



Learning Journey "Factory of the Future" - ZF Group Best Practices

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2021 Half-Year Figures



€19.3 billion
Sales

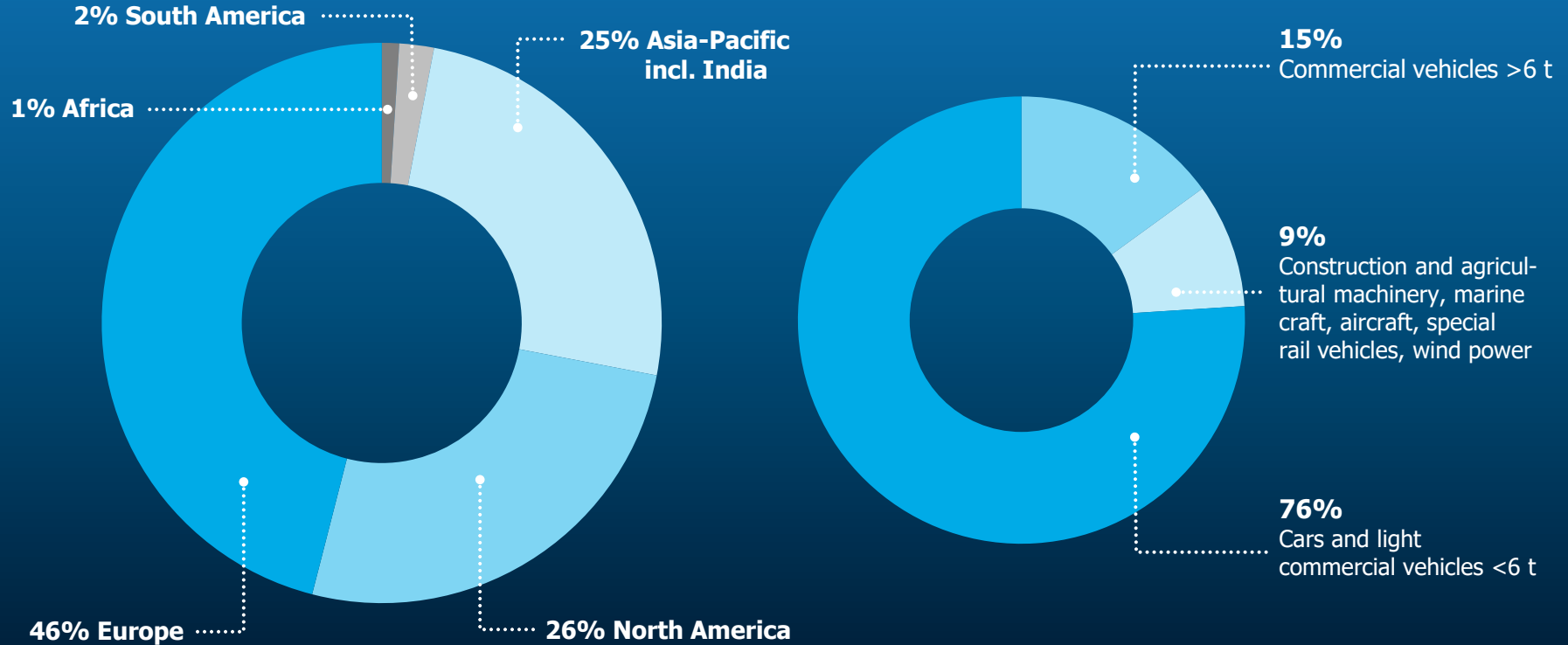


5.2 %
EBIT Margin (adjusted)

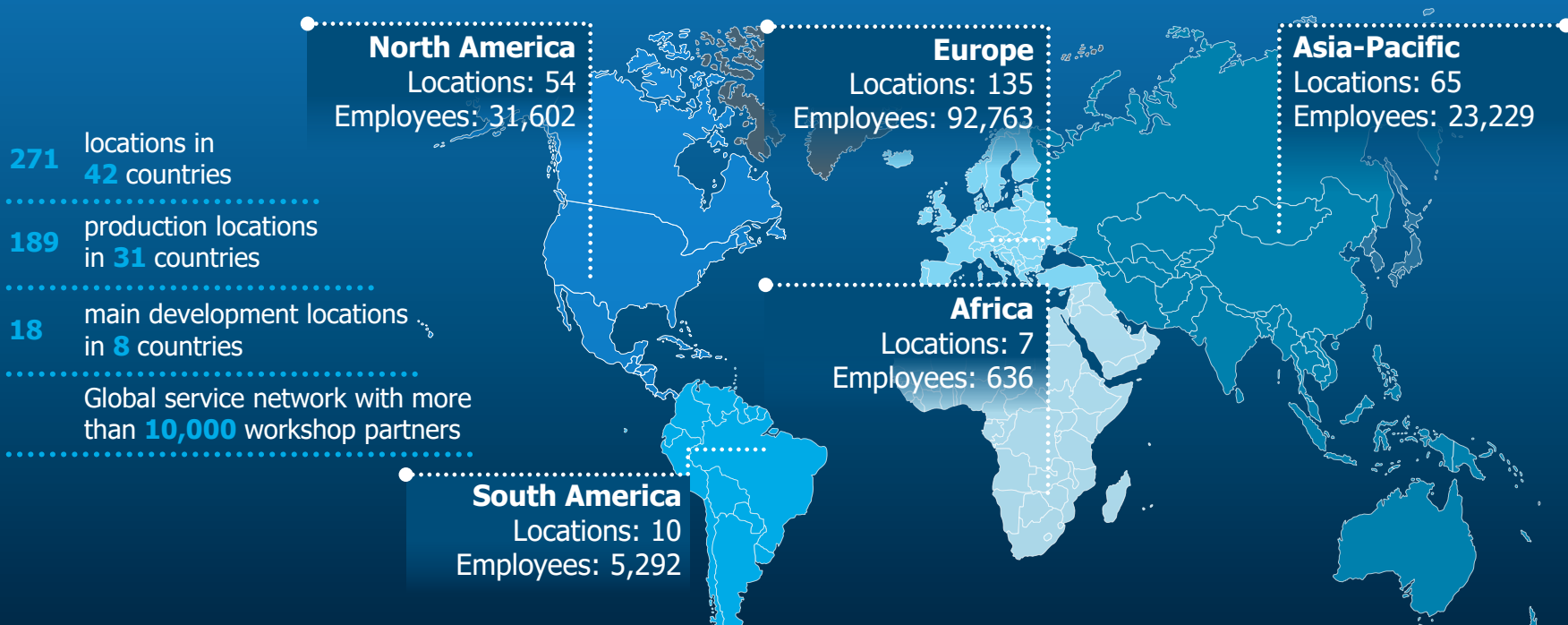


€1.0 billion
EBIT (adjusted)

Overall Sales €32.6 Billion in 2020



Key Figures – Locations



Worldwide Presence – Production, Development, Sales and Service

On Track with our 2021 Priorities



Business and Financial Performance



Digitalization & Cloud



Climate Neutral by 2040



Technology to Market

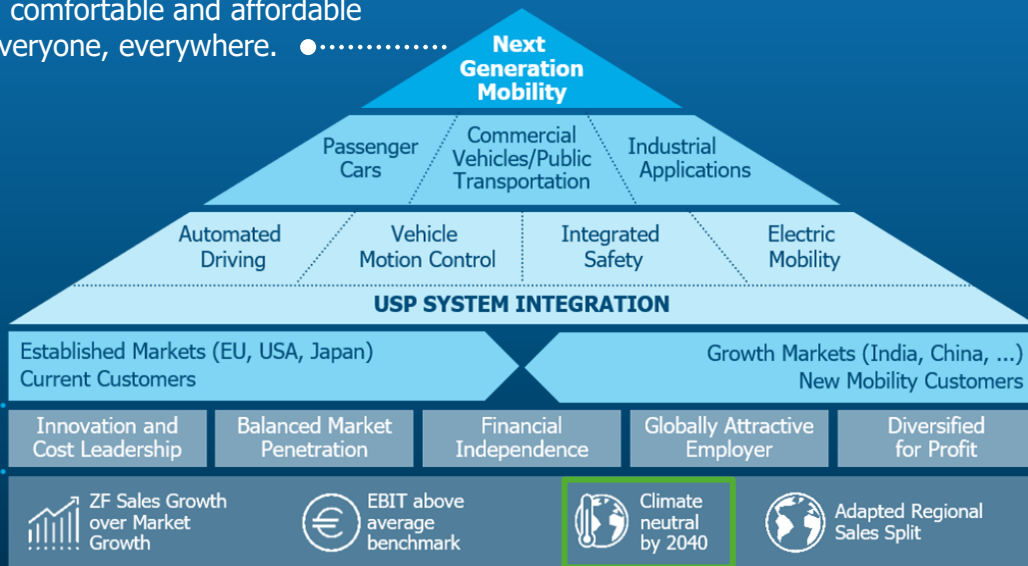


WABCO Integration

Next Generation Mobility Strategy

A clean, safe, comfortable and affordable mobility for everyone, everywhere. ●.....

Our Mission and Strategy

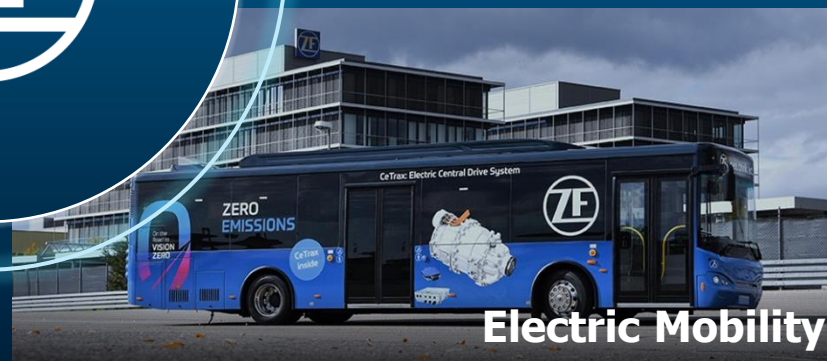
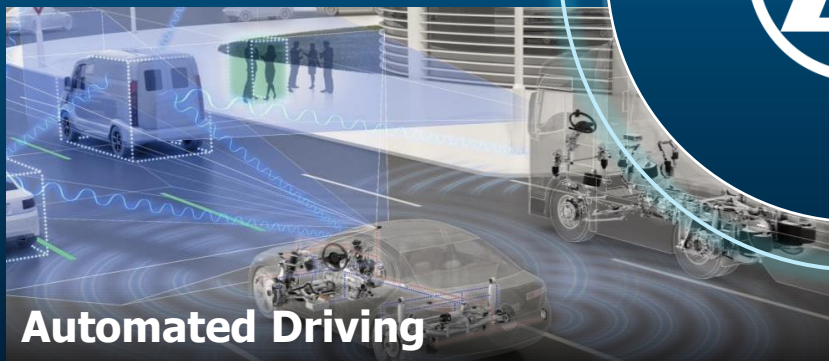
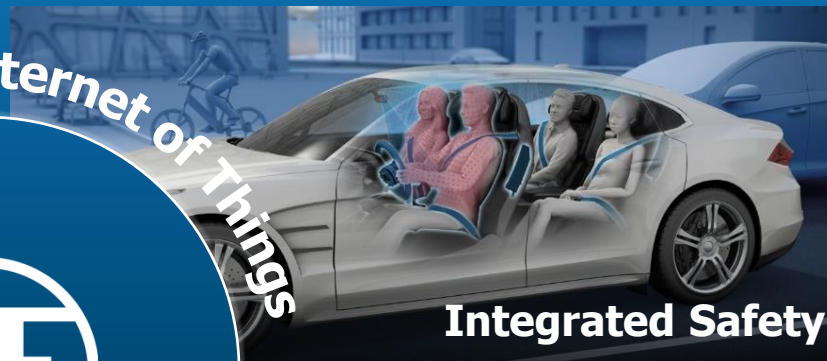


ZF's ambitious climate strategy: Climate neutrality across all emission categories by 2040

ZF – Next Generation Mobility



ZF Shapes the Future in Four Technology Domains



Our USP – Technology Transfer to all Segments



PASSENGER CARS



**COMMERCIAL VEHICLES /
PUBLIC TRANSPORTATION**



INDUSTRIAL APPLICATIONS

AFTERMARKET BUSINESS



Next Generation Mobility



Micro-Mobility



Urban Mobility



Mid- and Long-Range Mobility

Climate Neutrality at ZF



ZF's Target: Becoming Climate-neutral by 2040



1

Direct CO₂
emissions
(Scope 1)

2

CO₂ emissions
from energy
consumption
(Scope 2)

3

CO₂ emissions of
upstream value
chain & product use
(Scope 3)

Measures in Focus to Achieve 2030 Targets

ZF Plants

Supply Chain

Products



+20% energy efficiency
in 10 years



90% of European steel
from electric arc furnace



>40% fully electrified
powertrain



100% green power
in all ZF Locations
worldwide

50% CO₂ neutral
road transport
in ZF logistics network



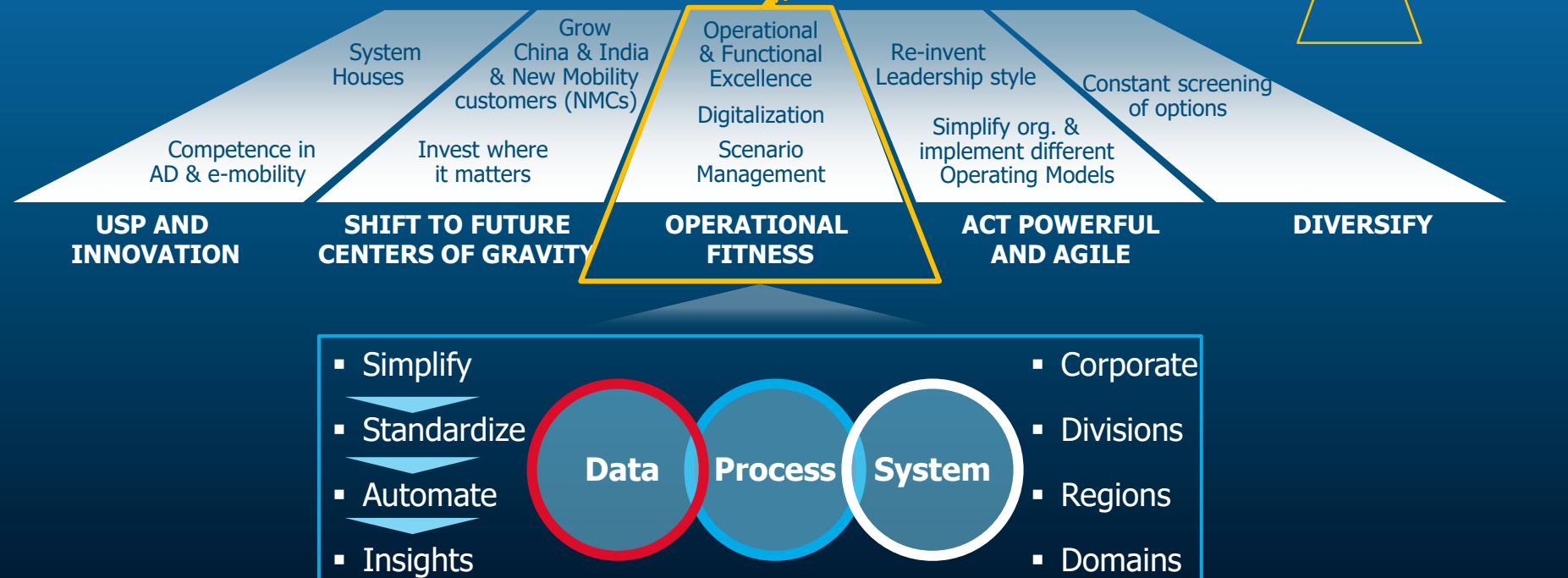
50% recycled
materials
in ZF products



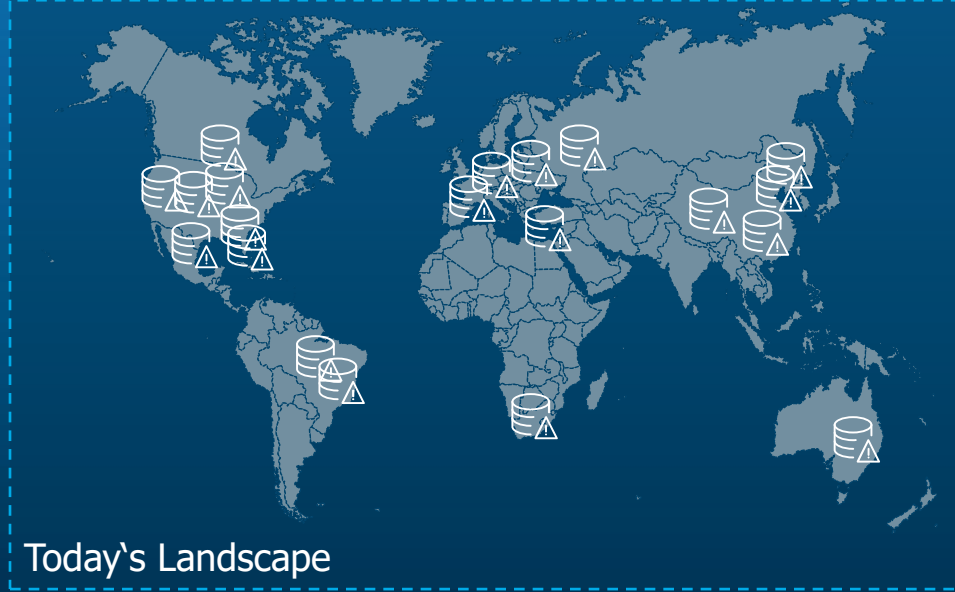
ZF's Way to Smart Factory



ZF's road to next generation mobility



ZF way to realize faster innovations and reduce costs by consolidating system landscape



**From heterogenous system landscape
to real-time intelligent enterprise**

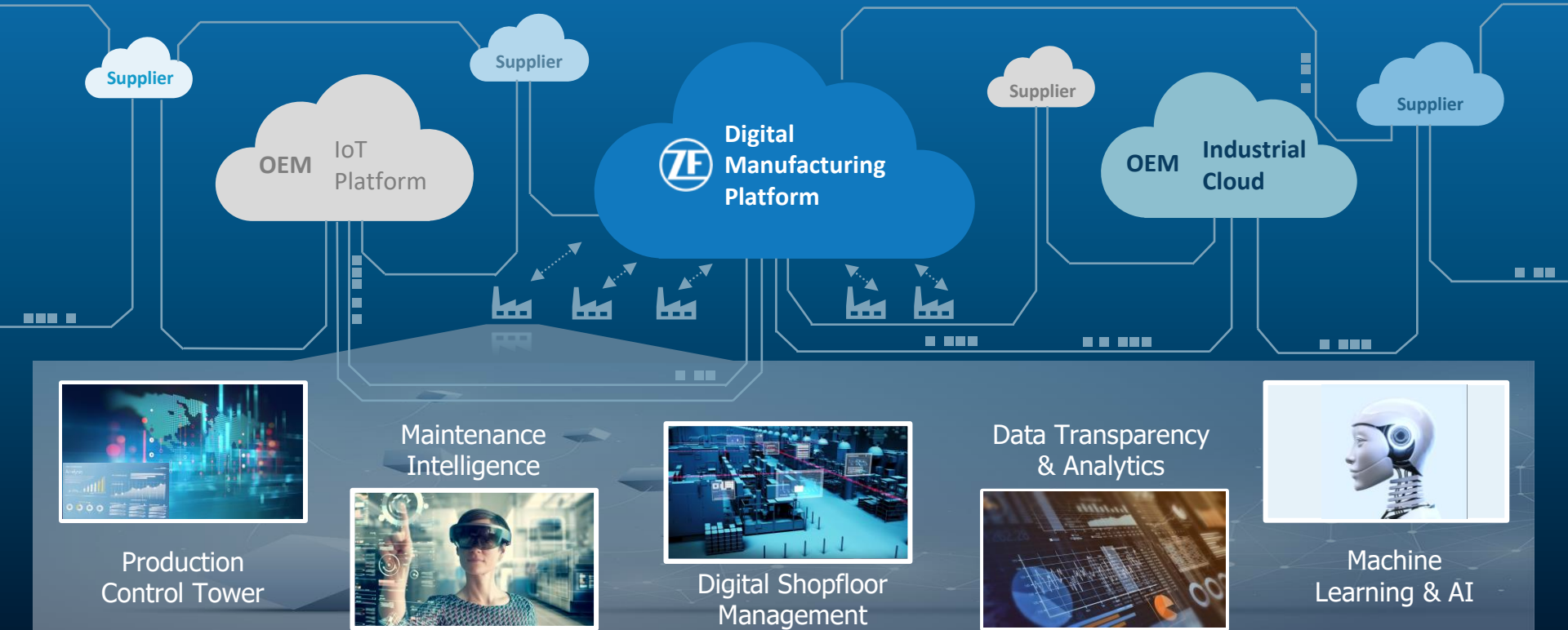


Consolidated system architecture

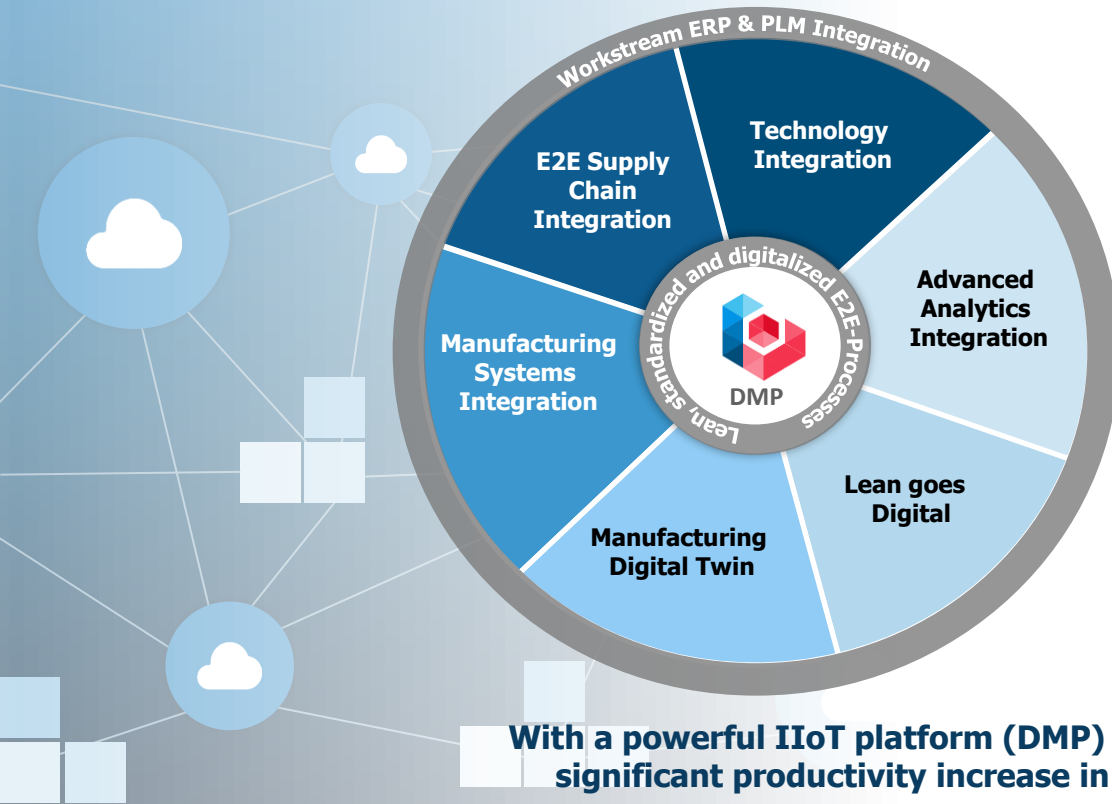
Harmonization and innovation for
system landscape



ZF's IIoT platform as key enabler to achieve our vision of connected smart factories



Digitally enabled “One Global Production Network with leading efficiency, flexibility and productivity”



Digital Manufacturing Strategy Mission

Establish a **learning culture** with a **flexible organization** and **standardized IT solutions** to

- enhance productivity
- increase efficiency
- provide flexibility and quicker value to our company

With a powerful IIoT platform (DMP) as key enabler for significant productivity increase in manufacturing

ZF's way forward to digitally enabled one global production network with leading efficiency, flexibility and productivity



Industry 4.0 Maturity levels

Target

Roadmap to Smart Factory



Connectivity



Visibility



Transparency



Predictability



Adaptability

How to increase Business Value

Way forward to onboard plants

What means Interoperability for ZF

Why lean and standardized Processes

Connectivity

MES Functions

ERP & PLM

DMP on Microsoft Azure

SCADA Functions

Power Platform & MSIS

SaaS Integration





ZF's Way to Smart Factory

**Learning Journey "Factory of the Future"
in February 2022 at ZF in Saarbrücken**