy demand" in PEIP**
Investments, new technology and controlling

- Method "Energy Kaizen" – global std**
Reduce/Eliminate waste (ca 15-40%), self founded





ENVIRONMENTAL FOOTPRINT P&L

CO₂

67% CO₂
reduction from
operations by
2025



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Energy

25% less energy
use in industrial
operations per
vehicle by 2025

CO₂ emissions logistical flow

50% CO₂
reductions from
land transports/
transported
tonne by 2025

Waste

50% reduction
of non-recycled
waste per
vehicle by 2025

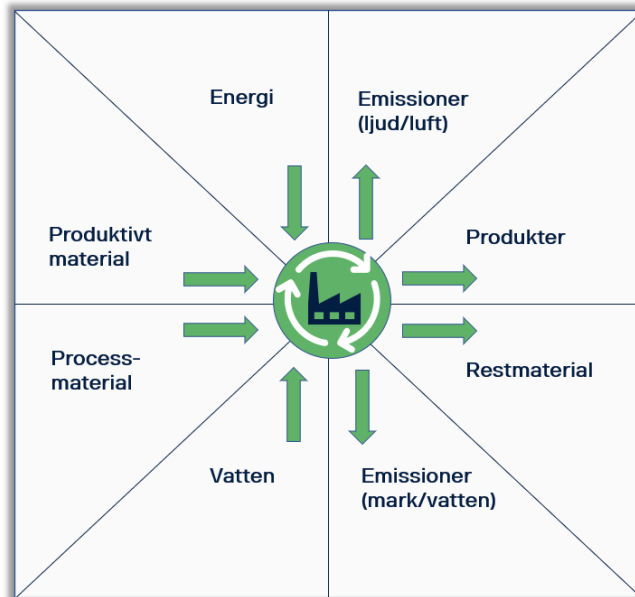
Water

40% reduction
of fresh water
use per vehicle
by 2025



RESPONSIBLE BEHAVIOUR – EXAMPLES WōW

Green Accelerator



Green Performance Map

Energy Kaizen





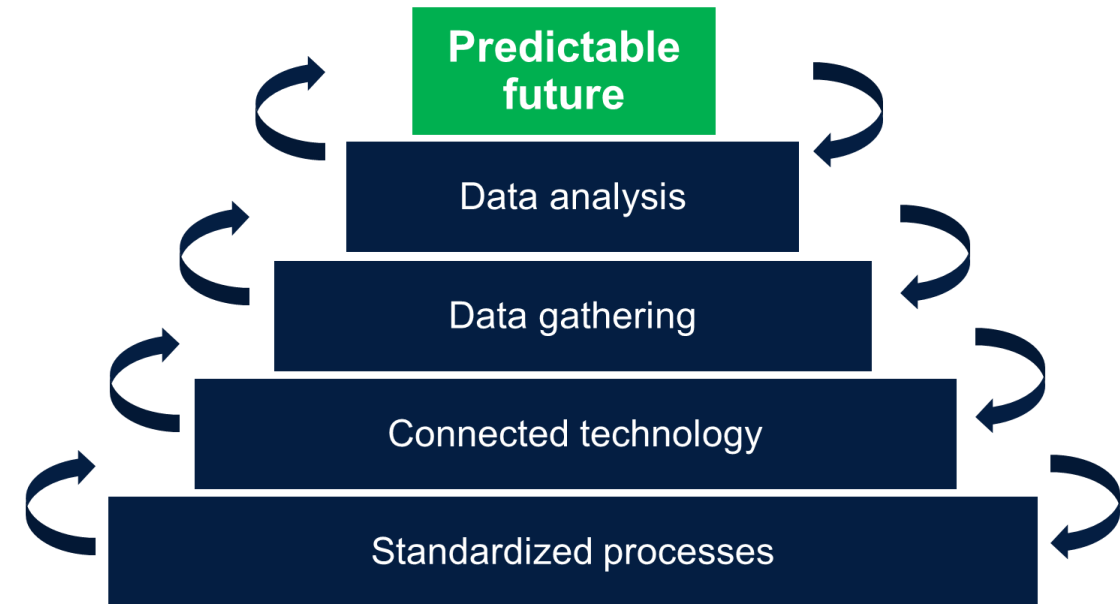
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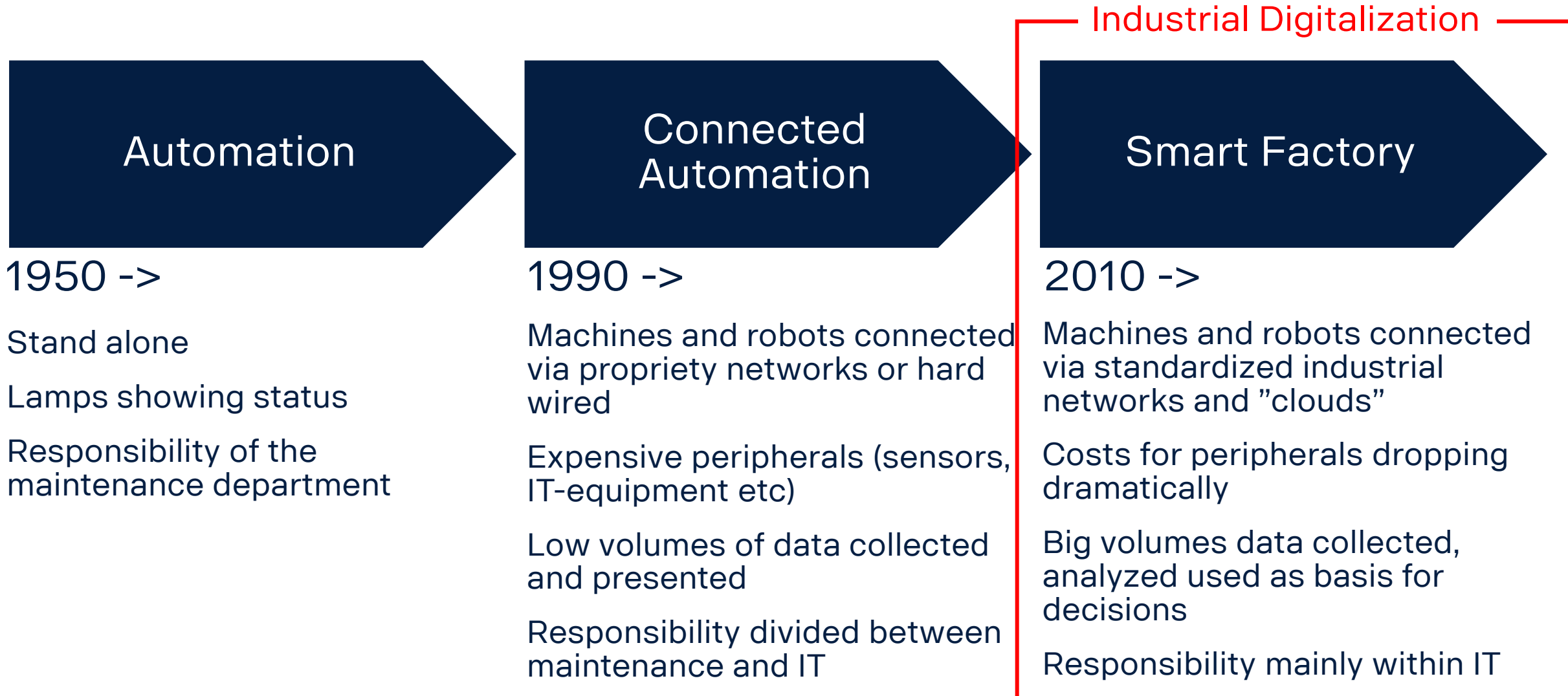


Automation and digitalisation

- **Automation** is used to remove manual work in order to reduce ergonomic load on the human, increase quality and productivity.
- **Digitalisation** is the toolbox to support the automation efforts in production, logistics and administration.

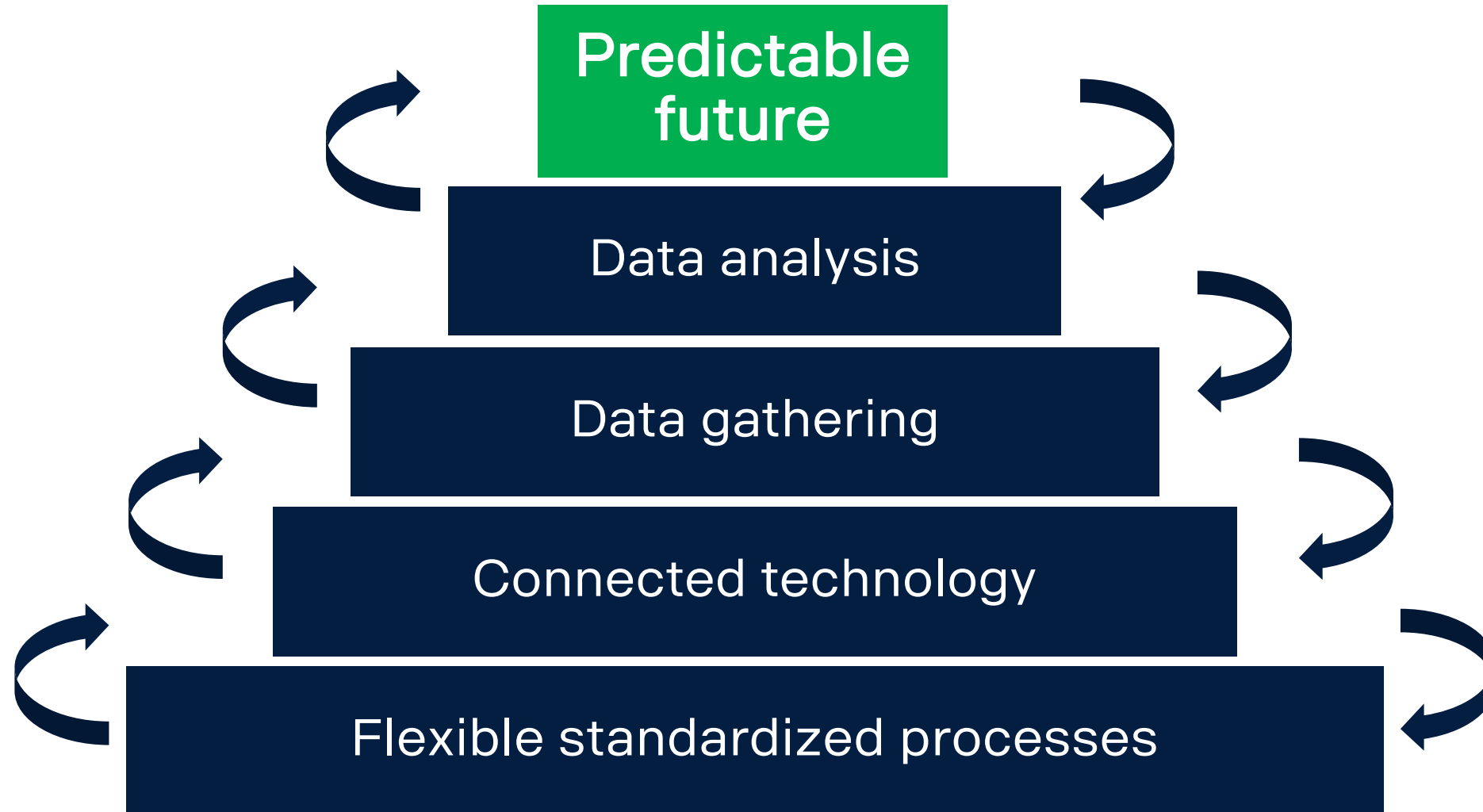


Development from automation to digitalisation



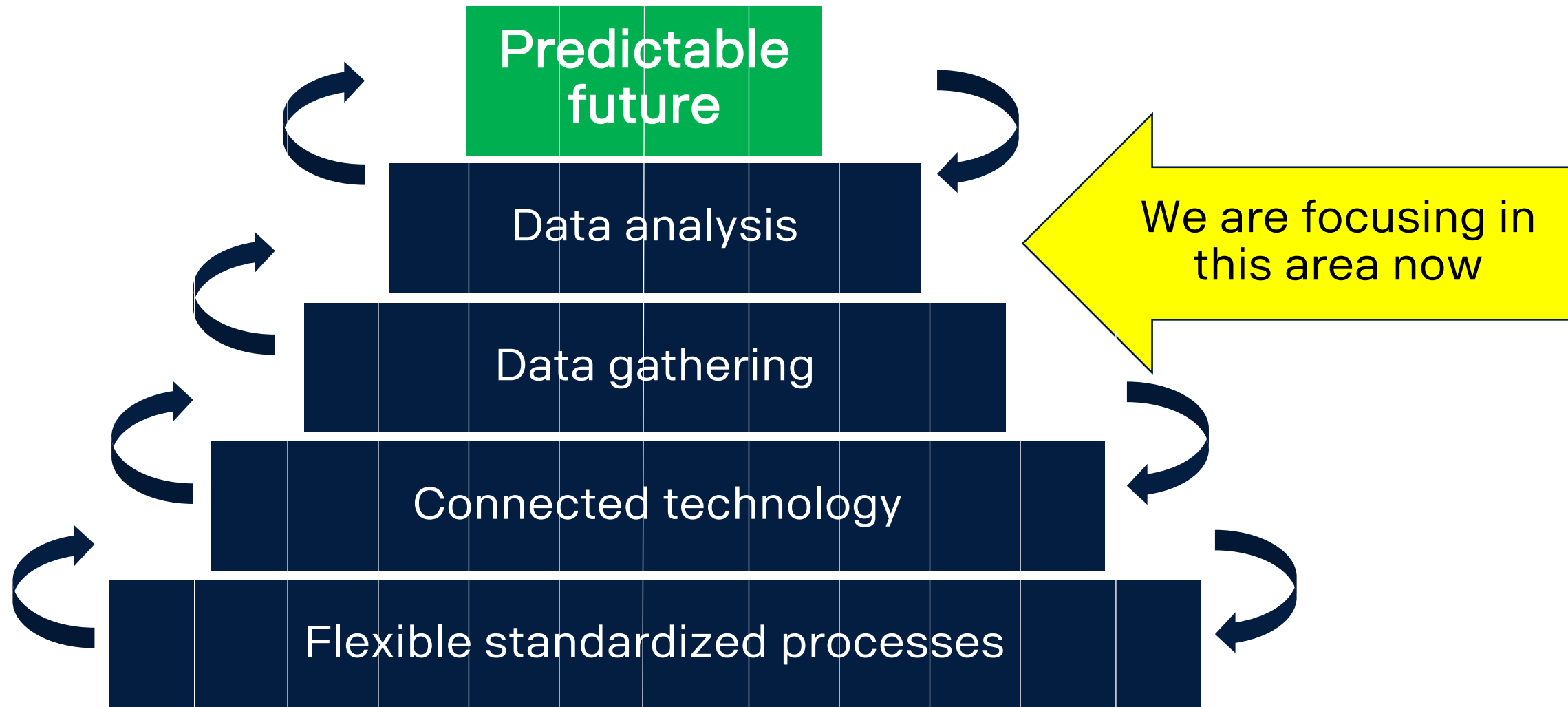


Industrial Digitalisation



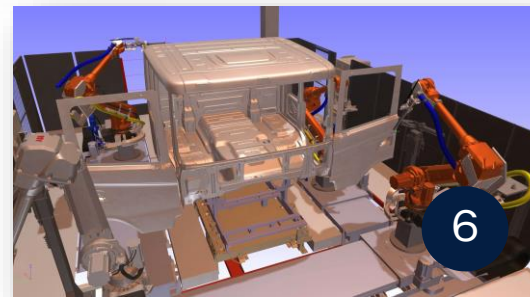
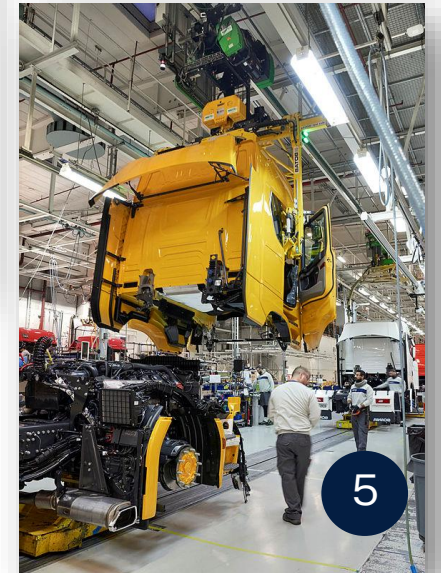


Industrial Digitalisation



Main areas for digitalisation

1. External logistics
2. Internal logistics
3. Machining and maintenance
4. Process (BiW, foundry, painting etc.)
5. Assembly
6. Layout, planning & Virtual reality





Major digitalisation initiatives within production and logistics

- Specifying machines with sensors and standardised data structure and connecting them to SCADA platform. Enabling analysis of historical and real time process data and preventive process control.
- Introduction of a MES-platform to run production with traceability of parts, parameters and real time quality status through out the process.
- Preparing for “3D-only” in an unbroken chain from birth to death of the product
- Automation of administrative tasks through the modernising of the ERP-platform
- Testing of digital ideas in our Smart Factory Lab
- Introducing self-service BI (business intelligence) with Microsoft Power BI



Preparing for the predictable future



SFL – SMART FACTORY LAB

The Smart Factory Lab is an experimental test environment that explores, assesses and pilots new technologies before we adopt them in Scania's production processes

- First Choice arena for Digital Transformation
- Accelerate Digitalization & Automation
- Facilitate introduction of Industry 4.0
- Find and share best practice, promote good ideas!
- Forums, workshops and sessions with different layers of management and decision makers



SMART FACTORY LAB



WHAT

We adapt, evaluate, share & deliver new technologies to improve safety, quality, productivity and sustainability through accelerating digitalization and automation.

WHY

To share how new technologies will increase safety, productivity, quality and human well-being.

HOW

The Smart Factory Lab is a hub driven by the collective expertise and passion of its dedicated team, moving P&L towards the Smart Factory vision.

WHAT IS A SMART FACTORY?



A Smart Factory is a factory that makes use of advancements in compute, sensor technology, AI and software development to increase safety, quality and productivity.



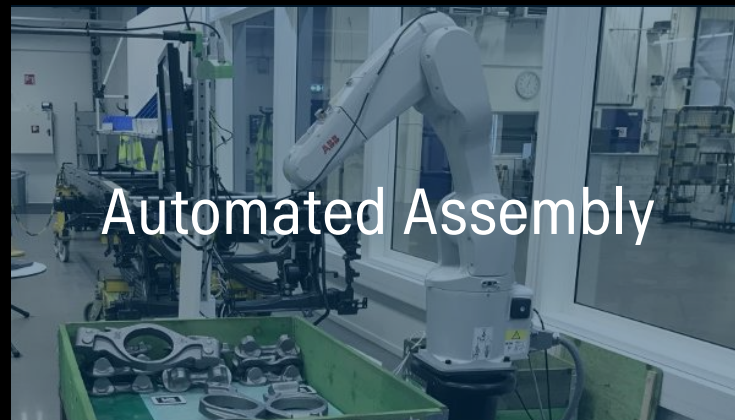
Autonomous Line Feeding



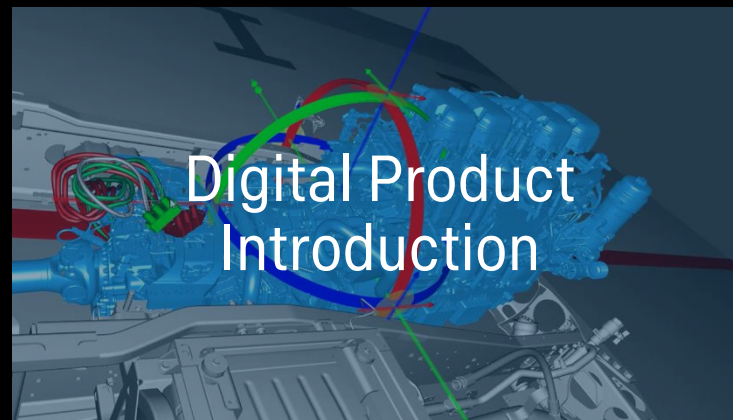
Automated Quality Gates



Radical Manufacturing and New Materials



Automated Assembly

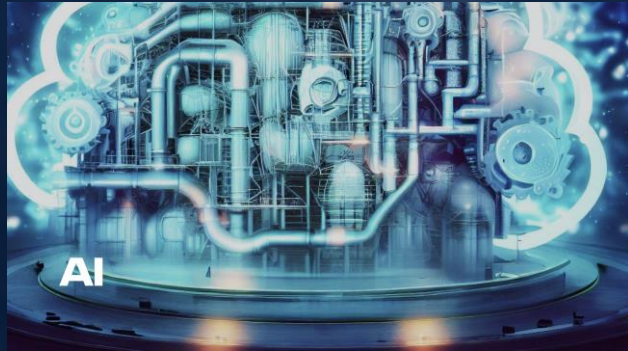


Digital Product Introduction



Best-In-Class Operator Guidance

TRENDS



AI



AUTOMATION



DATA DRIVEN



CONNECTIVITY



EMPLOYEE EXPERIENCE



P&L DIGITALISATION VISION 2030

We drive the shift supported by a digitalized operating model and are the reference in the industry in terms of cost, people and the environment.



Sustainable & attractive employer



Decreased lead time in changes



Improved operational efficiency



Improved product quality and delivery precision

SMART FACTORY LAB

YOU'RE WELCOME HERE

[LINK](#)



SCANIA