



# Digital Industries

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## Notes and forward-looking statements

This document contains statements related to our future business and financial performance and future events or developments involving Siemens that may constitute forward-looking statements. These statements may be identified by words such as “expect,” “look forward to,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “estimate,” “will,” “project” or words of similar meaning. We may also make forward-looking statements in other reports, in prospectuses, in presentations, in material delivered to shareholders and in press releases. In addition, our representatives may from time to time make oral forward-looking statements. Such statements are based on the current expectations and certain assumptions of Siemens’ management, of which many are beyond Siemens’ control. These are subject to a number of risks, uncertainties and factors, including, but not limited to, those described in disclosures, in particular in the chapter Report on expected developments and associated material opportunities and risks in the Annual Report and in the Half-year Financial Report, which should be read in conjunction with the Annual Report. Should one or more of these risks or uncertainties materialize, events of force majeure, such as pandemics, occur or should decisions, assessments or requirements of regulatory authorities deviate from our expectations, or should underlying expectations including future events occur at a later date or not at all or assumptions prove

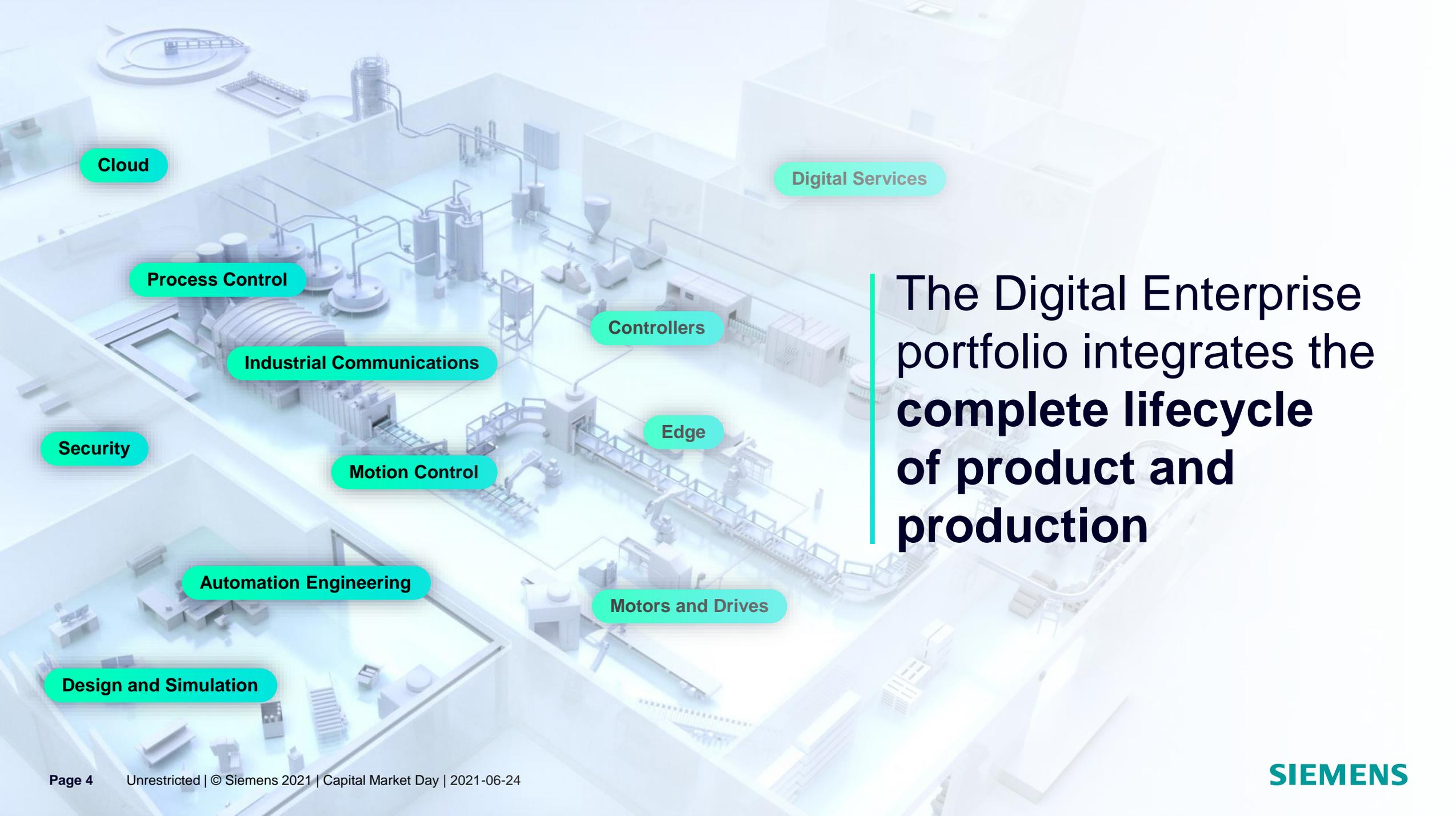
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This document includes – in the applicable financial reporting framework not clearly defined – supplemental financial measures that are or may be alternative performance measures (non-GAAP-measures). These supplemental financial measures should not be viewed in isolation or as alternatives to measures of Siemens’ net assets and financial positions or results of operations as presented in accordance with the applicable financial reporting framework in its Consolidated Financial Statements. Other companies that report or describe similarly titled alternative performance measures may calculate them differently.

Due to rounding, numbers presented throughout this and other documents may not add up precisely to the totals provided and percentages may not precisely reflect the absolute figures.



**Huge potential in digitalization and automation – this is our decade of opportunities**



Cloud

Digital Services

Process Control

Industrial Communications

Security

Motion Control

Automation Engineering

Design and Simulation

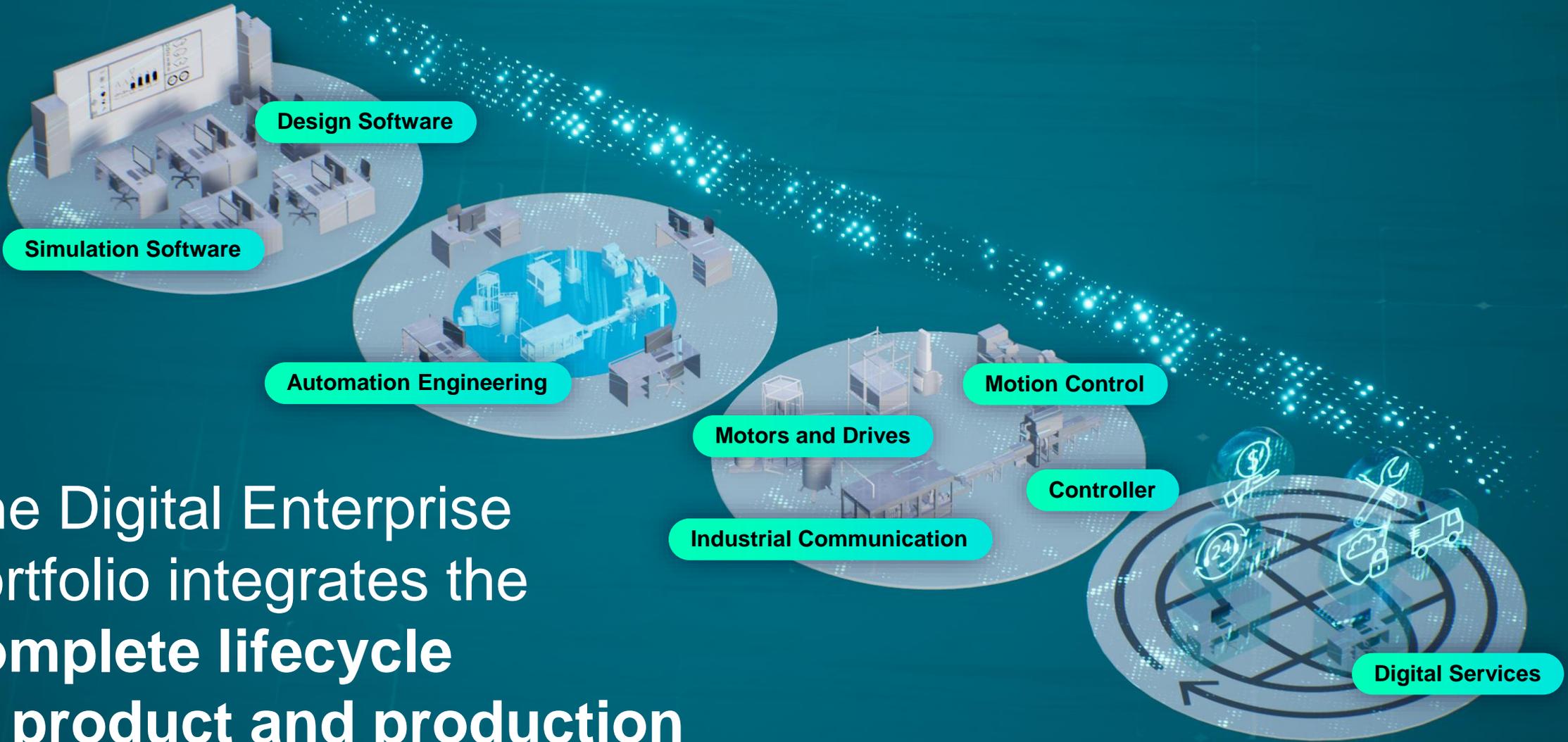
Controllers

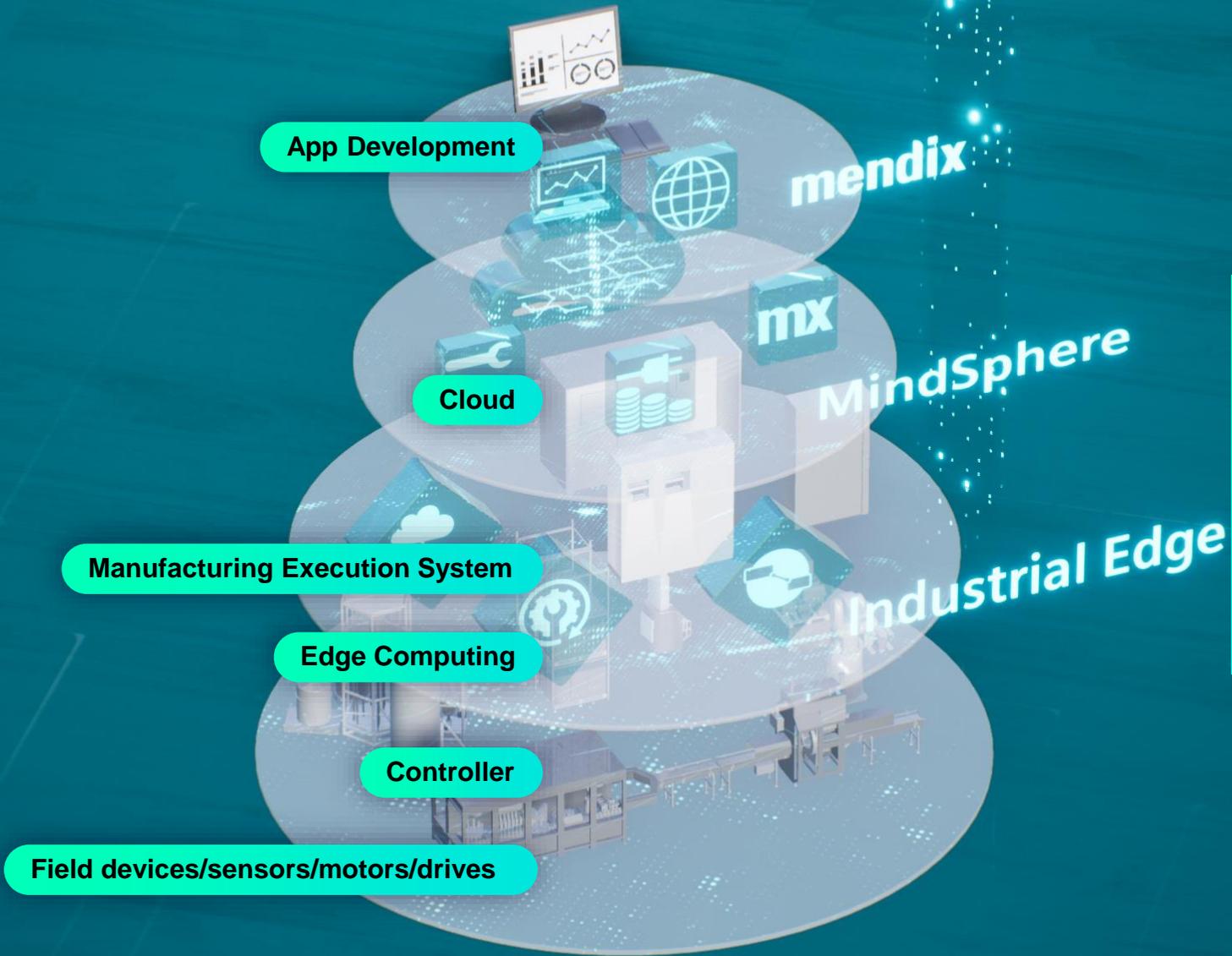
Edge

Motors and Drives

The Digital Enterprise portfolio integrates the **complete lifecycle of product and production**

# The Digital Enterprise portfolio integrates the complete lifecycle of product and production





Our offering helps our customers to innovate and compete from sensor to edge to cloud

**Customer trust and loyalty is resulting in various #1 and #2 positions**



**Industrial Software**

**Automation**

**PLC**

**Chemicals**

**Industrial  
Communication**

**Motion Control**

**Discrete Automation**



**Process  
Automation**

**Pharma**

Based on our strong market positions, we will extend our leadership through four growth levers



Existing customers

Verticals



Regions

Small and Medium Businesses



Industrial Communication

Chemicals

Automation

Industrial Software

Motion Control

Discrete Automation

PLC

Process Automation

Pharma

# Digital Industries

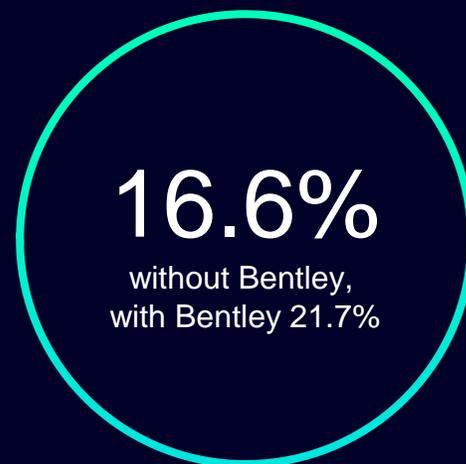
Key figures FY 20



**Orders**



**Revenue**

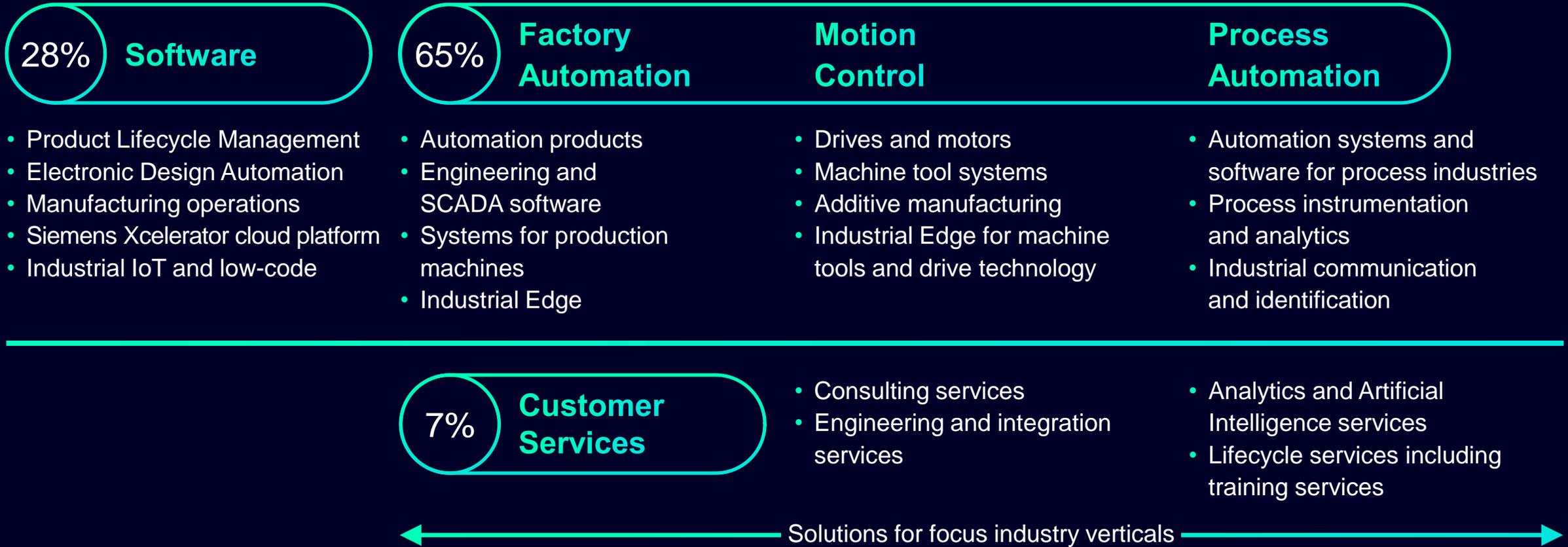


**Profit margin**



**Employees**

# Digital Industries Portfolio



Percent of revenue FY 20

# We have a balanced global footprint close to our customers



## Americas

Global headquarters for software in the USA



Note: Numbers FY 20

# We have a balanced global footprint close to our customers

## Asia, Australia

Global headquarters for standard motors in China



Note: Numbers FY 20

**We have a balanced global footprint close to our customers**

**Europe, CIS<sup>1</sup>, Africa, Middle East**

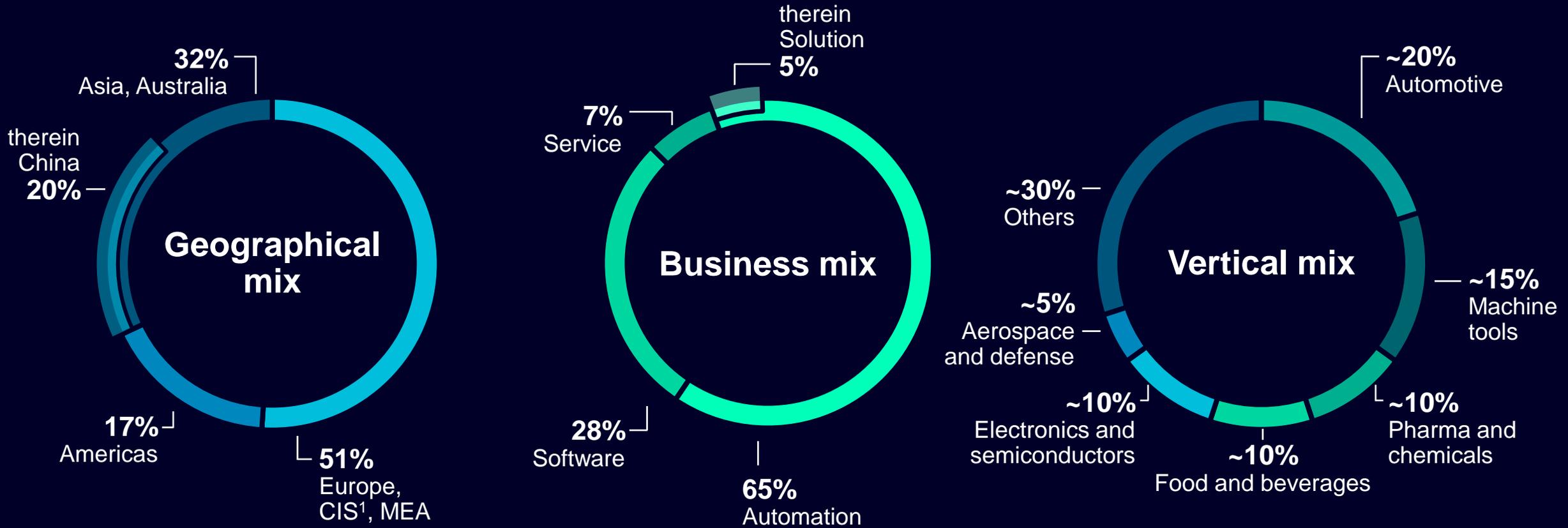
Global headquarters for automation in Germany



Note: Numbers FY 20 1 Commonwealth of Independent States

# Revenue split

FY 20 – in percent - €15.0bn



<sup>1</sup> Commonwealth of Independent States

# Market split

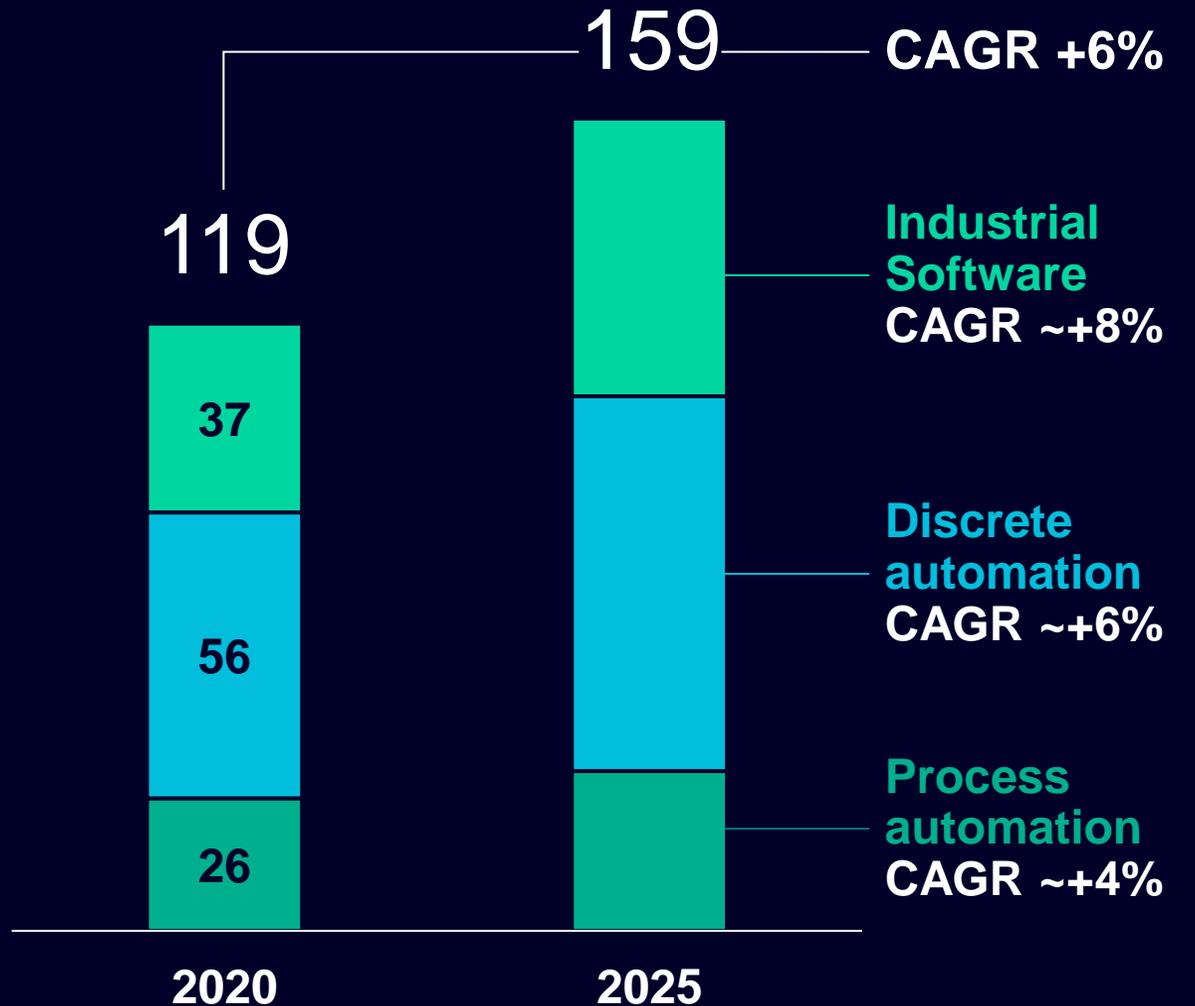
Business mix – in billion €

## Trends

Adoption of new technologies and new business models >

Investment in sustainable digital innovation >

Rise of value creating partnerships and ecosystems >



Source: Siemens common market model based on market analysts data

# Market split

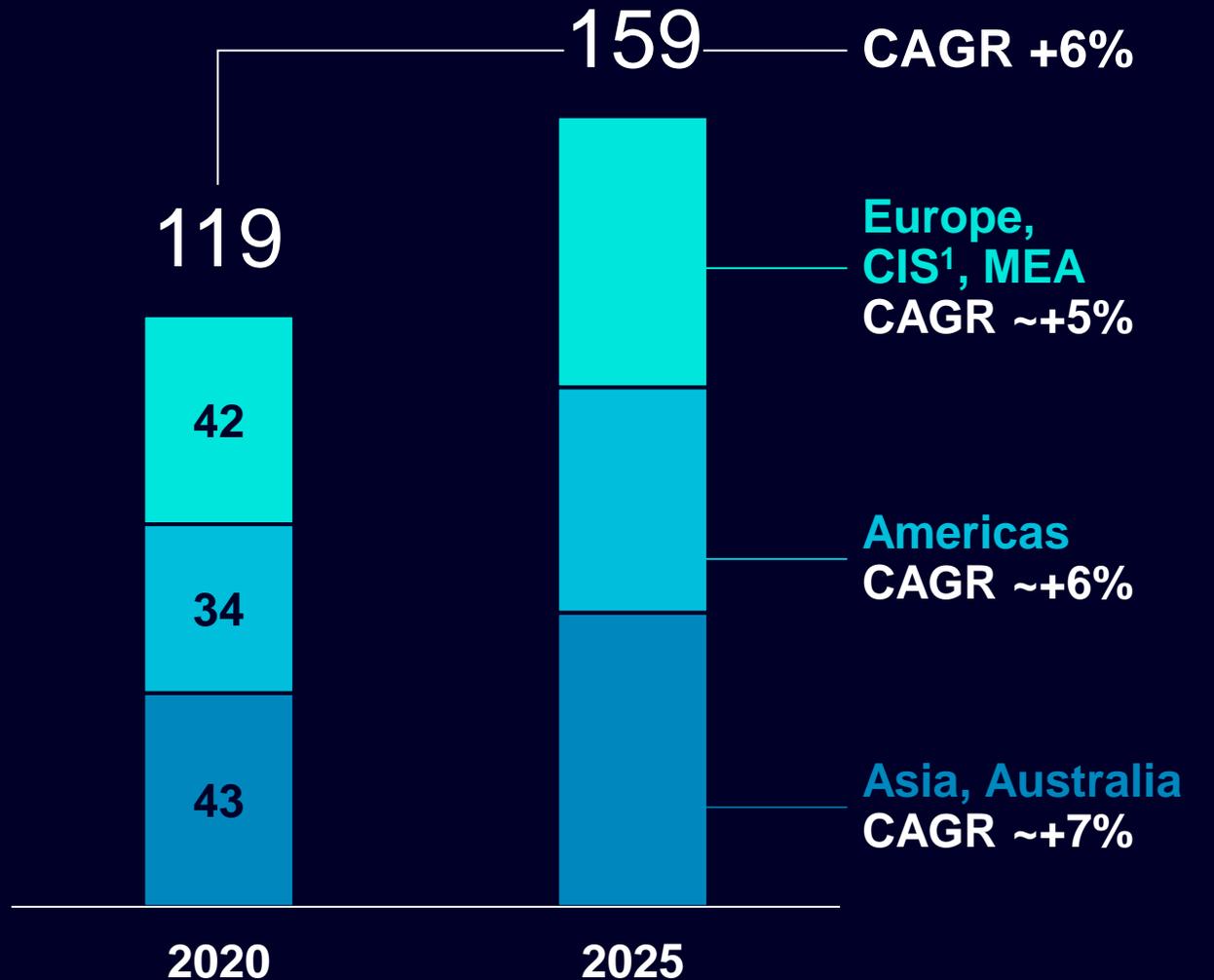
Geographical – in billion €

## Trends

Adoption of new technologies and new business models >

Investment in sustainable digital innovation >

Rise of value creating partnerships and ecosystems >



Source: Siemens common market model based on market analysts data    <sup>1</sup> Commonwealth of Independent States

# We are well prepared to capture attractive growth through increasing digitalization and automation of our industries

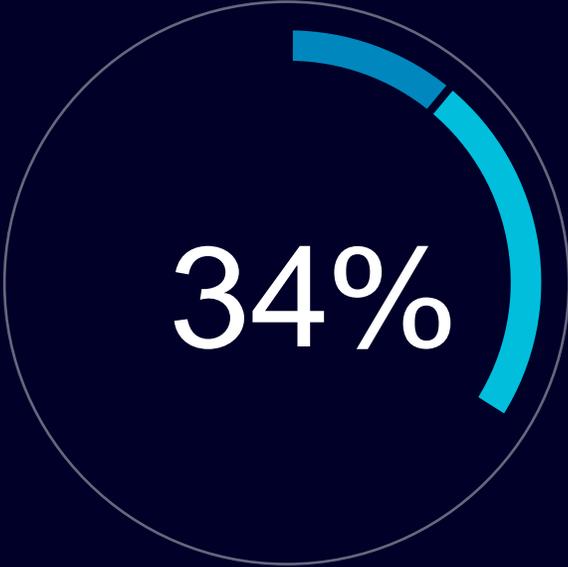
Digital Twins in productive use today<sup>1</sup>



today

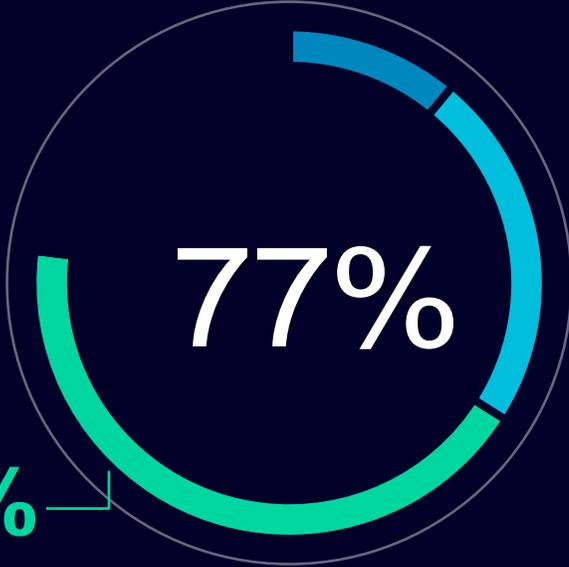
to

Digital Twins in productive use in 3 years<sup>1</sup>



34%

Additional 43% to be expected in pilot in 3 years<sup>1</sup>



77%

+43%

In 3 years

<sup>1</sup> CIMdata, 2019 survey

**Industry faces fast-changing market demands –  
creating value for our customers**

**Flexibility**

**Quality**

**Speed**

**Productivity**

**Sustainability**

**Business models**

# Flexibility

VINGROUP

**From zero to cars in 21 months – from smartphones to ventilators in 3 weeks**

## Customer challenge

Shift from manufacturing smartphones to manufacturing ventilators

## Solution

- License of Siemens customer Medtronic design for ventilator
- Digital twin for manufacturing by Siemens (Teamcenter, NX)

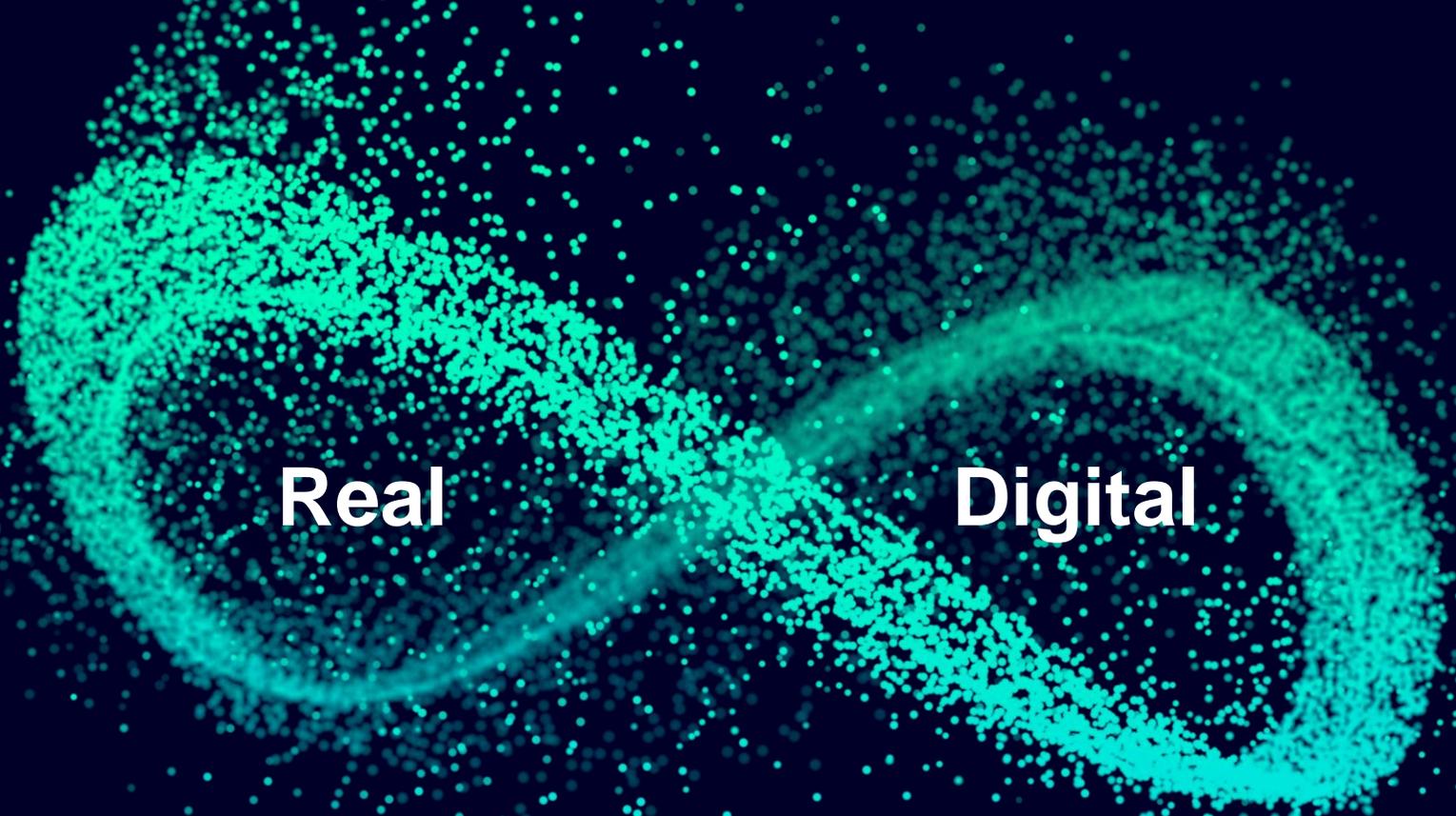
## Customer benefit

- Shift to ventilator manufacturing technology from scratch in three weeks
- Were able to manufacture 55,000 ventilators/month



COMPANY CORE  
TECHNOLOGY  
**Simulation  
and Digital  
Twin**

**We combine the real and the digital worlds –  
With our end-to-end capabilities and our domain know-how**



**Real**

**Digital**

See how our customers use our portfolio

Mercedes-Benz

Partnership to digitally  
enhance existing  
Mercedes-Benz factories

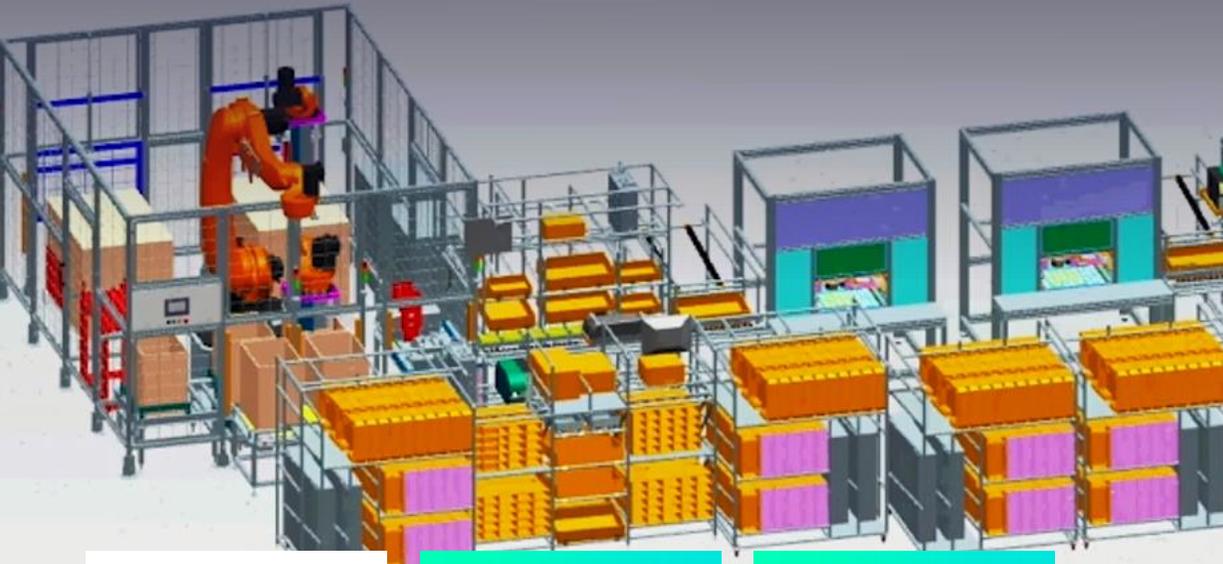
**SIEMENS**

Most advanced digital  
factory for Motion Control  
– benefitting from our  
portfolio's strength

BIONTECH

Vaccine against Covid  
within one year –  
from development to  
release to production

# Productivity Volume Flexibility



**SIEMENS**

COMPANY CORE  
TECHNOLOGY  
**Simulation  
& Digital  
Twin**

COMPANY CORE  
TECHNOLOGY  
**Connectivity  
& Edge**

SIEMENS MOTION CONTROL

**Most advanced digital factory for MC –  
benefitting from our portfolio's strength**

## Customer challenge

- Build a new lighthouse factory for Motion Control (MC) to cover the need of the fast growing Chinese market
- Show full potential of Siemens' automation and digitalization capabilities to customers
- Plan and optimize with digital twin

## Solution

- Holistic approach using the full-fledged Siemens DI portfolio
- Planned and optimized with digital twin before factory was built

## Customer benefit

- + 20% productivity
- + 30% volume flexibility
- + 50% material replenishment
- 40,000 m<sup>3</sup> less water consumption p.a.
- 2,900 ton less CO<sub>2</sub> p.a.

# Flexibility Sustainability



COMPANY CORE TECHNOLOGY  
**Simulation & Digital Twin**

COMPANY CORE TECHNOLOGY  
**Connectivity & Edge**

MERCEDES-BENZ

## Partnership to digitally enhance existing Mercedes-Benz factories

### Customer challenge

- Mercedes-Benz and Siemens to expand the digitalization of sustainable production methods

### Solution

- Partnership to develop innovative solutions for:
  - Digital end-to-end technologies for flexible production
  - Resource-saving, CO<sub>2</sub>-neutral factories
  - New working environments

### Customer benefit

- Create new Mercedes-Benz Digital Factory Campus in Berlin as a blueprint
- Roll-out of new developments at all Mercedes-Benz plants

# Speed

BIONTECH

COMPANY CORE  
TECHNOLOGY

**Data  
Analytics  
& AI**

COMPANY CORE  
TECHNOLOGY

**Simulation  
& Digital  
Twin**

BIONTECH

## Vaccine against Covid within one year – from development to release to production

### Customer challenge

- Rapid production of Covid-19 vaccine in large quantities

### Solution

- Paperless documentation of development and production, immediately fulfilling all documentation requirements

### Customer benefit

- Accelerated vaccine development and production within one year
- Conversion time for existing production facility cut from one year to five months

# Digital Industries is uniquely positioned – with automation and software driving the digital transformation

<b>1</b>	<b>Loyal and constantly growing customer base</b>	<b>&gt;</b>	<b>250k+</b> <b>7,5k</b>	Customers Partners
<b>2</b>	<b>Our strong market positions</b>	<b>&gt;</b>	<b>#1</b>	In industrial software, factory automation and motion control
<b>3</b>	<b>Data generated worldwide through DI control systems</b>	<b>&gt;</b>	<b>100</b>	Terabytes/hour
<b>4</b>	<b>Unique end-to-end portfolio of software and automation</b>	<b>&gt;</b>	<b>&gt;€10bn</b> <b>&gt;13%</b>	M&A executed R&D investment
<b>5</b>	<b>Global network of domain experts</b>	<b>&gt;</b>	<b>~50%</b>	Employees are either in digital jobs or automation engineers (~14,000 in digital jobs, ~22,000 automation engineers)
<b>6</b>	<b>Passion for DI</b>	<b>&gt;</b>	<b>53%</b> <b>~8k</b>	Employees with company for 10+ years Employees joined since last CMD having wide variety of skills, therein ~58% in software and sales

# Go-to-market

We adapted our customer communication to the new conditions and we reached more than 100,000 customers via virtual events in the last 12 months – through new digital formats around the globe.



**Virtual Hannover Messe 2020 and 2021**

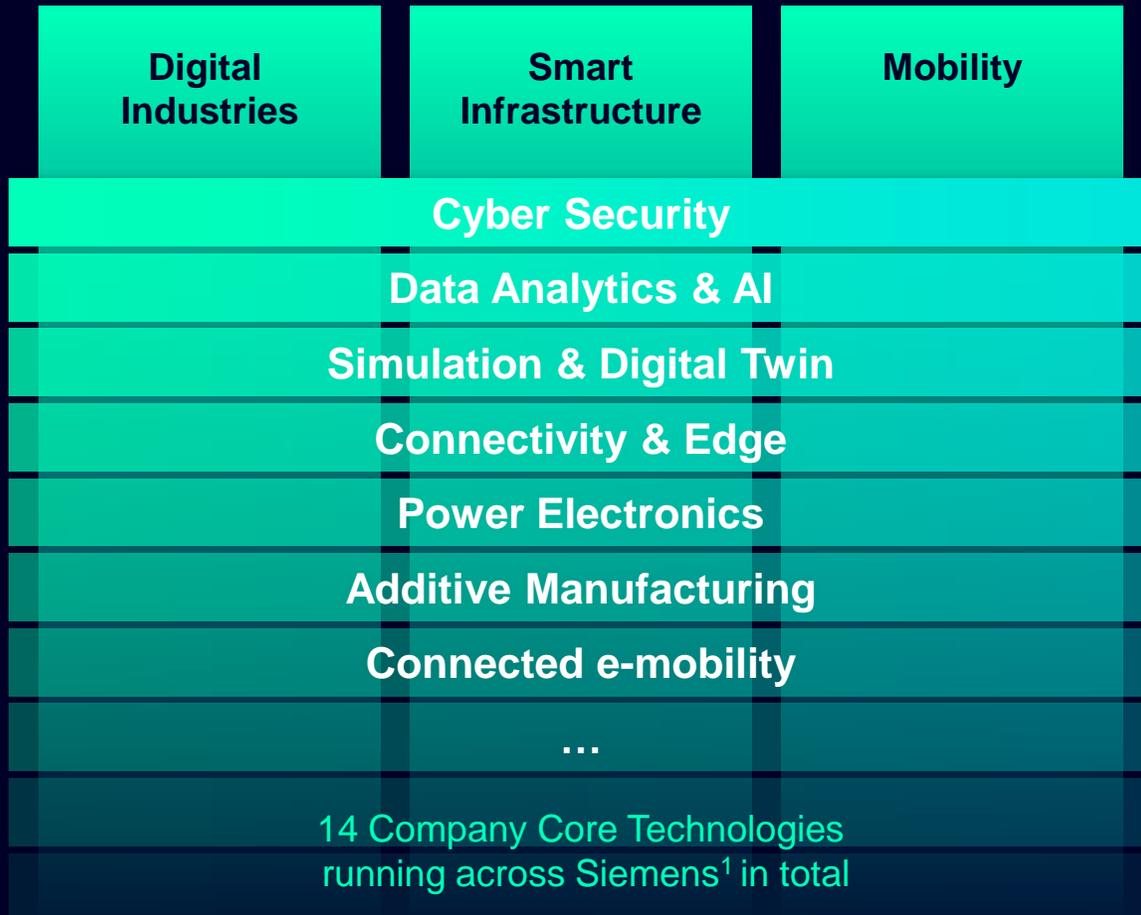


**Virtual Factory Tours**



**Digital SPS 2020**

# Siemens with strong technology core and cross-business collaboration for accelerated customer value



## Company Core Technologies

- Connectivity and edge as core offering in our partnership with Volkswagen
- Simulation and Digital Twin empowering customer Vingroup to leverage potential of digitalization
- Co-creating customer solution with Coca-Cola based on Data Analytics and AI

## Cross-business technology collaboration

- Six AM Hubs across Siemens businesses co-create next generation solutions and manage the AM eco-system beyond Siemens
- Support SI with edge and automation technology
- Close co-operation in Digital Twins for different domains like DT of vehicles, of buildings and energy systems

<sup>1</sup> Siemens Healthineers: R&D Framework Agreement in place plus option to license; Siemens Energy: R&D Framework Agreement plus Cost Pool Agreement in place

# Technology with purpose

In the last fiscal year we invested about €2bn which is more than 13% of our revenue into R&D

The technologies we innovate and invest in will lift Industry 4.0 to the next level – and our customers build on them.

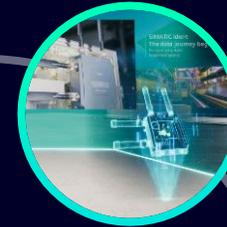
## Additive Manufacturing

Complete portfolio for AM on industrial scale



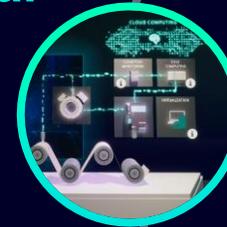
## 5G Connectivity

Fully-networked, high-performance data transmission



## Industrial Edge

Solutions, devices and apps integrating IT and OT



## IoT

Fully exploit the value of data



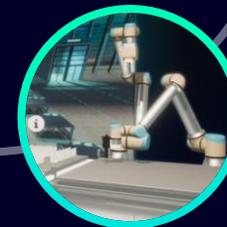
## Industrial Software

Portfolio of software, services and application development platform



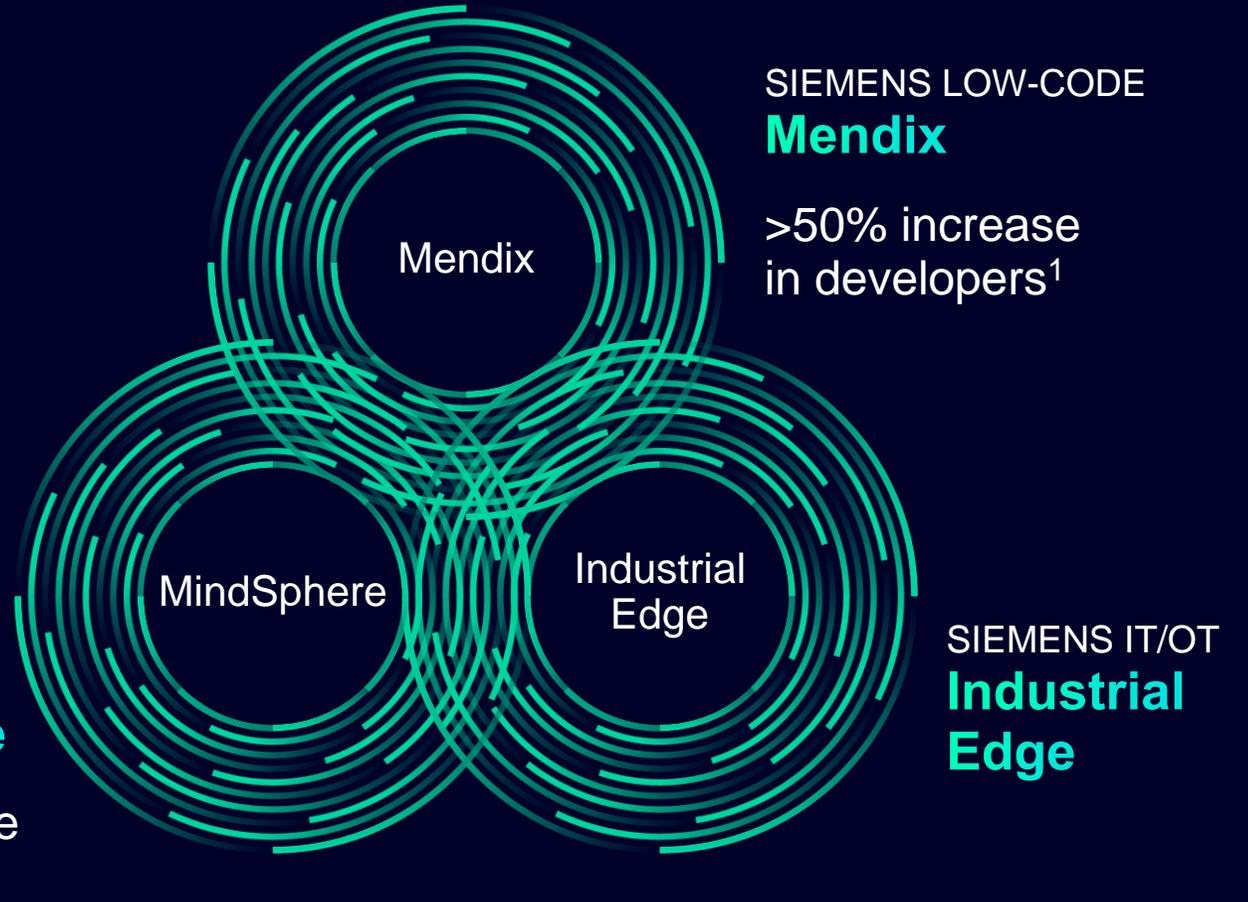
## Artificial Intelligence

Industrial-grade AI across the lifecycle



# Ecosystems

We are combining the strength of our ecosystems providing holistic and scalable cloud and edge solutions for discrete and process industries



<sup>1</sup> Growth since Siemens Capital Market Day 2019

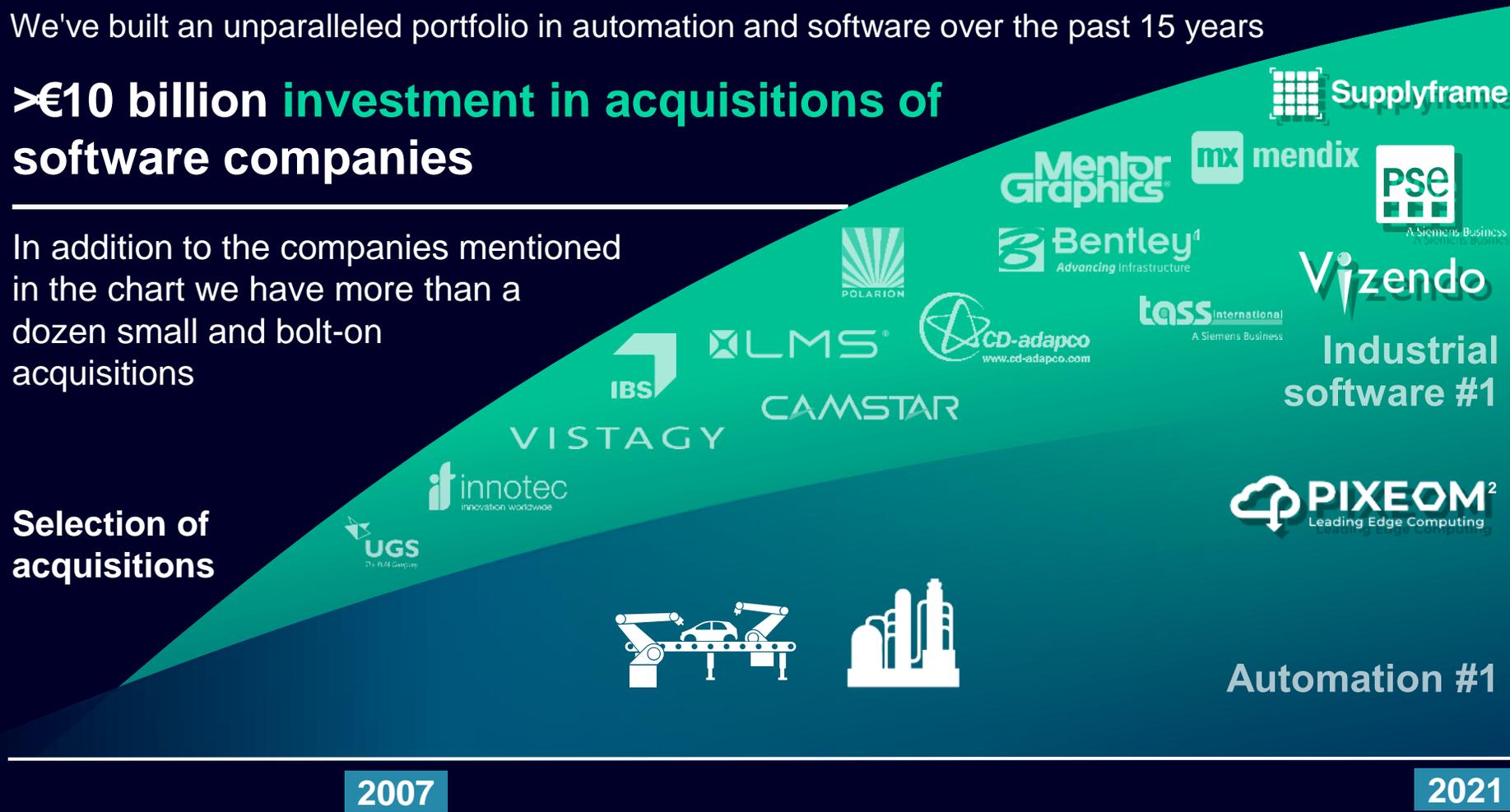
# New business models

We've built an unparalleled portfolio in automation and software over the past 15 years

>€10 billion investment in acquisitions of software companies

In addition to the companies mentioned in the chart we have more than a dozen small and bolt-on acquisitions

Selection of acquisitions



**Supplyframe<sup>3</sup>**  
is a digital marketplace company focused on the electronic supply chain.

**PSE**  
A Siemens Business  
is a technology leader in advanced process and materials modelling with focus on process industries.

**PIXEOM**  
Leading Edge Computing  
is leader in providing a comprehensive Edge portfolio/ Edge computing technology components.

**Vizendo**  
is a leading provider of virtual operator training solutions for the manufacturing industry with strong focus on the Automotive Industry.

1 Cooperation 2 Acquisition of Edge technology 3 Not yet closed

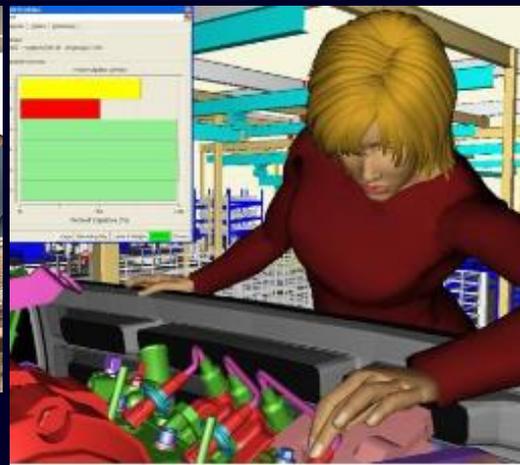


**Unique digital core allows  
Digital Industries Software  
to transform the business**

**Design, simulation, engineering  
and manufacturing software**

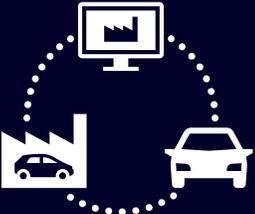


Software helps tackle complexity in a factory before it is built



The factory of the future is going to rely more and more on **virtual humans** and the real and digital worlds coming together

# Digital Industries Software's unique advantage drives growth



**Comprehensive Digital Twin**



**Personalized Adaptable/Modern**



**Flexible Open Ecosystem**

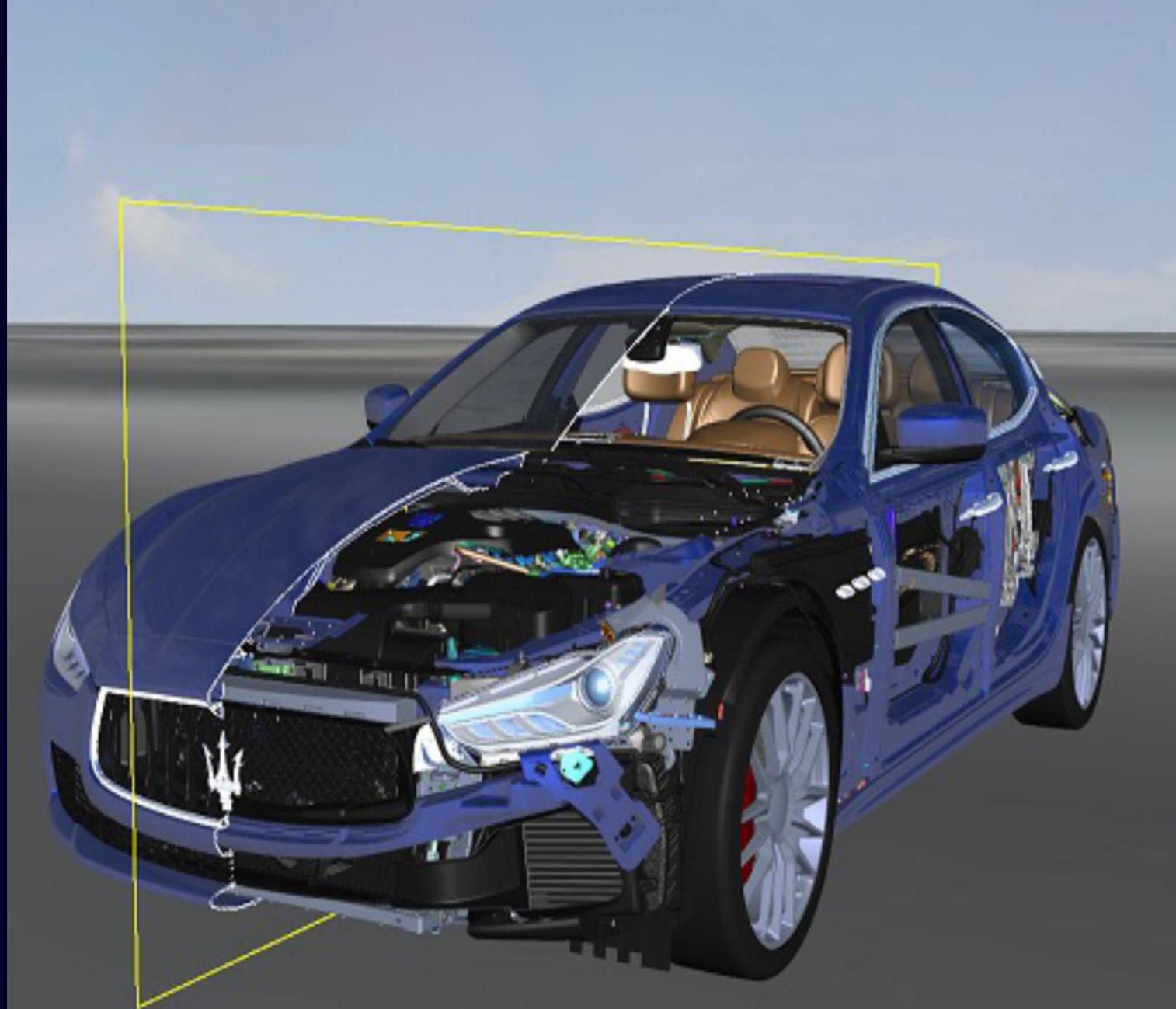


# Comprehensive Digital Twin

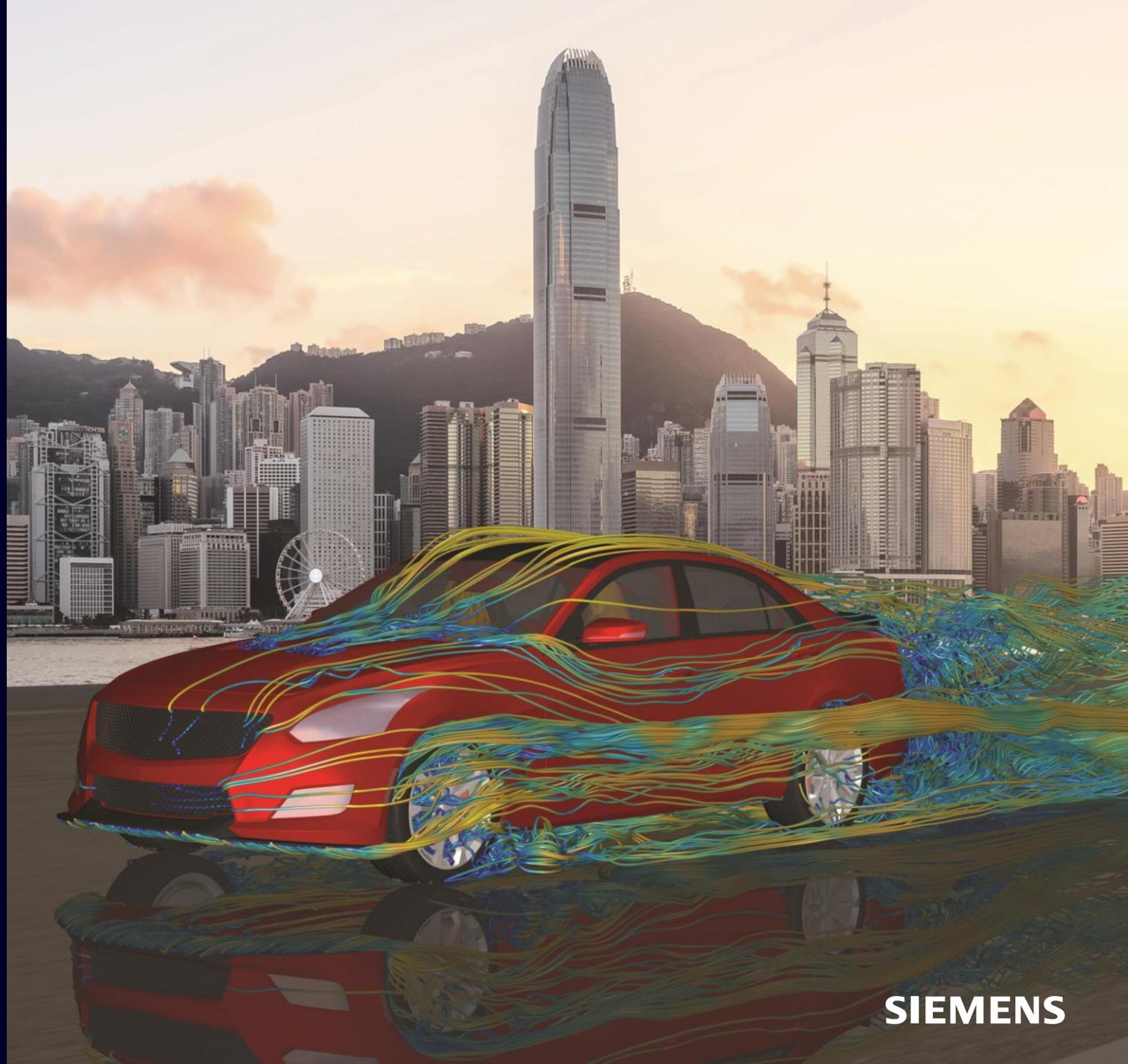
The most complete  
digital representation  
of a product or factory



**Design and  
manage all data  
and processes**



# Predict performance through simulation software



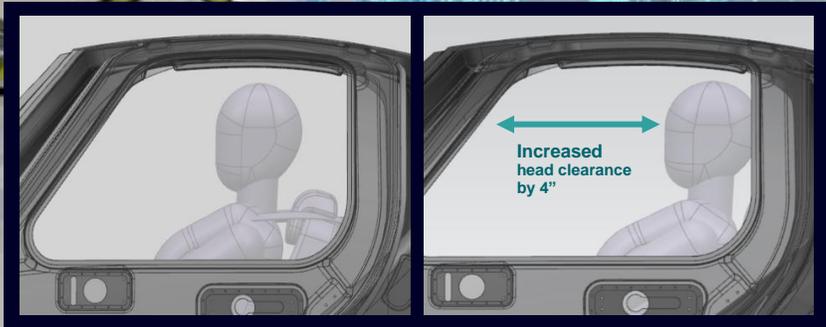
**Enable  
comprehensive  
system design  
with electrical  
and electronics  
engineering**



# Connect products, plants and systems with MindSphere, the Industrial IoT as a service solution



# Productivity



COMPANY CORE  
TECHNOLOGY  
**Simulation  
and Digital  
Twin**

BYE AEROSPACE

## Reducing product development time for all-electric composite aircraft

### Customer challenge

- Develop and deliver aircraft with low operating costs, low noise and no CO<sub>2</sub> emissions for general aviation
- Optimize plane stability while working from home

### Solution

- Leverage a comprehensive digital twin

### Customer benefit

- Reduced product development time
- Decreased engineering effort by 66%
- Only 7 days to re-design, test and create reports for certification through digital twin

Mendix allows any user to create personalized apps

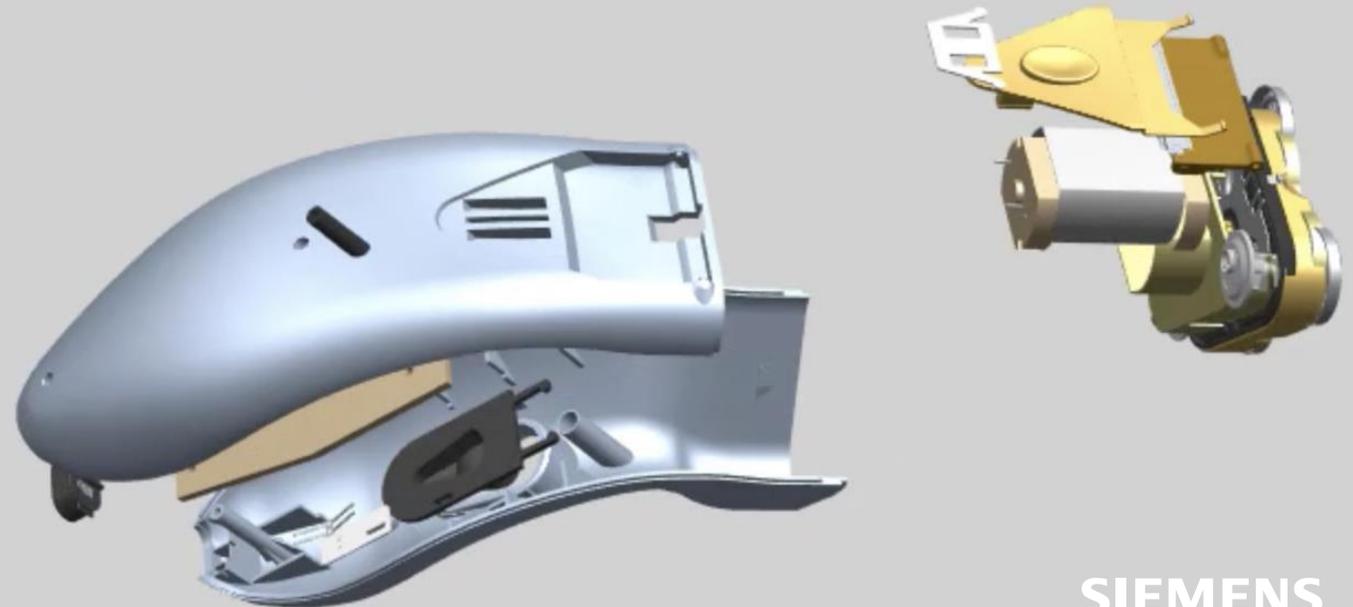


Open Model ✕

Data Source  Visualization Service  
 Teamcenter  
 DataHub  
 Mendix

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Engine_Assembly.jt	Open	Details	Delete
ElectricRazor_assm_LW.jt	Open	Details	Delete
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1 2



# An open architecture enables interoperability

>4m users of  
3D modelling engine

De facto standard  
in visualization

~200,000  
Ecosystem developers



>10m marketplace members



# Siemens Software: A growth story



Market expansion



DI Software business revenue FY 20



Industrial software





# Increased demand for digital transformation



# Enabling companies to become Digital Enterprises

Siemens is the best positioned company in the world to bring together IT and OT



# Sustainability

COCA-COLA HELLENIC BOTTLING COMPANY

## Reduced energy usage and improved sustainability

### Customer challenge

Improve bottling plant efficiency and reduce emergency downtime

### Solution

- Implement an end-to-end solution
- Developed MindSphere app for predictive maintenance
- Connect machines from sensors to edge to cloud

### Customer benefit

- >4% Reduction in equipment performance loss
- Eliminated 4 emergency downtimes in first 6 months
- 13% energy use reduction; 110,000 EUR savings in first year

 **Coca-Cola**  
Hellenic Bottling Company

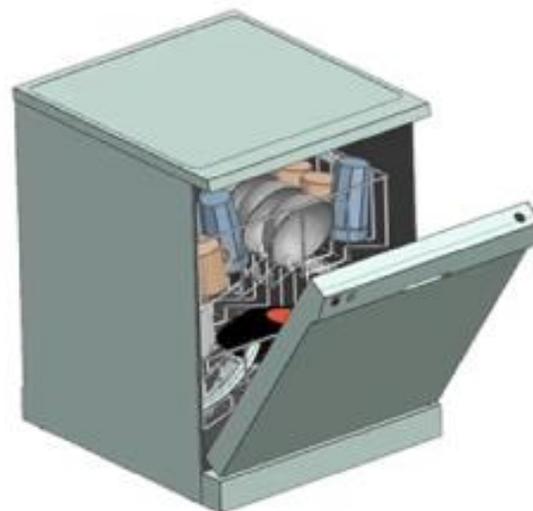
COMPANY CORE  
TECHNOLOGY

**Data  
Analytics  
& AI**

## Transforming to become a SaaS business

SaaS connects engineers, suppliers and ecosystems

- Ad-hoc collaboration for engineers
- Personalized experiences
- Access to the right data, anywhere, any device



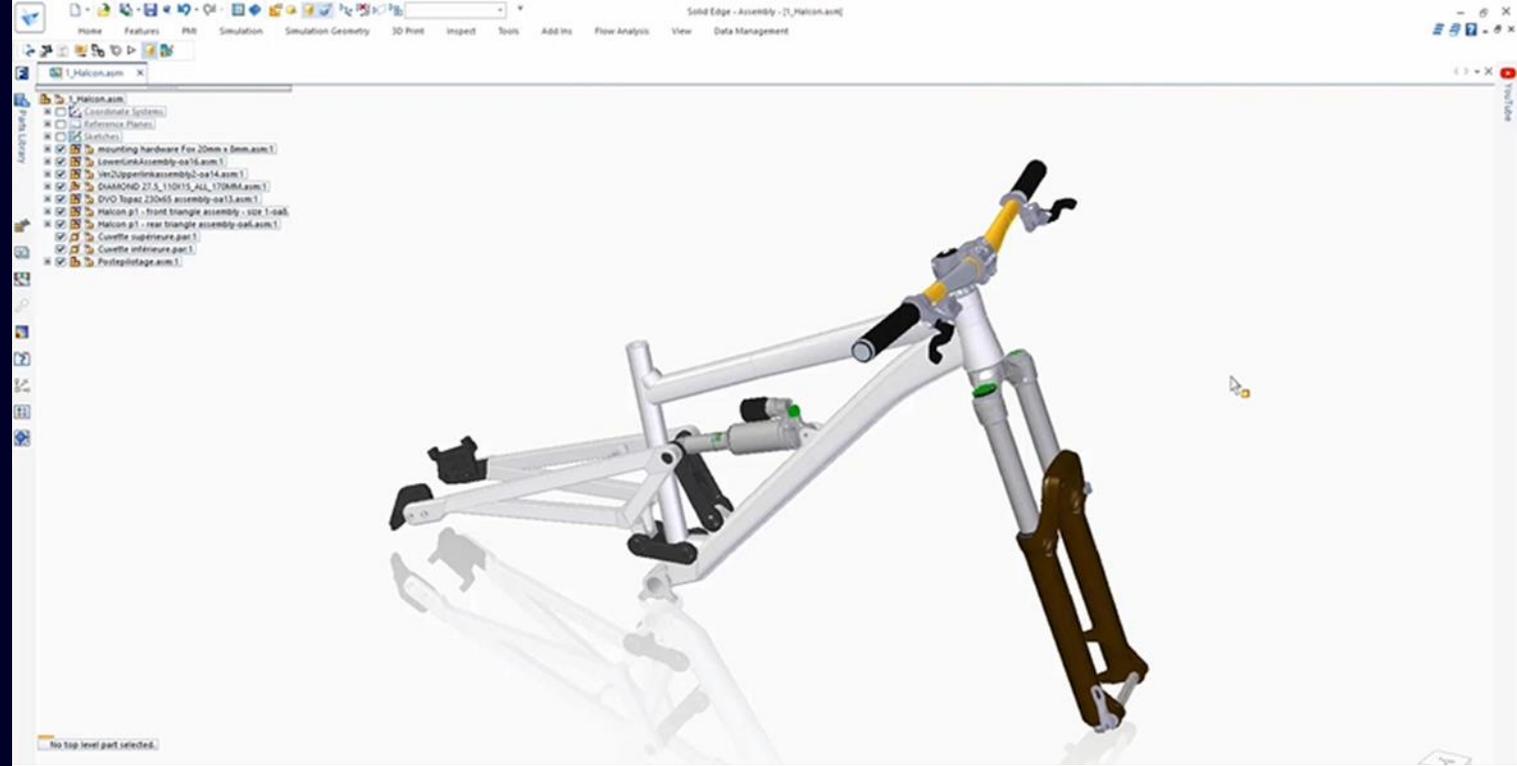
Simcenter STAR-CCM+



## SaaS – Good for large and small companies

Allows customers to focus on innovation while we manage infrastructure and IT

- Effortless scalability
- Faster innovation
- Easier access



# SaaS and Cloud create opportunities for Siemens

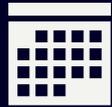
New markets



New ways of working

New adopters

# Offering customers freedom of choice



Subscription



Cloud



Perpetual



On-premises

# Transition to SaaS will drive resilient, predictable growth for Siemens



Easier  
access

Additional  
monetization

Capture  
insights

On demand  
capabilities

Higher lifetime  
value of  
subscription

## A commitment to future growth

**>10%**

**CAGR for  
Software ARR**

# Based on its strong market positions Digital Industries will extend its leadership through four growth levers



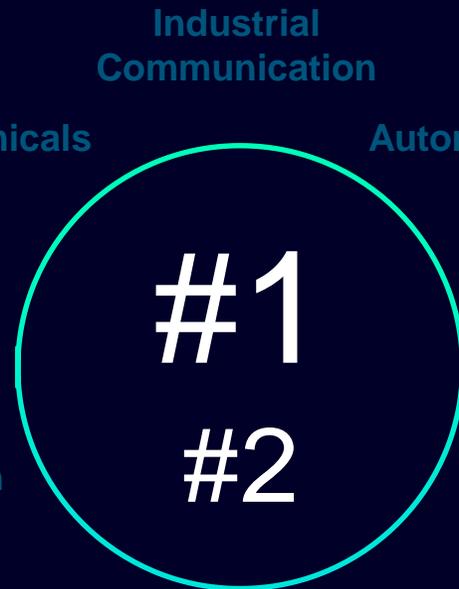
## Existing customers

- Integrated digital thread
- Sensors to edge to cloud
- Product to production to service



## Regions

- Leaders in growth regions
- Additional untapped market potential
- Next wave growth regions



## Verticals

- Domain know-how
- Lighthouse to broad market
- Automation and Digitalization

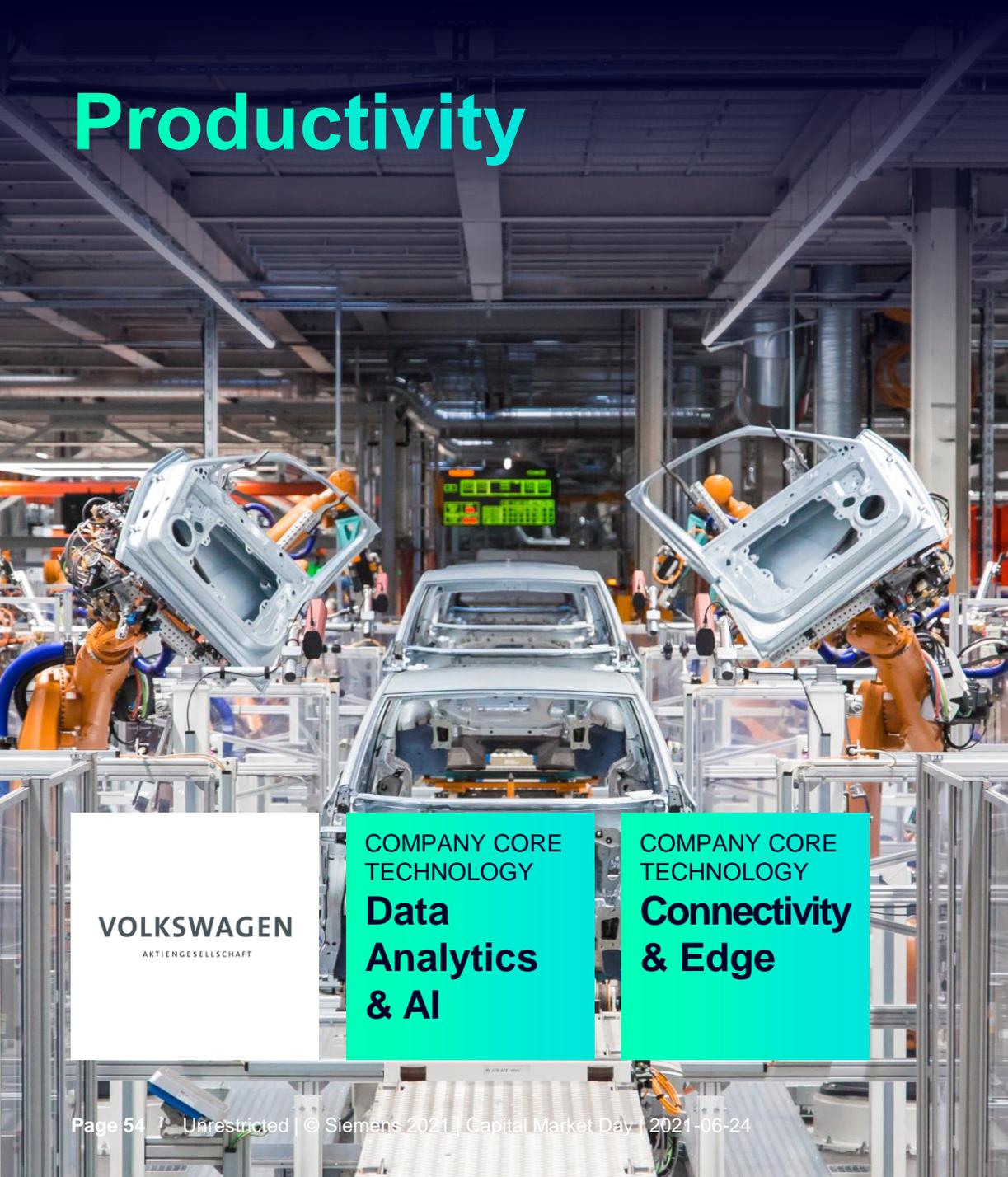


## Small and Medium Businesses

- Fit2Purpose offering
- Increased coverage (digital + channel + partner)



# Productivity



**VOLKSWAGEN**  
AKTIENGESELLSCHAFT

COMPANY CORE  
TECHNOLOGY

**Data  
Analytics  
& AI**

COMPANY CORE  
TECHNOLOGY

**Connectivity  
& Edge**

VOLKSWAGEN

## Land and expand: Linking existing automation equipment to the cloud via the Industrial Cloud

### Customer challenge

- Efficiency improvement for production, logistics and supply chain through data transparency and advanced analytics

### Solution

- Joint development of use cases with Volkswagen, e.g.:
  - App for predictive quality assurance of spot welds using Siemens MindSphere and Siemens Industrial Edge
  - Predictive maintenance in press shop
  - Tool management via Mendix app

### Customer benefit

- Efficient networking of production systems, machinery and equipment at Volkswagen Group plants globally
- Co-creation of automotive solutions which will be made available to the Industrial Cloud community

# Productivity



COMPANY CORE  
TECHNOLOGY

**Data  
Analytics  
& AI**

SWIRE COCA-COLA

## Expanding our leadership position in growth verticals

### Customer challenge

- Improve line performance and availability

### Solution

- Tracking and analysis of downtimes
- Customized manufacturing information system and mobile app for asset overview, faster fault diagnosis and predictive maintenance

### Customer benefit

- Unlock annual production capacity of 550 million cans
- Benchmark and standard for Swire Coca-Cola worldwide: to be extended to 100 production lines in next two years
- Starting point for building 18 digital plants in the future and saving 10 million kWh of electricity p.a.

# Speed Quality



WOLF OF THE WILLOWS

## Broaden footprint of Industry 4.0 with small and medium-sized enterprises

### Customer challenge

- Lockdown boosted demand for different varieties of canned beers
- Ramp up production in short time for microbrewery Wolf of the Willows

### Solution

- Integrated automation and software solution with partner Deacam (Fermecraft)
- Linking of all different, separated components and data that are part of brewing process: reaction of ingredients, temperature, state of fermentation, etc. and streamlining the different processes

### Customer benefit

- Rapidly scaled up production and tripled capacities
- Reduced ferment time from 25 to 18 days

Addressing value drivers:  
**growth, resilient revenue,  
profitability and cash  
conversion rate**

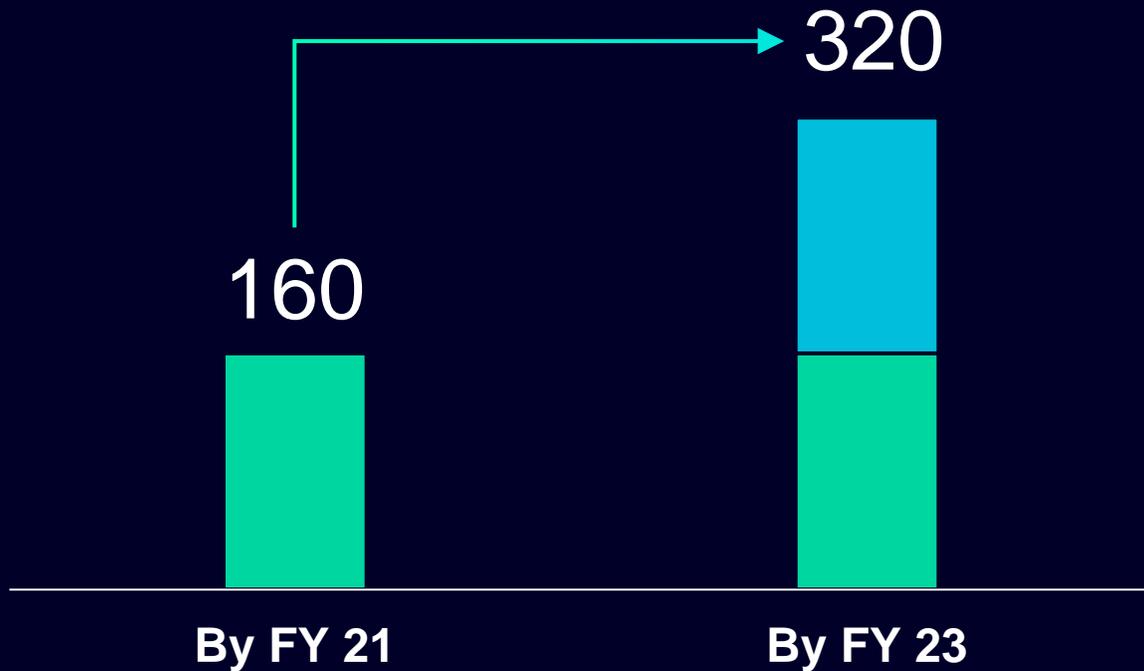
- Continuous Productivity
- Flexible cost structure
- Efficient asset management
- Stringent capital allocation

# Continuous productivity

DI will overachieve its CMD 2019 cost savings commitment

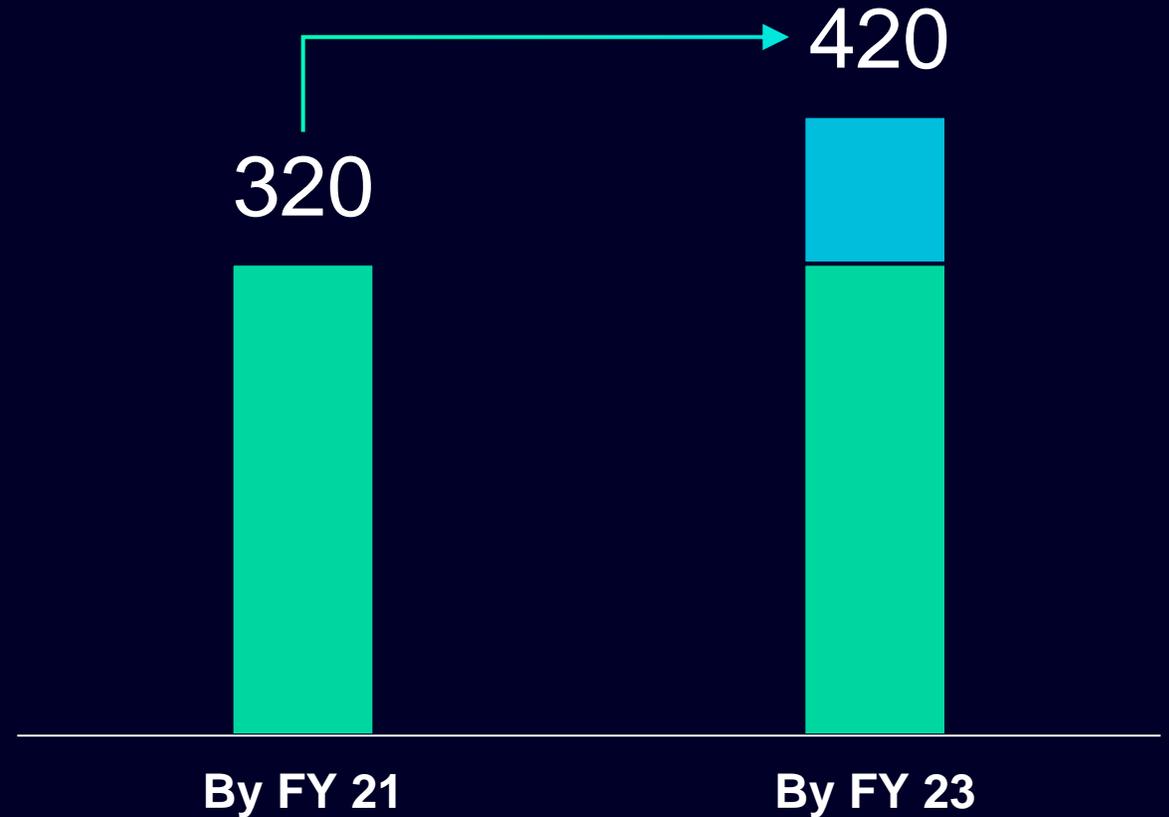
## CMD Commitment 2019

Cumulative savings in million €



## Updated forecast 2021

Cumulative savings in million €



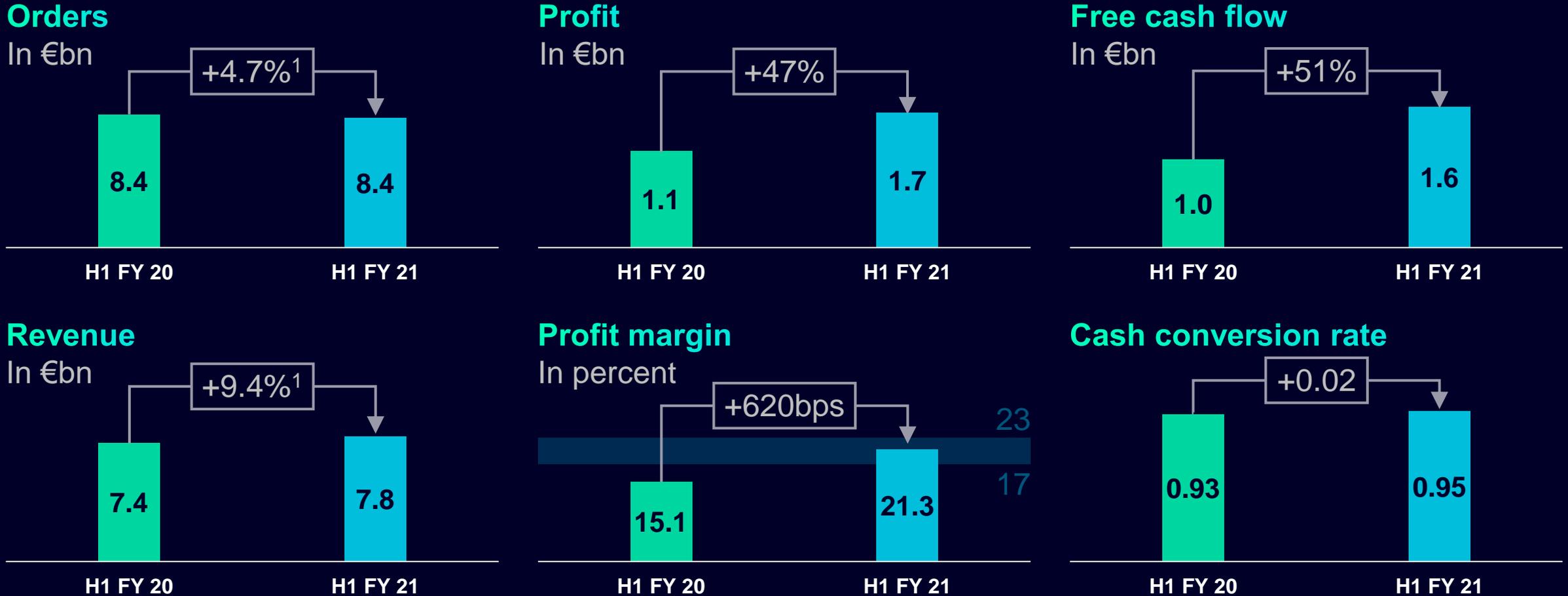
# Flexible cost structure

We will continue to focus on additional levers to take DI to the next level



# Efficient asset management

Converting growth into profit and cash | H1 Proven financial performance



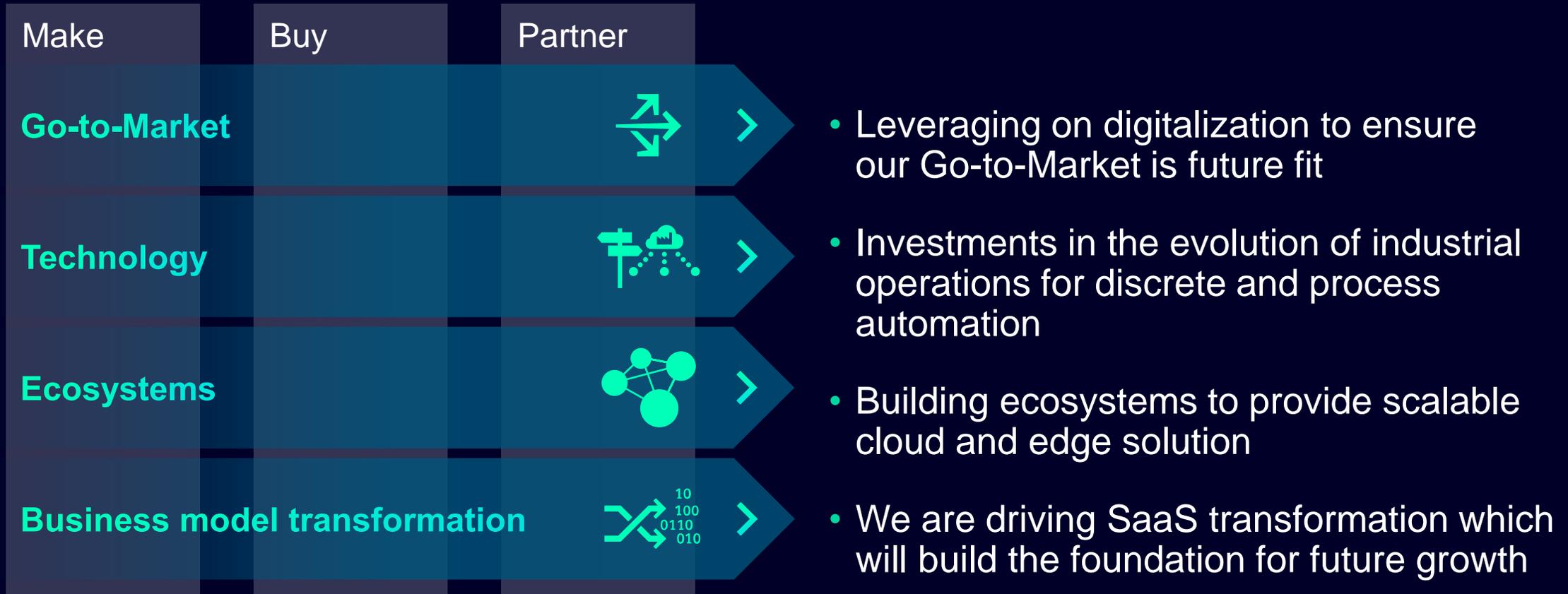
<sup>1</sup> Comparable growth

## Stringent capital allocation

We allocate capital efficiently to ensure future growth and profit pools

## Focused investments ensure DI's future value creation

Overview on DI's investment areas



# A powerhouse combining the real and digital worlds

## Digital Industries

Revenue split



€15.0bn  
FY 20

## Software

Revenue split



€4.1bn  
FY 20

72%  
Automation  
incl. Service

28%  
Software

33%  
EDA

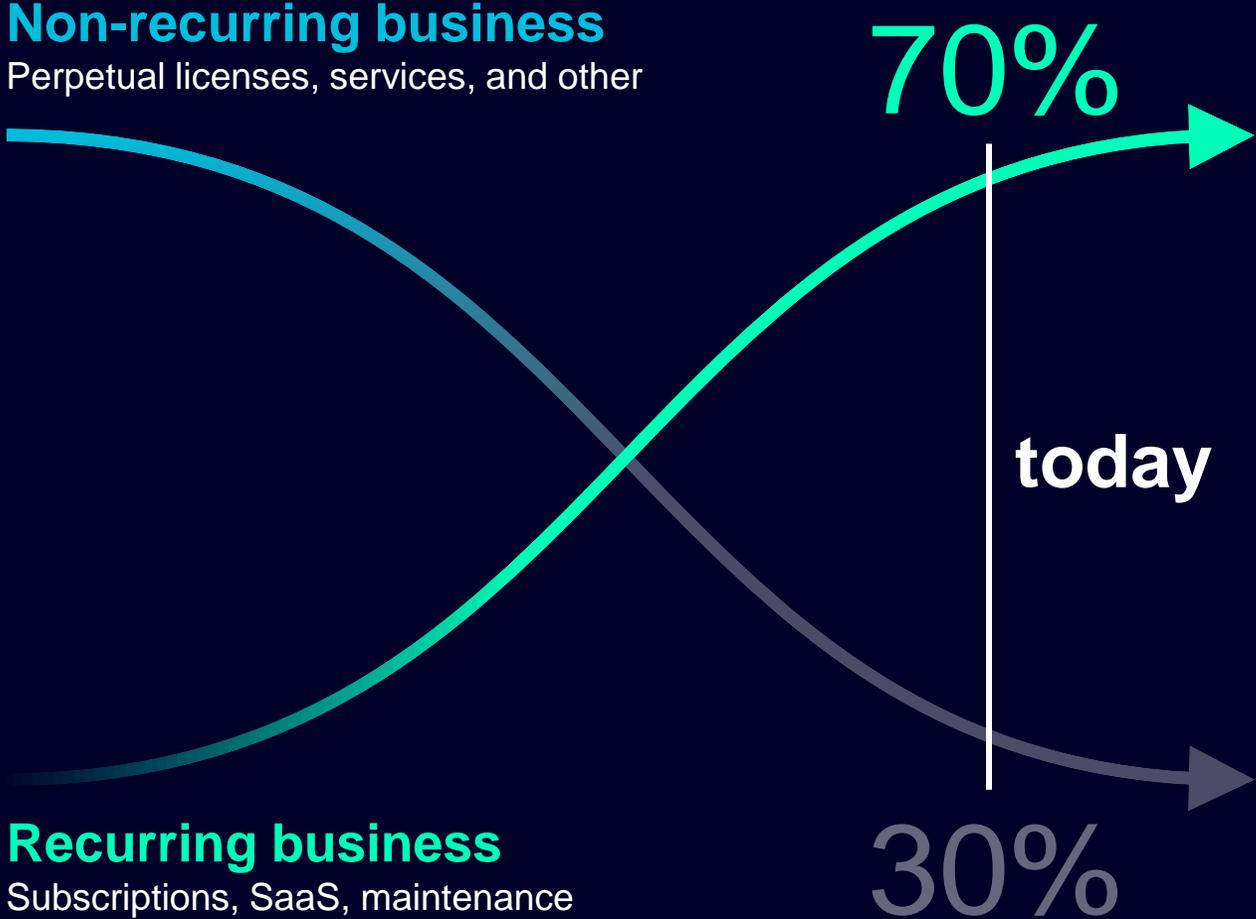
2%  
Mendix and  
MindSphere

65%  
PLM

Transition to SaaS  
starting 2022

# Resilient recurring business models

**Successful shift**  
towards resilient  
recurring business  
models



## ARR as key performance indicator to monitor this resilient business stream

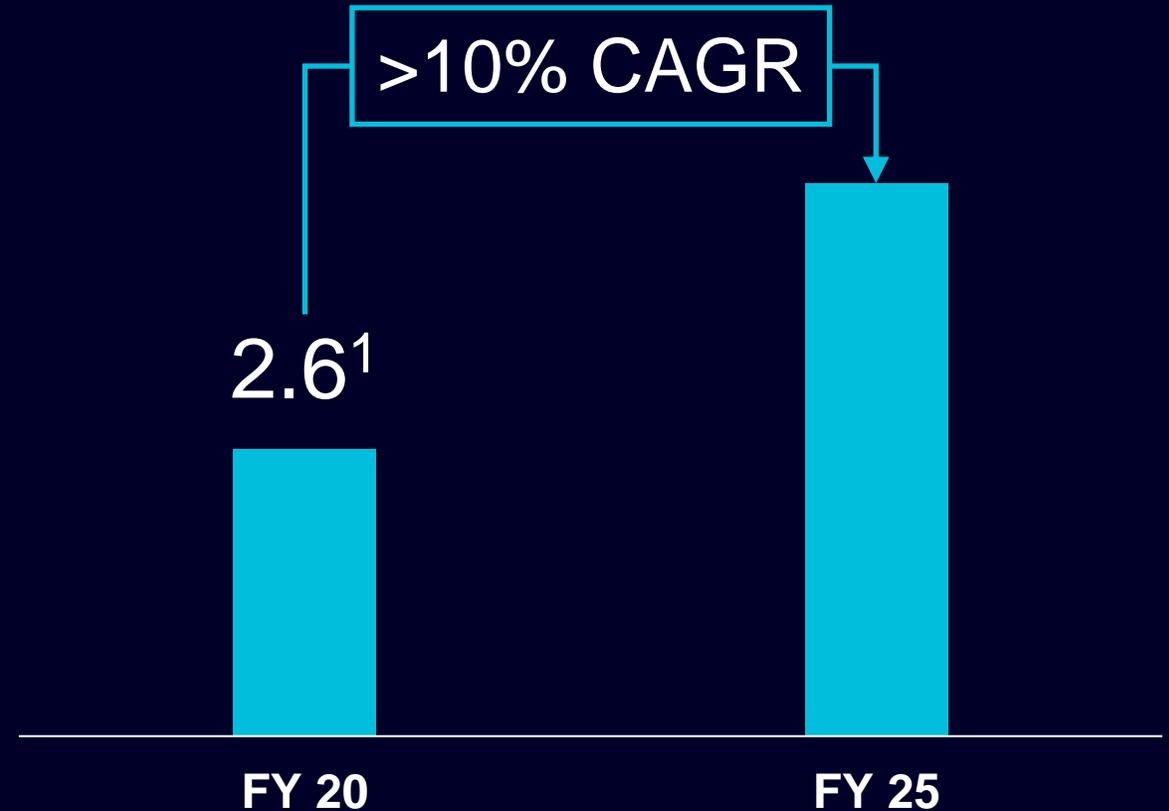
$$\text{ARR} = \sum \frac{\text{Total contract value of a new subscription order}}{\text{its contract length in month(s)}} \times 12$$

## Digital Industries Software

Highly accretive growth of recurring business will drive **value of transformation**

### Annual Recurring Revenue

In billion €



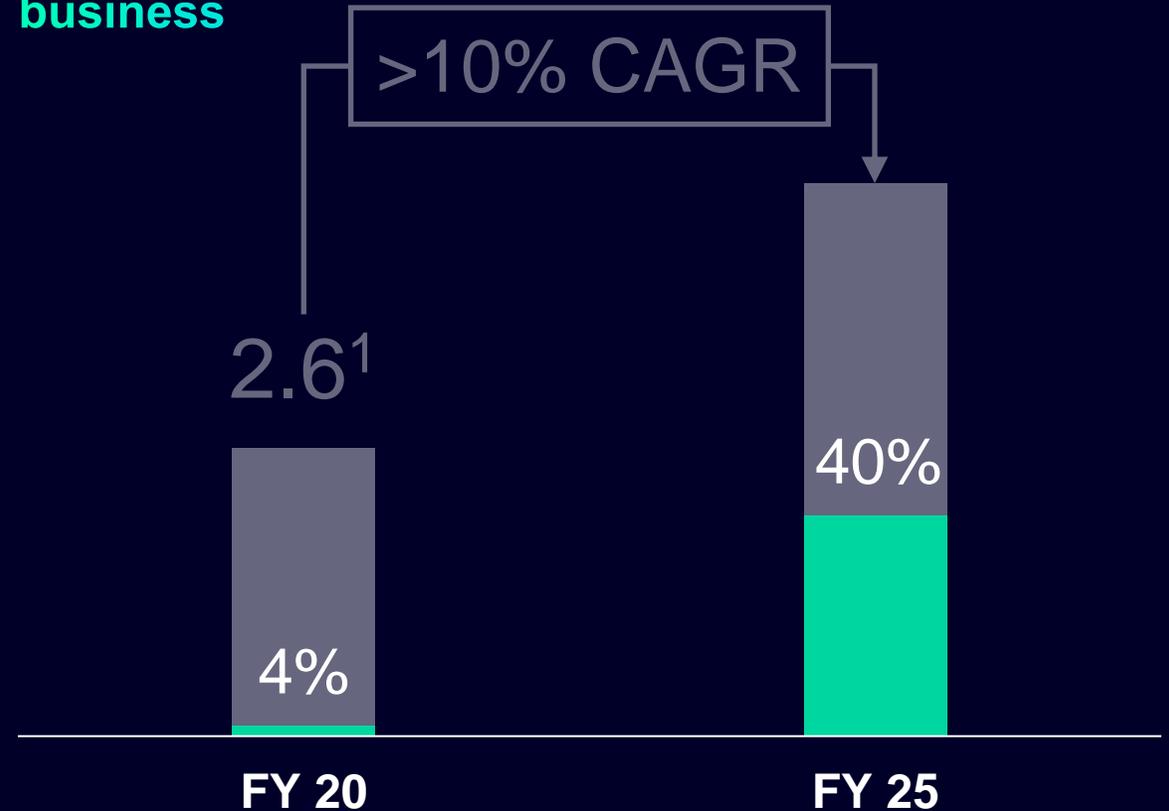
<sup>1</sup> Indication; non-audited, non-IFRS operational metric

**Cloud business**  
to represent more  
than 40%  
of subscription  
businesses by 2025

Annual Recurring Revenue

In billion €

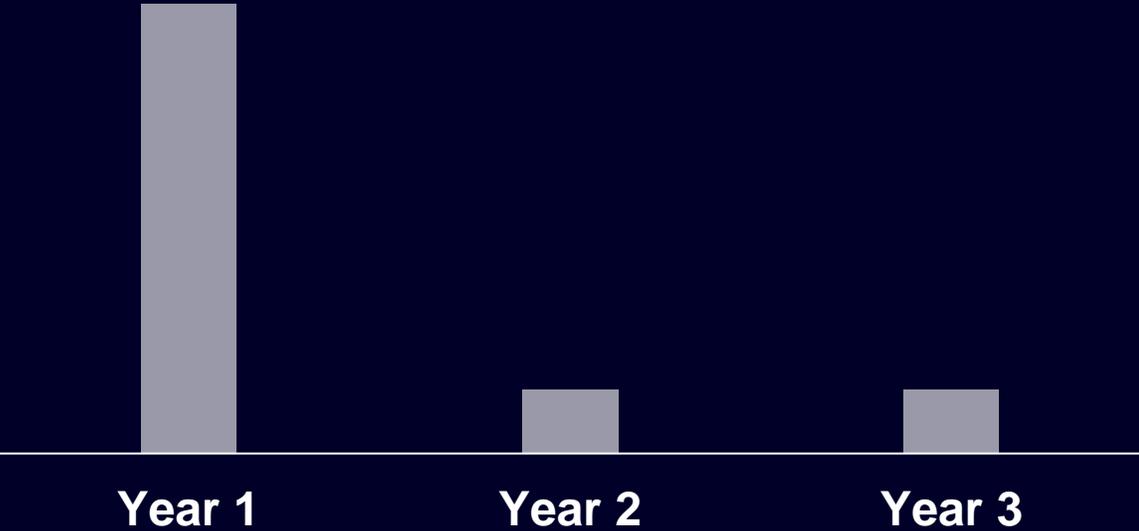
**Thereof cloud  
business**



<sup>1</sup> Indication; non-audited, non-IFRS operational metric

# Digital Industries Software

Up-front revenue recognition



Ratable revenue recognition



# SaaS Transition and its impact

## Digital Industries Software

Revenue development



### Phase 0

On/above market growth



### Phase 1

Start of transition  
Flat revenue growth  
(dilution effect)



### Phase 2

High growth due to base effect



### Phase 3

Harvesting sustainable growth potentials of SaaS

2021

## Digital Industries

Profit margin impact



- Investment in SaaS transition, Mendix and MindSphere comparable to recent years
- Continued strong DI FCF during transformation
- DI Profit continue to grow, profit margin will be back to FY 21 level by year 4

# DI SW business transformation

## Summary

**1** | **ARR is expected to grow**  
at a CAGR > 10% until  
2025

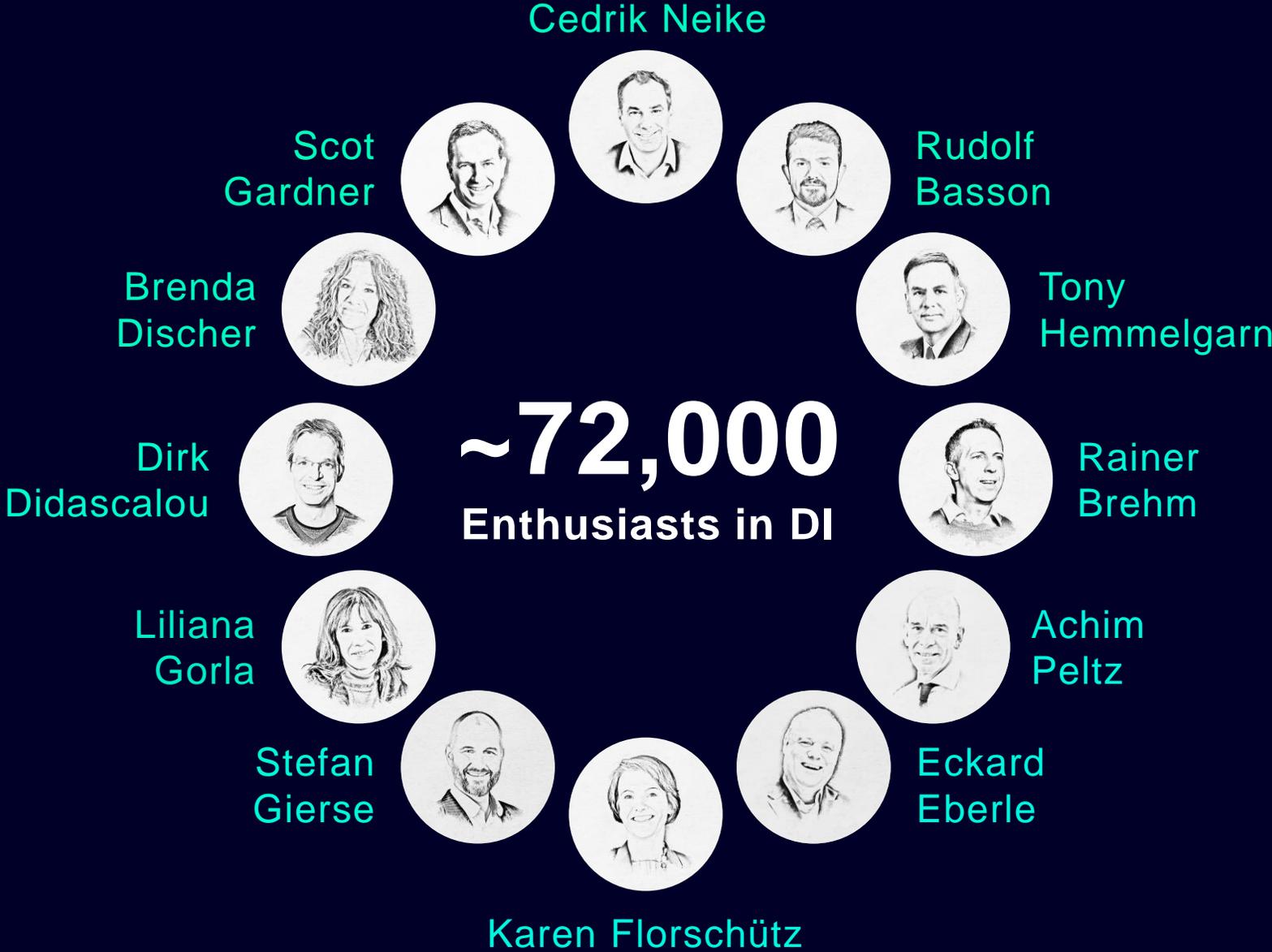
**2** | **Stable revenue in FY 22**  
despite switch to ratable

**3** | **Investment covered**  
by capital reallocation

**4** | **Continued strong FCF**  
during transformation

# Commitment of global leadership team

CMD 2021



# Digital Industries Financial commitments

Targets over 3–5 year cycle



**Comparable  
revenue growth**



**CAGR for  
Software ARR**



**Profit margin**



**Cash conversion  
rate (CCR)**