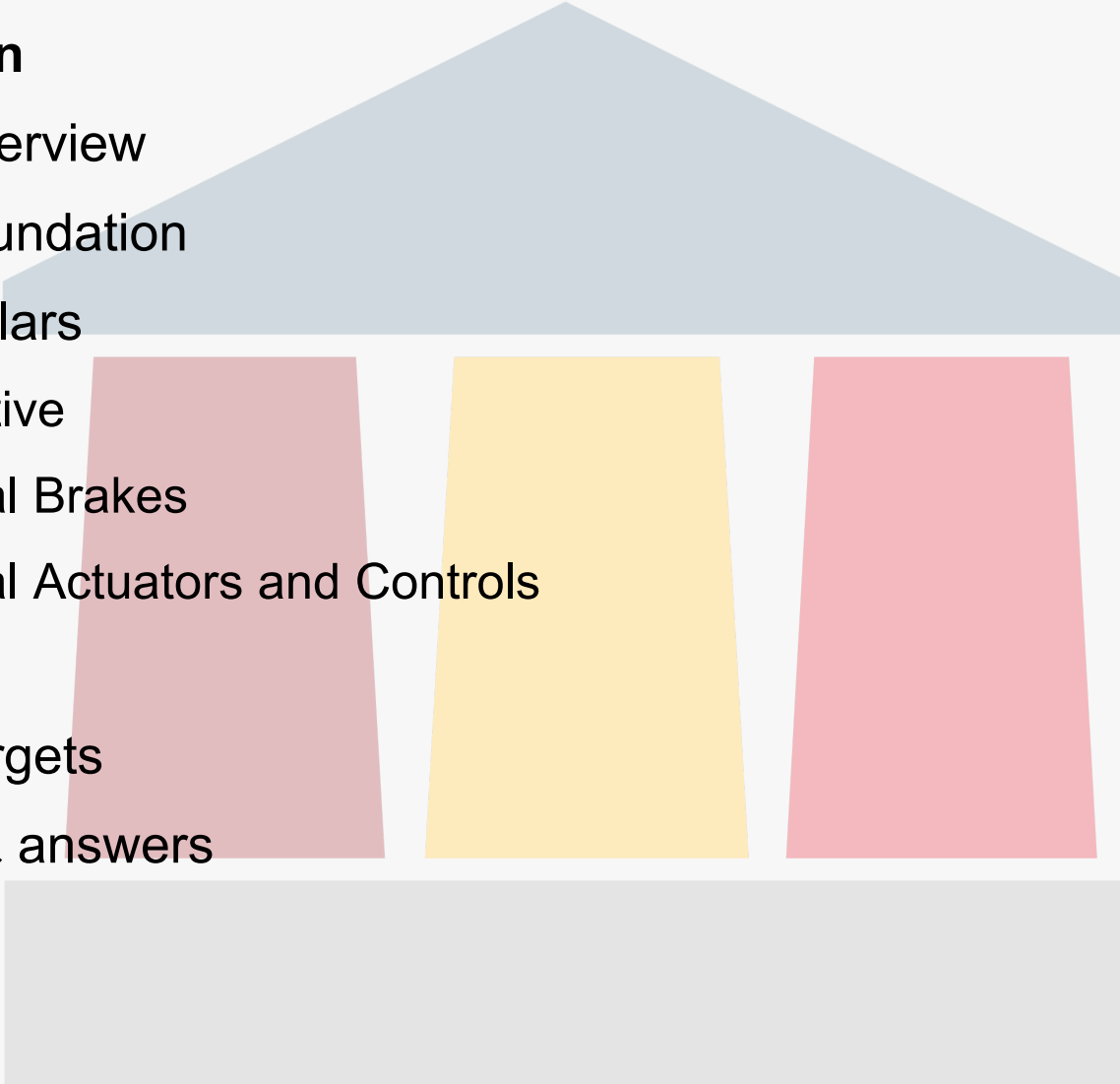




# CAPITAL MARKETS DAY

Amsterdam, 10 September 2020

# AGENDA

- 
- **Introduction**
  - Strategic overview
  - Kendrion foundation
  - Business pillars
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - Questions & answers

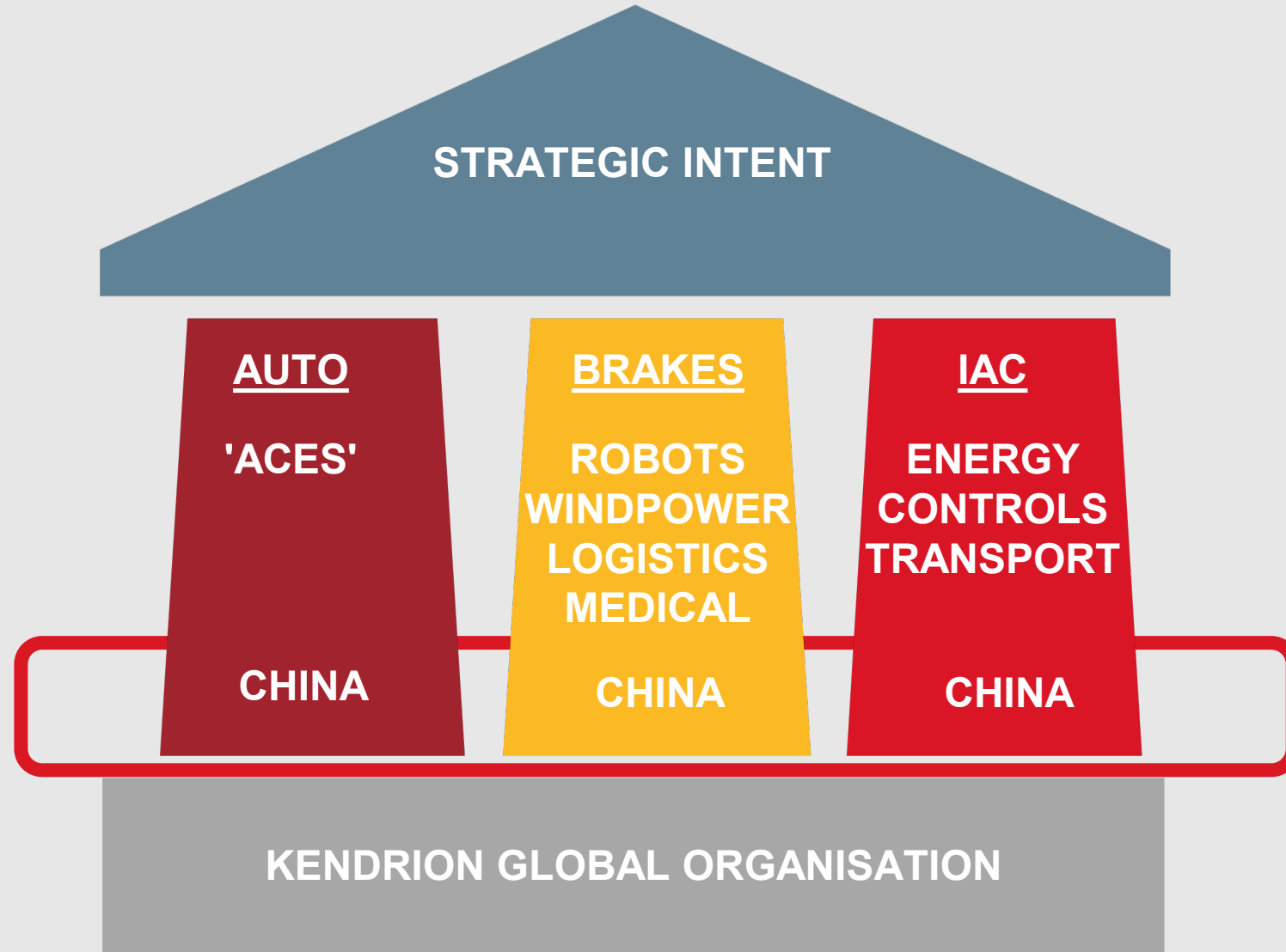
## CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS

Certain statements contained in this presentation constitute forward-looking statements. These statements may include, without limitation, statements concerning future results of operations, the Company's share of new and existing markets, general industry and macro-economic trends and the Company's performance relative thereto and statements preceded by, followed by or including the words "believes", "expects", "anticipates", "will", "may", "could", "should", "intends", "estimate", "plan", "goal", "target", "aim" or similar expressions. These forward-looking statements rely on a number of assumptions concerning future events and are subject to uncertainties and other factors, many of which are outside the Company's control that could cause actual results to differ materially from such statements.

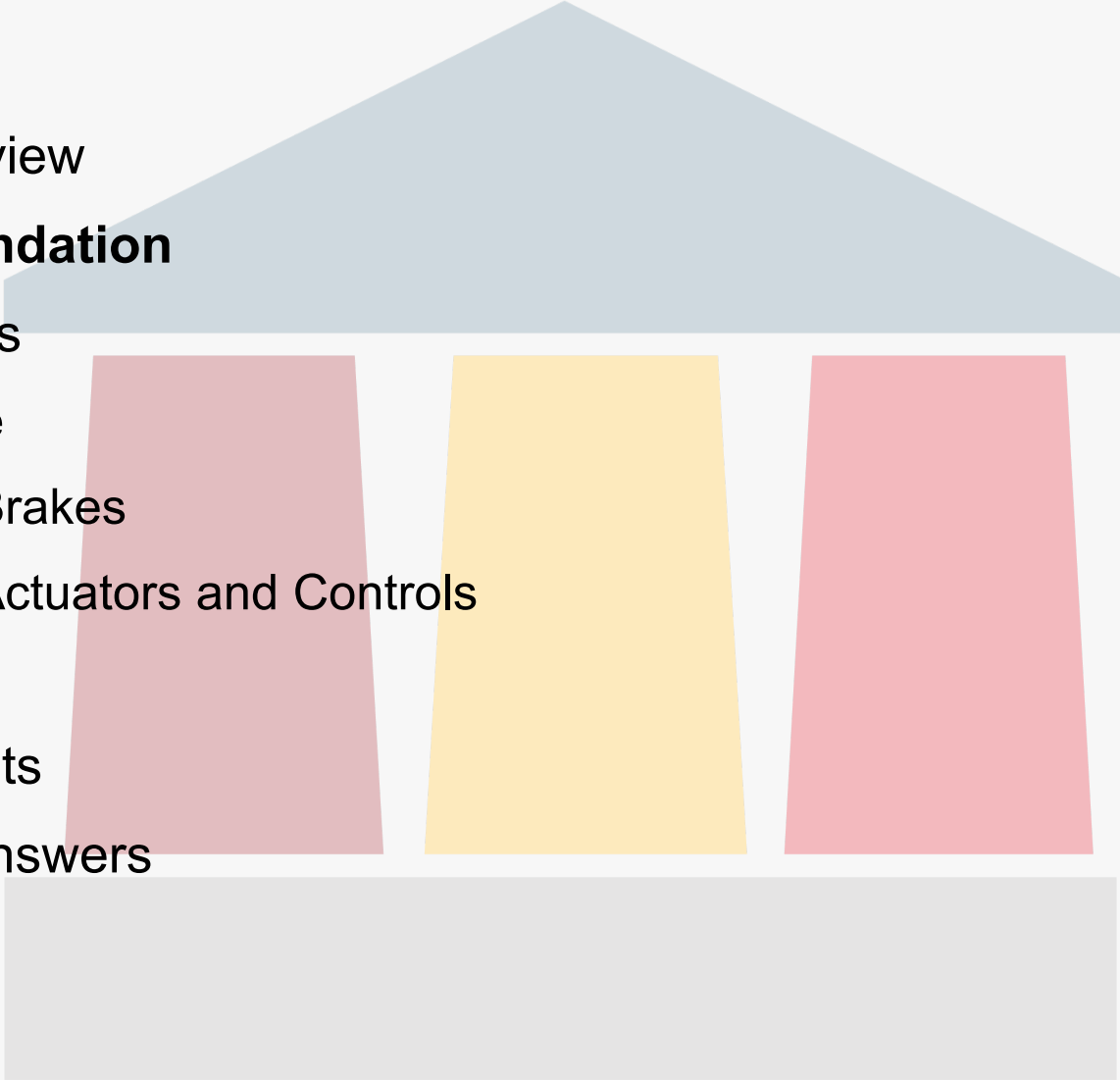
## AGENDA

- 
- Introduction
  - **Strategic overview**
  - Kendrion foundation
  - Business pillars
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - Questions & answers

# KENDRION STRATEGIC HOUSE

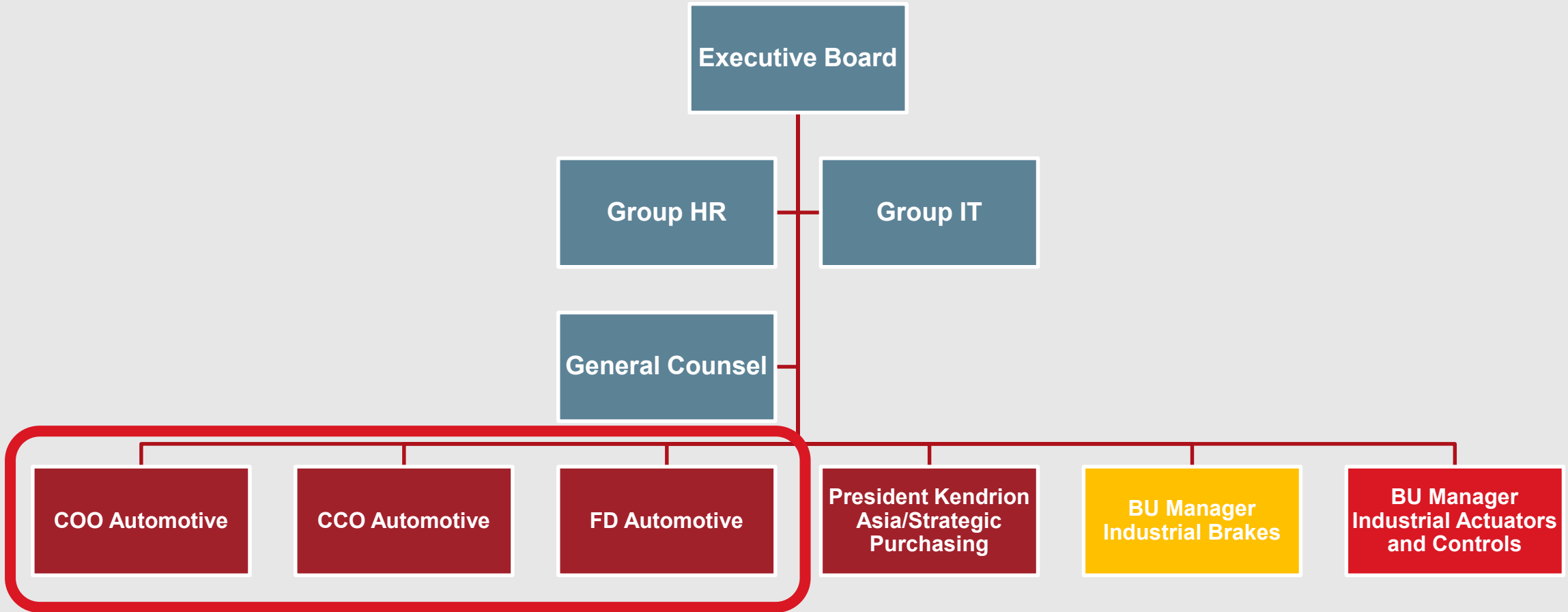


## AGENDA

- 
- Introduction
  - Strategic overview
  - **Kendrion foundation**
  - Business pillars
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - Questions & answers



# KENDRION ORGANISATION





# IT STRATEGIC FRAMEWORK

## Value-Add

Unleash the power of technology

### SIMPLIFICATION



4

### DATA INSIGHT



5

### DIGITALISATION



6

## Organisation

Right structure  
for successfully execution

### MINDSET



1

### RIGHT-SOURCE



2

### SECURITY



3

## Foundation

Tactical. Enable business activities

### KEEP THE LIGHTS ON

(infrastructure, business support, manufacturing)





## IT KEY INITIATIVES

### In Progress

Strengthen the organisation.  
Prepare for the future

- **Strengthened IT** with new leadership
- Rolled out comprehensive **security framework**
- Invested in **Mobile Workplace**. Made working from home seamless
- **Outsourcing** commodity activity

### To Come

Leverage technology  
To drive business performance

- Implement **Data Science** for intelligent **automation**
- Push **Digitalisation** of back office and manufacturing
- Complete the **INTORQ integration**, delivering synergies
- **Modernise applications**. Harmonise processes, increase automation



# CORPORATE SOCIAL RESPONSIBILITY

## Target framework 2019-2023

### Natural Capital

**15%**  
Relative reduction  
of energy  
consumption

**15%**  
Relative reduction  
of CO<sub>2</sub> emission

**Implementation of the waste management hierarchy**  
in global waste management practices

### Social and Human Capital

**Recurring annual improvement of health & safety figures**  
number of accidents per 1,000 FTE,  
lost time injury rate per 1,000 FTE,  
group-wide illness rate

**The establishment of a Global Diversity Committee,**  
responsible for advancing diversity

**The implementation of a global company culture campaign**

**Rewarding 10 community investment initiatives per year**  
through Together@Kendrion

### Responsible Business Conduct

**Maintain a responsible product portfolio**  
Products that Keep you Safe, Products that Reduce Climate Impact and Products that Improve Health

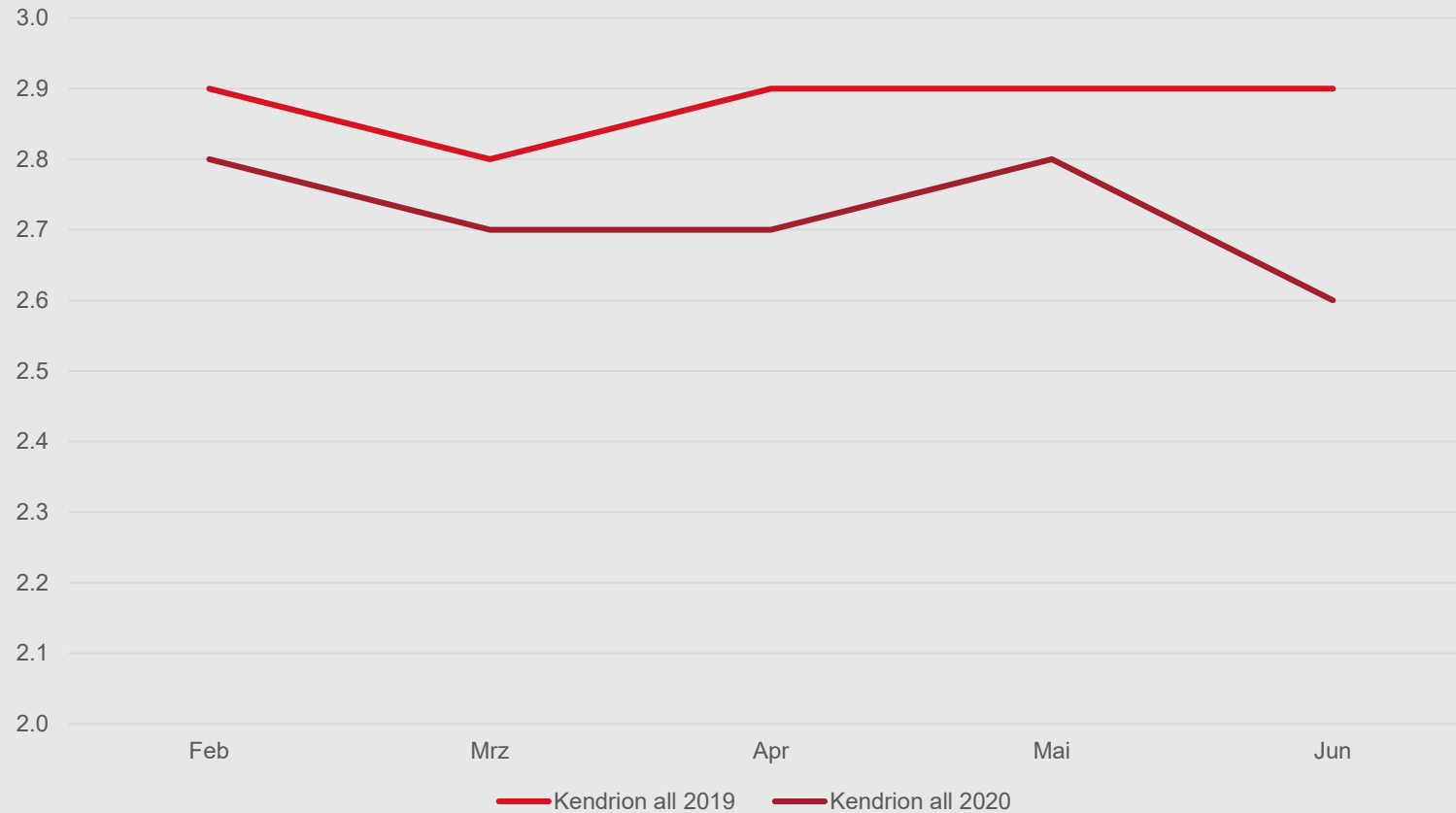
**Sustainable sourcing**  
Sourcing only from approved suppliers and conducting at least 25 implementation audits annually

**Continuous improvement and strengthening of the Global Legal Compliance and Governance Framework**  
to secure responsible business conduct



# DEVELOPMENT OF ILLNESS RATE (12-MONTHS ROLLING AVG)

In 2020, overall illness rate has declined





## THE KENDRION WAY

A global **TEAM** of actuator **SPECIALISTS**,  
with **COURAGE** to act,  
curiosity to **LEARN** and **SHARE**, confidence to  
learn from **MISTAKES** and successes, and open to  
**FEEDBACK**



Specialists



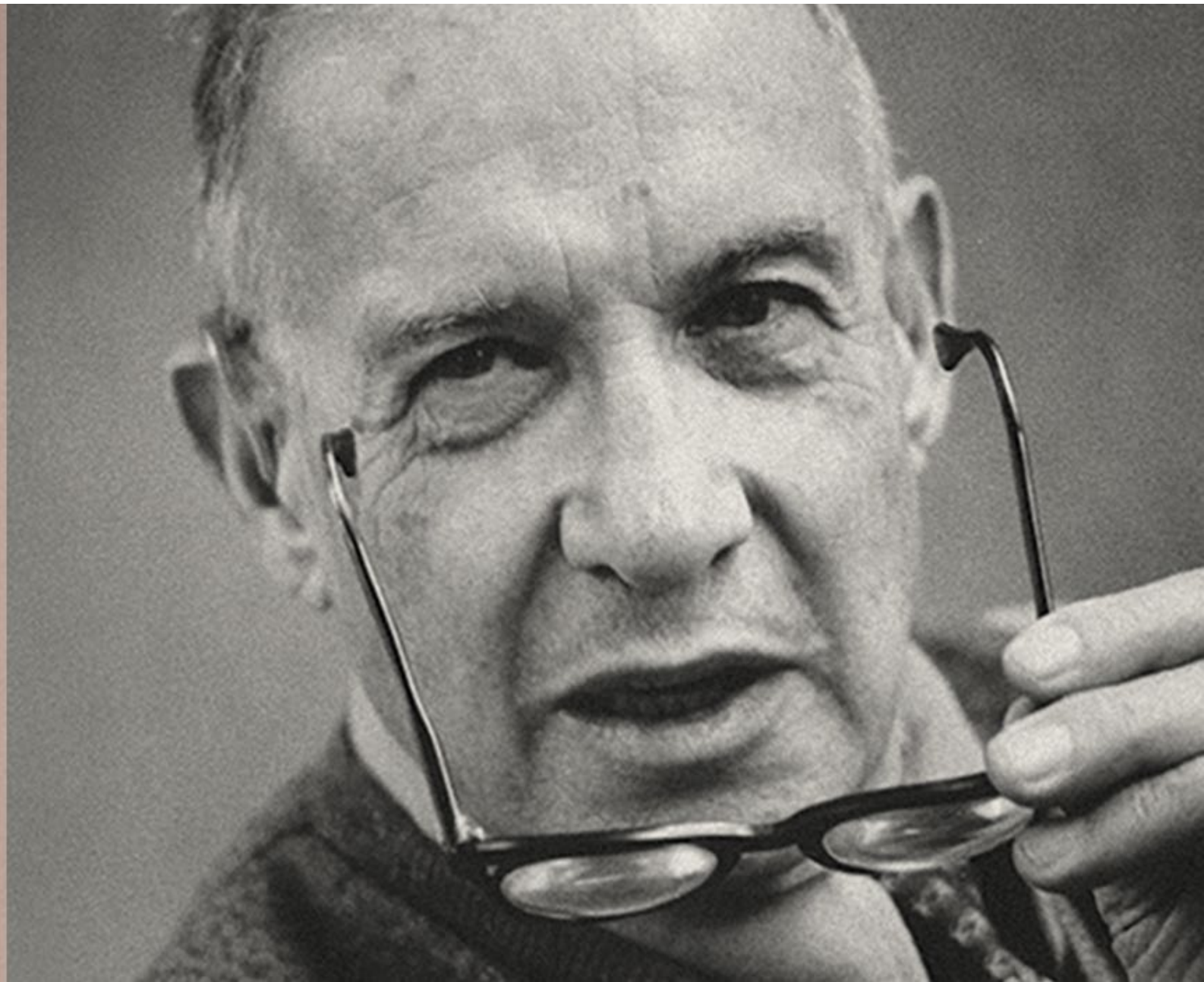
Courage



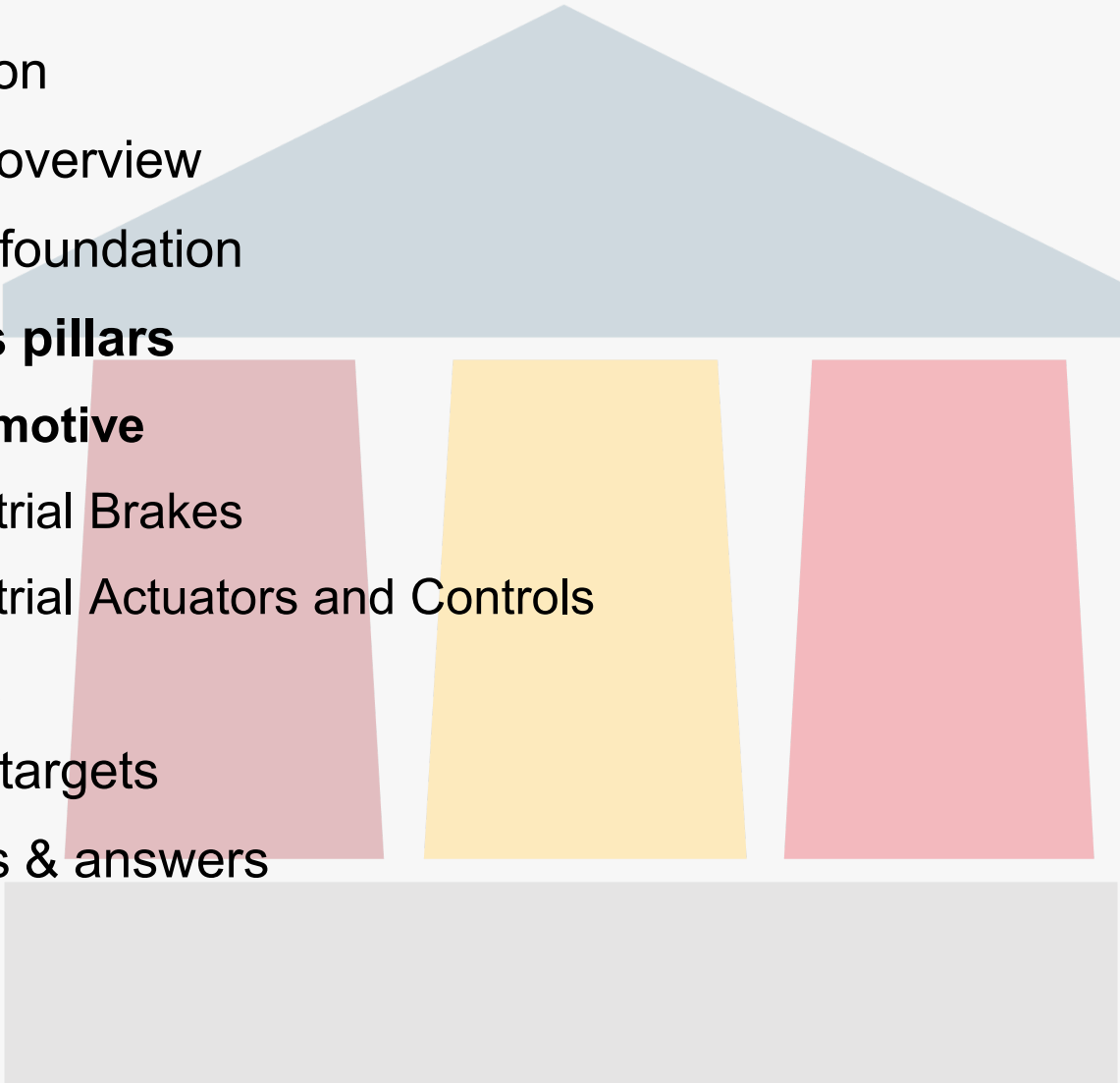
Feedback

**CULTURE  
EATS  
STRATEGY  
FOR  
BREAKFAST.**

*- Peter Drucker*



## AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - **Business pillars**
    - **Automotive**
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - Questions & answers



## DISRUPTIVE TRENDS

### ACES - Basis of our technology evolution

#### Autonomous



„By 2025 nearly all vehicles will be equipped with up to Level 3 autonomy“

#### Connected



„V2X will change the entire car electronics and how we use cars in the future“

#### Electrified



„By 2030 nearly all cars will be electrified and widely equipped with batteries“

#### Shared



„Car sharing instead of car owning will become an important trend“



# MOBILITY RE-DEFINED

## From combustion to electrification to autonomy

### Combustion only

2019: >90 %  
2025: 60 %  
2030: 10 %



### Electrified

2019: <10 %  
2025: 40 %  
2030: 85%



### Autonomous

2019: Level 1-2 40 %  
2025: Level 1-3 90 %  
2030: Level 4



**Market penetration light vehicles**





# **CAR ARCHITECTURE (R)EVOLUTION**

## **From mechanical to data-oriented vehicles**

Combustion engine  
Focus on engine  
Mechanical engineering  
Driving performance  
Comfort

Electrification  
Focus on software  
IT centric  
Data & service  
Connectivity

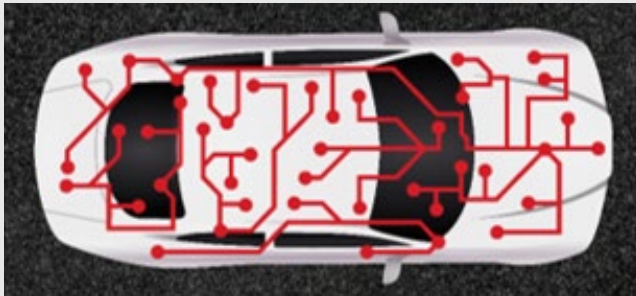




# THE CAR (R)EVOLUTION

## From mechanical to data-oriented vehicles

**1980-2020**

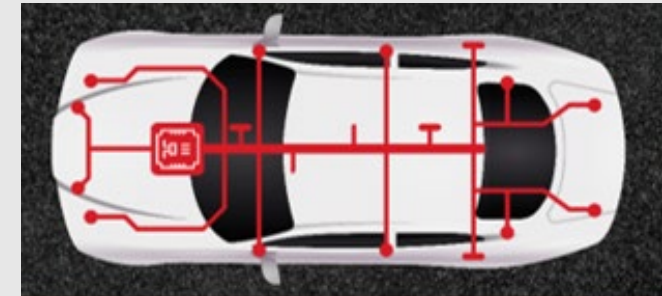


**70-100 distributed ECU's**  
**Complex system**  
**CAN-bus infrastructure**  
**Separated valves and ECU's**



**cars evolving to  
data-processing  
vehicles**

**2020+**

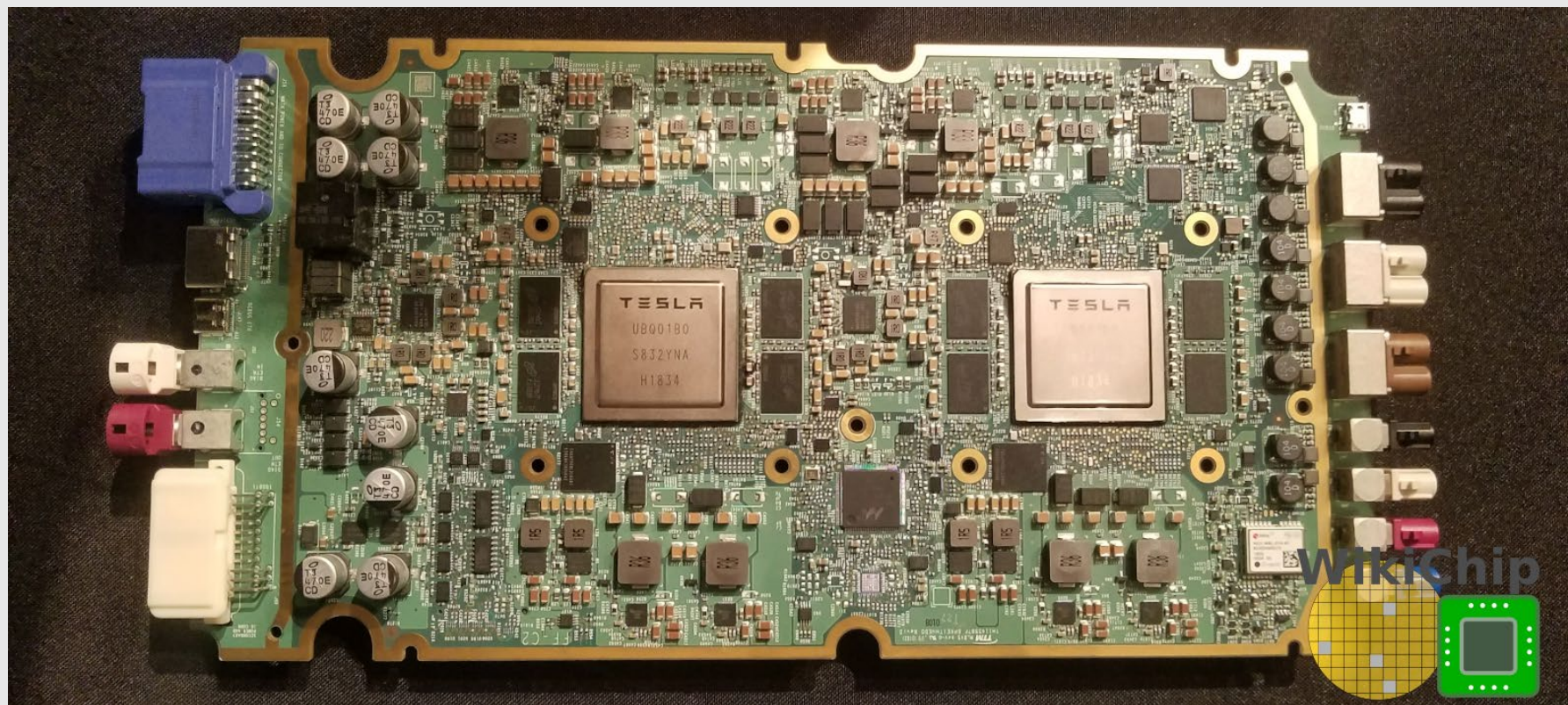


**2-3 Central car computers**  
**Server architecture**  
**Ethernet-based infrastructure**  
**Integrated smart actuators**



# TESLA FSD CENTRAL CAR COMPUTER

## FSD replacing most conventional ECU's

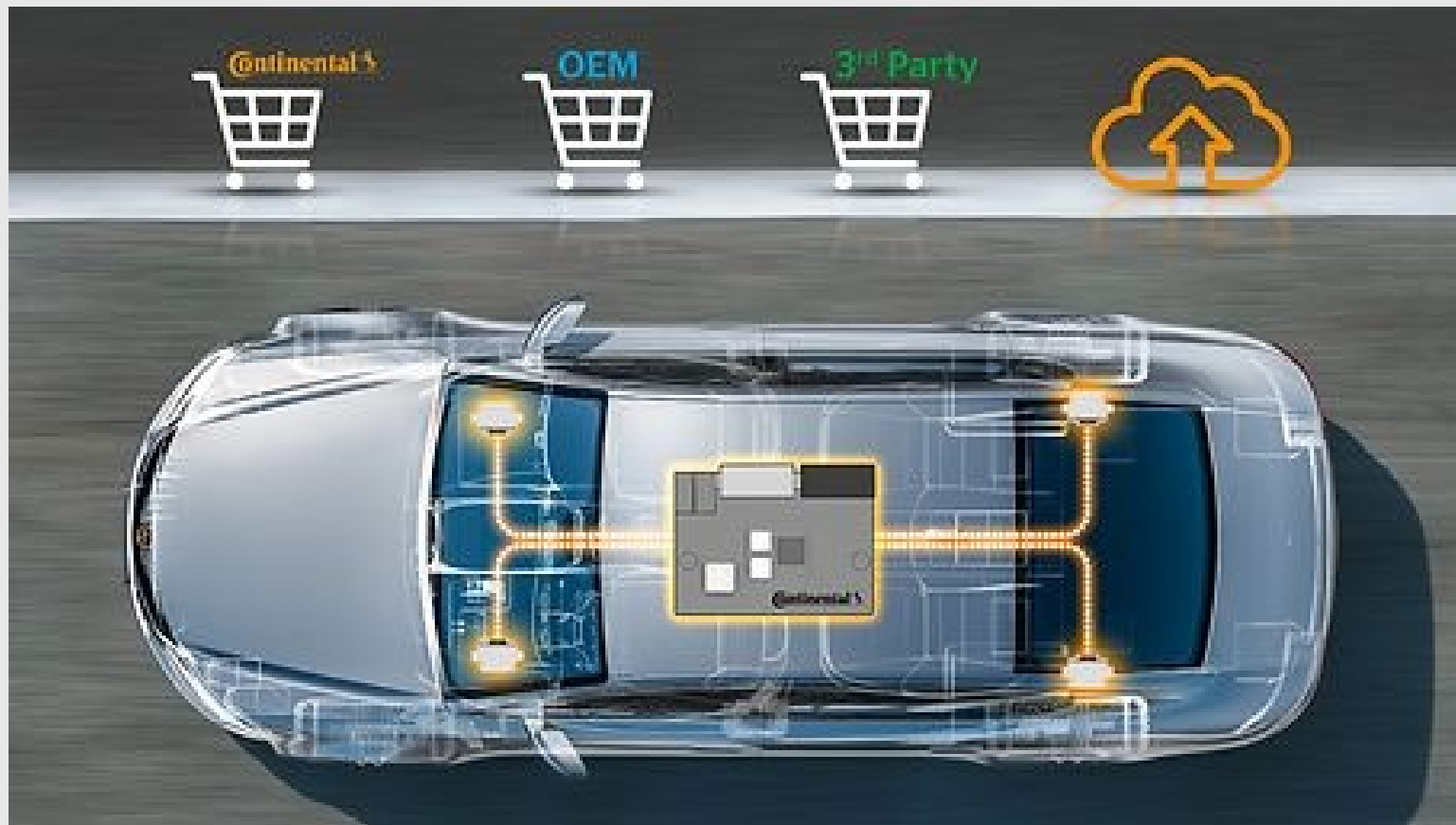


Tesla full self-driving (FSD) chip technology



# CONTINENTAL ICAS1 CENTRAL CAR COMPUTER

## ICAS1 replacing most conventional ECU's



Volkswagen ID.3 using Continental's in-car application server ICAS1



## DAIMLER SELECTED NVIDIA AS KEY PARTNER

### Upgrading cars during lifetime



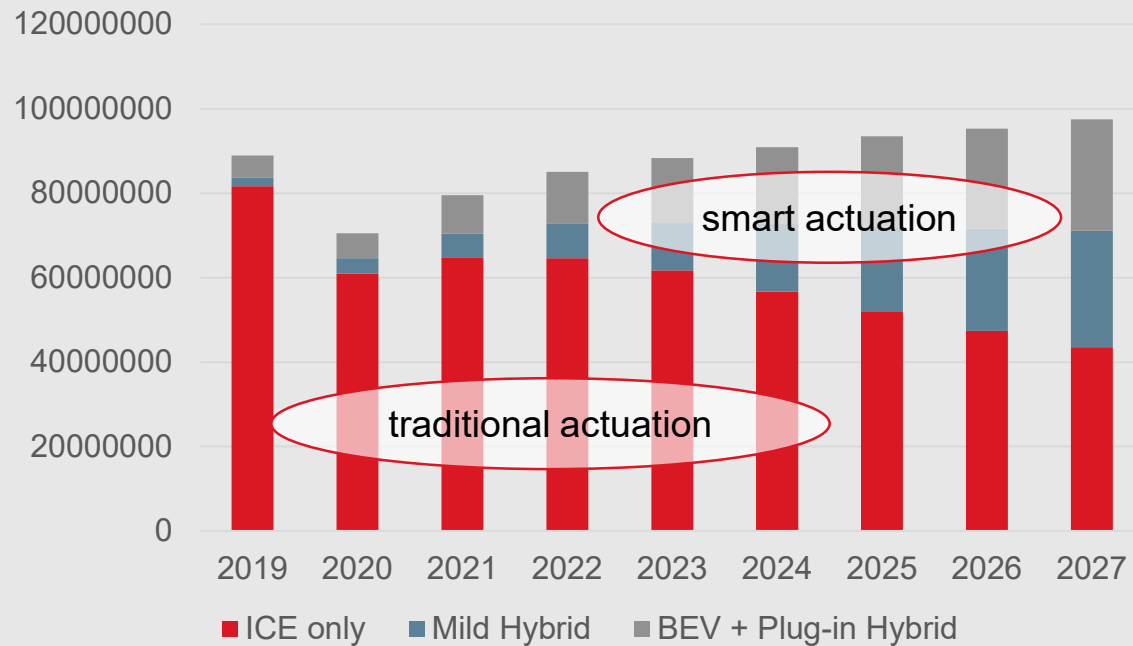
Daimler partnering with nVidia re-defining in-car architecture



# AUTOMOTIVE (R)EVOLUTION DRIVING 'SMART ACTUATION'

## Electrification adaption rate

**Propulsion Market Trend**



Battery-centric

E-Motor integrated

ICE-centric



Changing In-Car Architecture to ICAS1/FSD-type + smart actuation

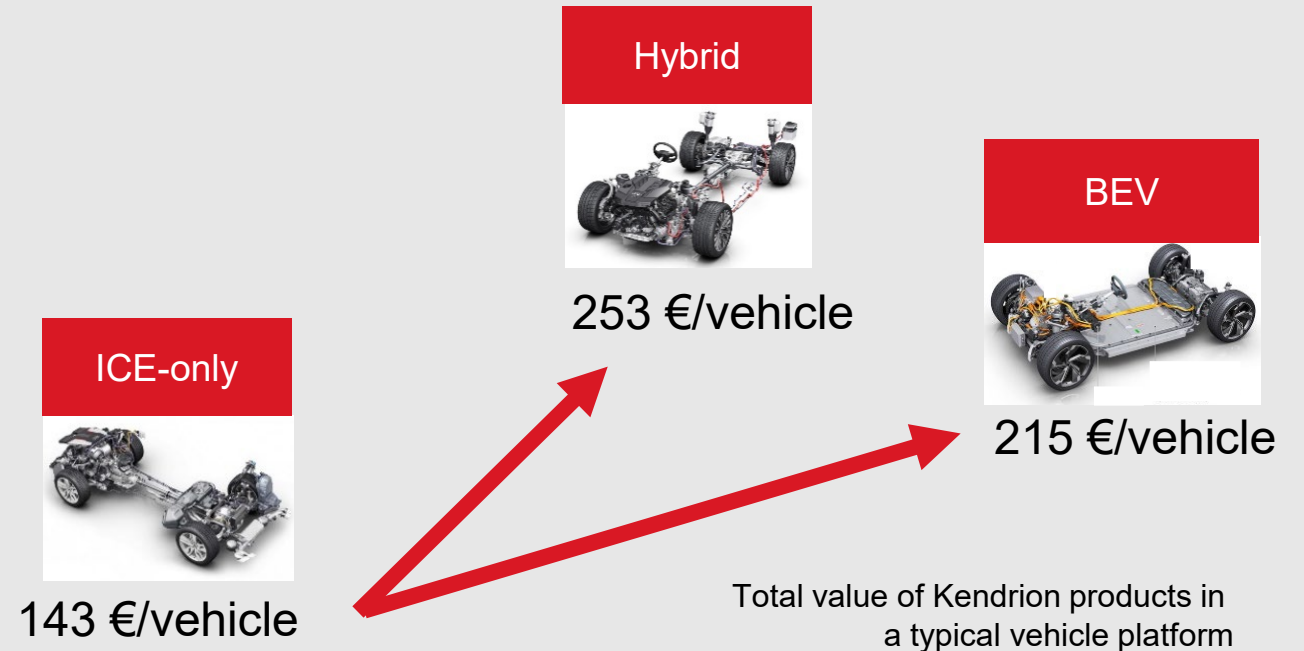


## KENDRION PORTFOLIO VALUE SHIFT

Combustion engine → electrified and autonomous cars

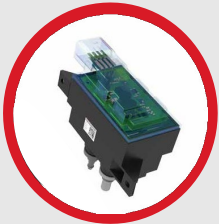
Product	Application	ICE	Hybrid	BEV
Valves	Engine	→	↘	↓
Suspension	Suspension	→	↑	↑
Actuator	Gearbox parklock	→	→	↓
ECU + actuator	Sound	→	→	→
Actuator	Seating	→	→	→
Clutch	Hybrid drives		↑	
Smart valves	Sensor cleaning		↑	↑
Smart valves	Battery cooling		↑	↑

Value trend of Kendrion products in a typical vehicle platform



# GROWTH POTENTIAL

## Smart, hybrid, system



Smart products (sensor cleaning, battery cooling; smart clutch, sound) addressing new in-car architecture

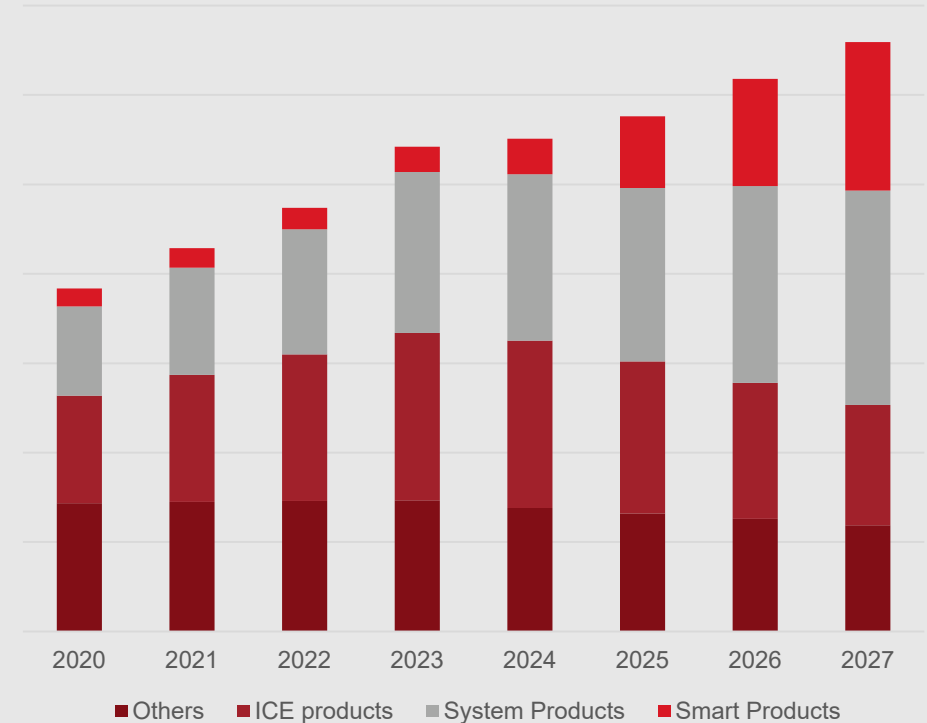


Traditional valve and actuator market peaking in hybrid vehicles



Additional value creation by system approach in growth segments (suspension, parklock)

**Portfolio and revenue trend**







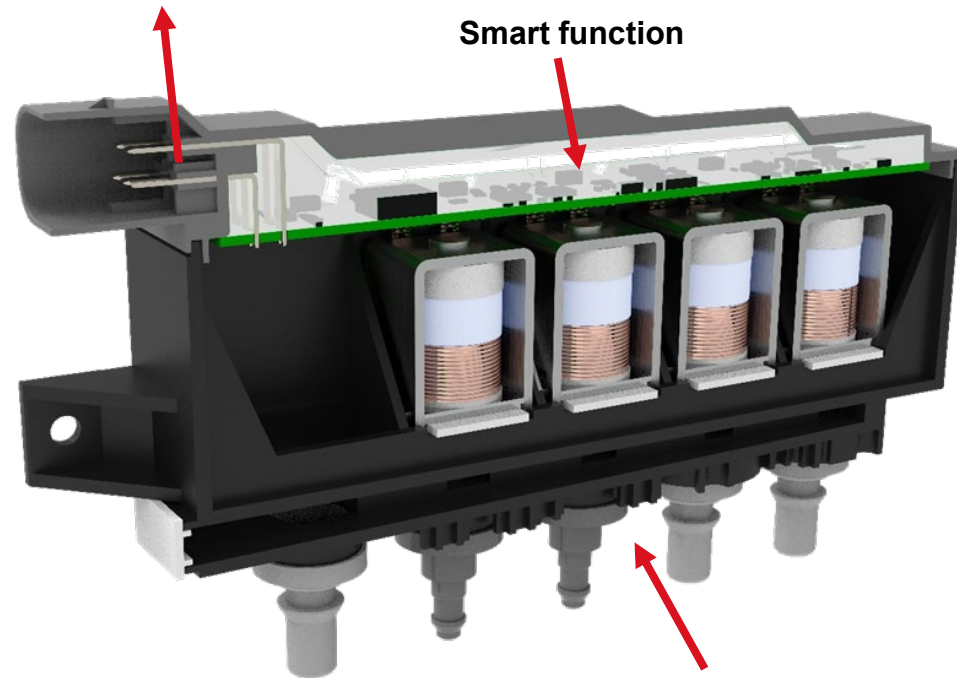
# SMART 'SENSOR CLEANING' VALVE BLOCK

## Moving to smart valves for higher autonomy levels

### Smart sensor cleaning valve block (1 out of 6 'Lighthouse projects')

Connection to central car computer

Smart function



Valve block

Automotive sensor market:

- Autonomous driving
- +10.2% CAGR from 2020-2027
- US 37.65 billion by 2027
- Source: Allied Market Research, 2020

Autonomy going up to 'Level 4' by 2030

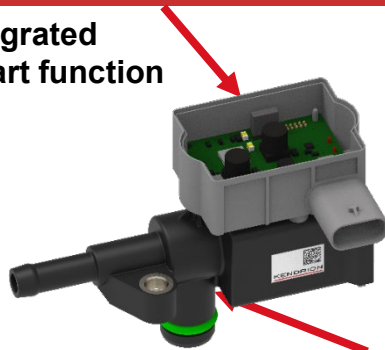


# SMART VALVES & ACTUATORS

## Battery cooling and AVAS sound systems

### Smart water valve

Integrated smart function



Connection to central car computer

Water Valve

Battery cooling demands new concepts, AVAS sound required by all electrified vehicles

Battery-powered electrical vehicles:

- Around 40% of all passenger cars expected to be electrified by 2025 (mild and plug-in hybrid, fully electric)

### AVAS sound system

Connection to central car computer



ECU



Actuator



Speaker





## 'SMART' ENGAGEMENTS

### Kendrion business perspective

- Focus on smart product range:
  - Substantial investments in software
  - Smart sensor cleaning valves, smart battery cooling valves, AVAS sound systems, smart clutch, smart damping solutions and more to come
  - Serial nominations from 4 leading OEM's
  - Further engagements with 9 leading OEM's and Tier 1's
  - Creating an ecosystem of partners to establish system solutions for improved TCO
  - Establishing platforms for rapid prototyping



## AUTOMOTIVE VISION STATEMENT



We are an **innovative** and **advanced** company,  
our **platforms** turn electromagnetic actuators **smart**,  
enabling **next generation mobility** in every vehicle.



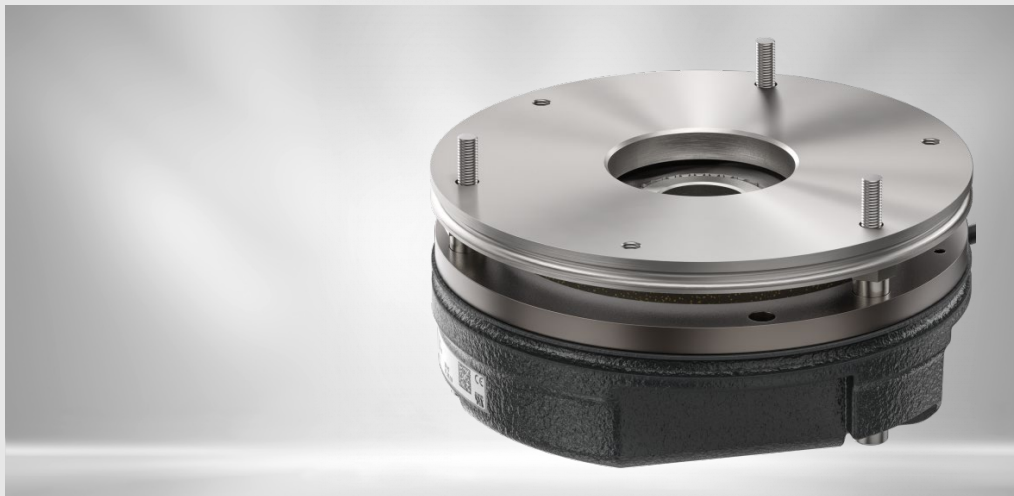
## AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - **Business pillars**
    - Automotive
    - **Industrial Brakes**
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - Questions & answers



## WHAT SETS US APART

- ✓ We are a **full-line provider** of electromagnetic brakes & clutches
- ✓ Our core product portfolio includes **permanent magnet and spring-applied brakes** for a wide range of applications
- ✓ Our competencies include both **off-the-shelf products** and **customer-specific solutions**



### Our off-the-shelf products

Preconstructed components designed to complement each other perfectly



### Our solutions

Individual performance features, perfectly combined, tailored to best fit customer needs



# LAUNCH OF INDUSTRIAL BRAKES

## Highlighted activities

8 January – Formal **acquisition** of INTORQ

1 April – **Go live** of Industrial Brakes with **global organisational** structure

Industrial Drives Systems  
(Kendrion)

INTORQ

Integration process 3 months

NEW business unit  
INDUSTRIAL BRAKES

Integrated business unit

### Key activities

- Define **Architecture** of the **global growth strategy**
- Clear **definition** of **focus markets** and **positioning**

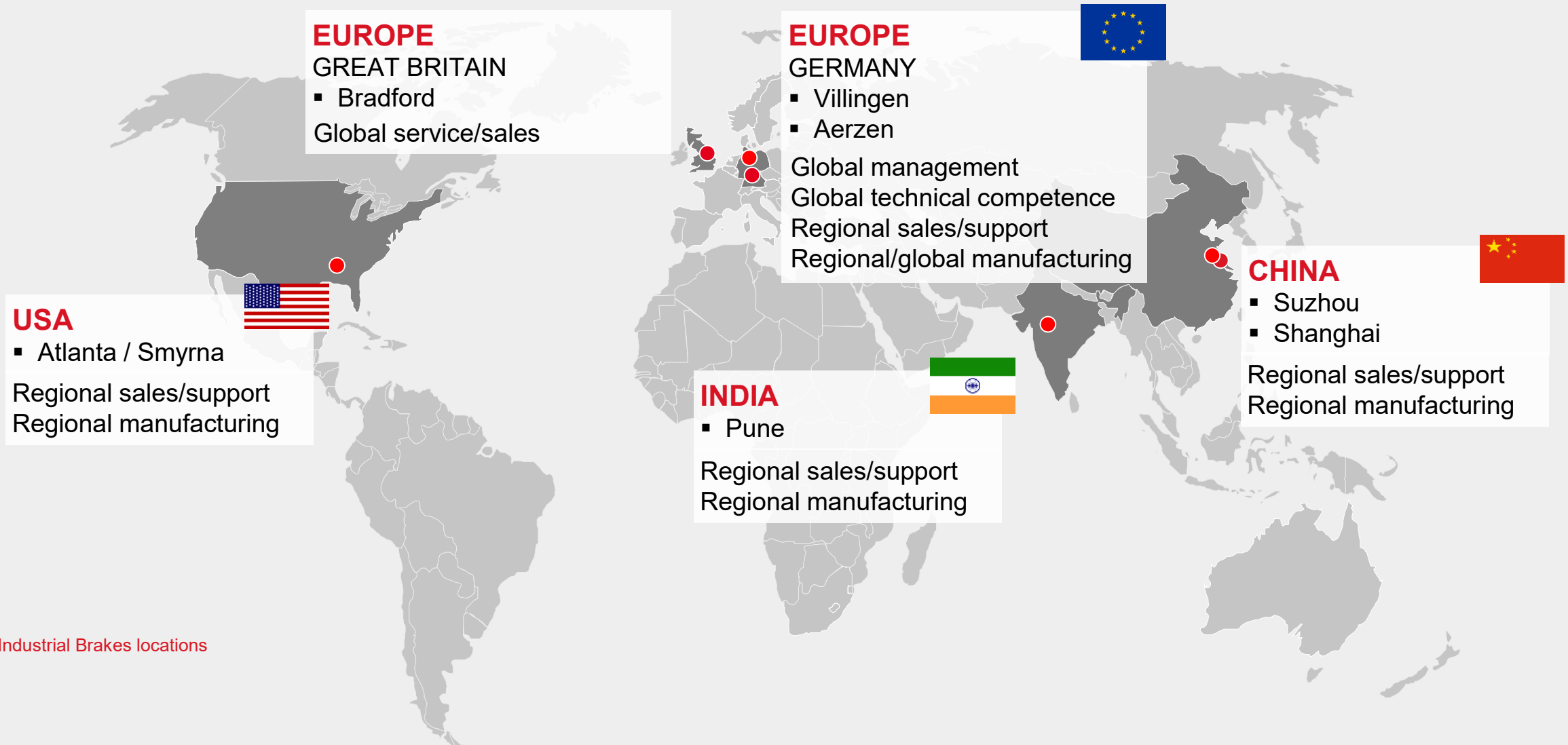
### Continuing activities

- On-going operational integration
- Alignment of **product portfolio**
- **Share** of **know-how** & apply **best practices**
- Continuous identification of **synergies**



# GLOBAL SETUP

## Industrial Brakes

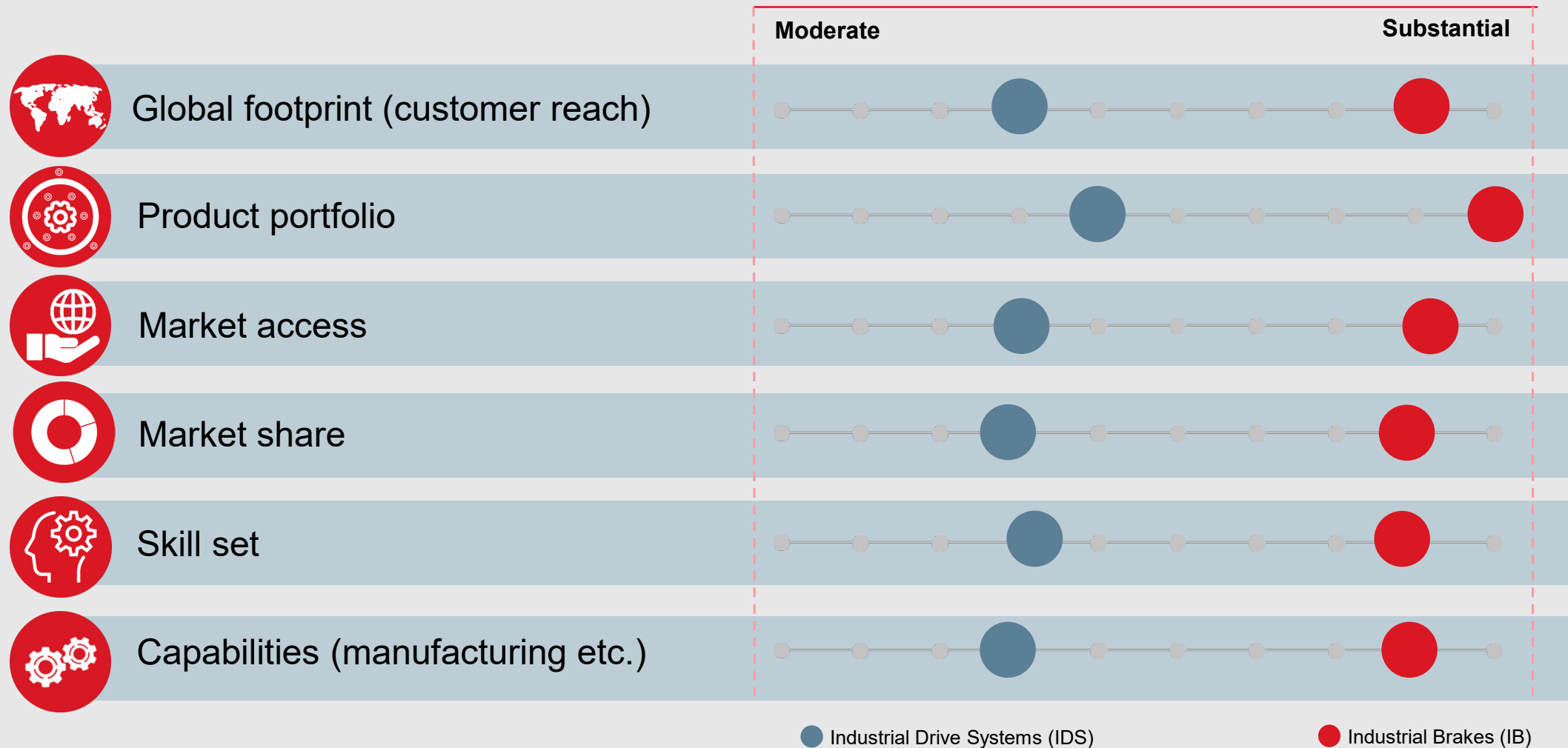






# WHAT HAS CHANGED AFTER THE INTEGRATION

## Key indicators





## OUR FOCUS MARKETS

We offer solutions for individual applications



Robotics & automation



Automatic guided vehicles



Industrial vehicles



Wind power



Logistics



Machine building



Hoists and cranes



Medical



# OFF-THE-SHELF PRODUCTS

## Based on mature modular system

### Electromagnetic brakes & clutches

#### Permanent magnet technology

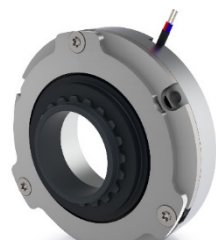


**PM Line / High Torque**  
>10 sizes  
0.01 – 300 Nm

#### Spring-applied technology



**Servo Line**  
11 sizes  
0.3 – 130 Nm



**Servo Slim Line**  
6 sizes  
0.4 – 6.5 Nm



**BFK458**  
9 sizes  
1.5 – 600 Nm



**BFK470**  
7 sizes  
2 – 370 Nm



**Active Clutch Line**  
9 sizes  
0.2 – 150 Nm

#### Electronic accessories



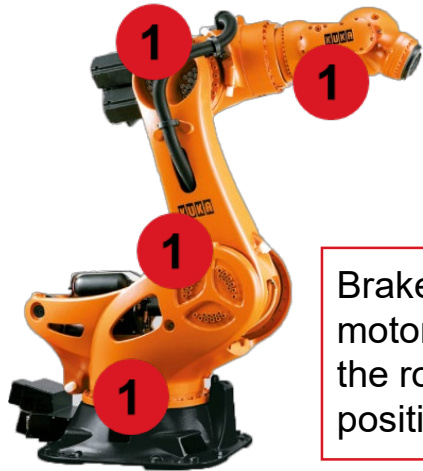
**Rectifiers and modules**  
in  
different versions



# FOCUS MARKET

## Robotics & Automation

### Application



Brakes in servo motors are holding the robot arm in position



In lightweight robots brakes are implemented inside the robot arm.

### Applicable products

1



High Torque



PM Line



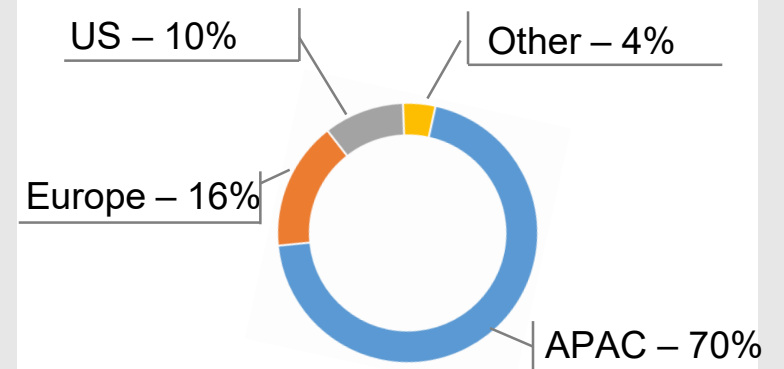
Servo Line

2



Servo Slim Line

### Market view 2019<sup>1</sup>



### Market forecast<sup>1</sup>

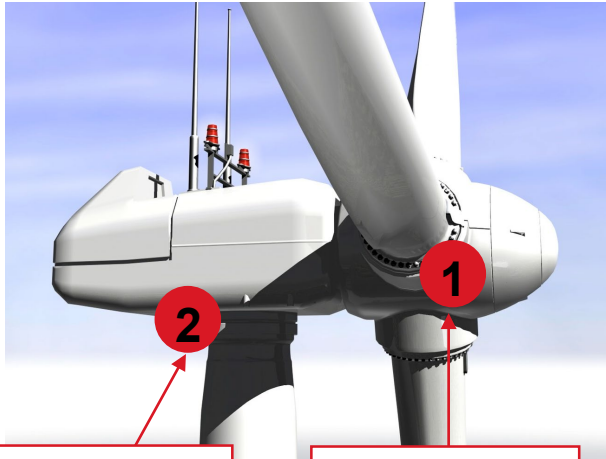
Based on forecasts the Asian market will be the largest consumer of robots, with world CAGR growth of >10%. In line with the China 2025 strategy, China is establishing itself as a major producer of robots.



# FOCUS MARKET

## Wind power

### Application



Azimut drive

Pitch control

### Applicable products

1



High Torque



BFK458



BFK470

2



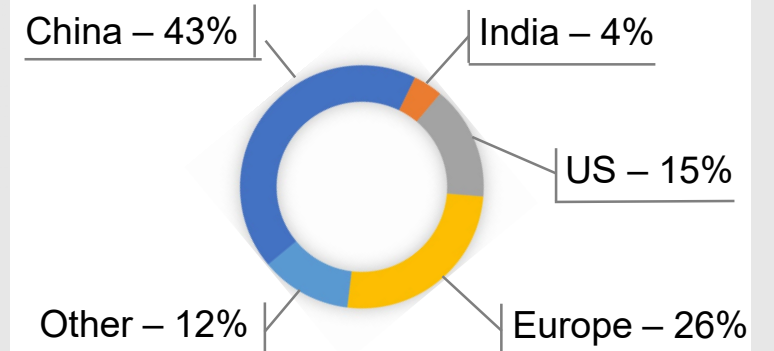
BFK457



BFK458

### Market view 2019<sup>1</sup>

(Additional installed capacity 60 GW)



### Market forecast<sup>2</sup>

In 2030, the conservative market forecast of power generated from wind show a growth factor of x2-3 times more as compared to 2020.



## FOCUS MARKET

### Intra logistics (industrial trucks & AGVs)

#### Application



Holding function industrial vehicles



Holding and emergency stopping

#### Applicable products

1



**BFK457**



**BFK458**

2

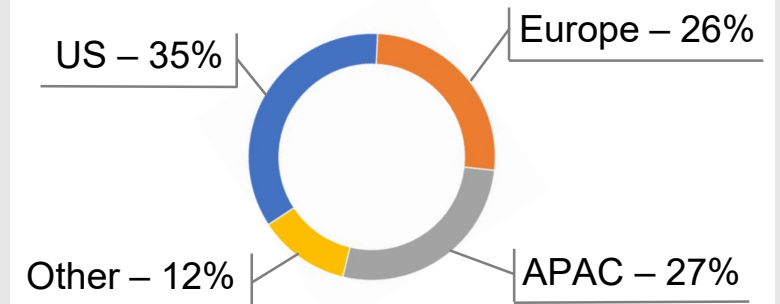


**Servo Line**



**Servo Slim Line**

#### Market view 2019<sup>1</sup>



#### Market forecast<sup>2</sup>

Driven by needs of greater productivity efficiencies, the global market growth is expected to be a factor of > x2 in the coming 10 years.



# GROWTH POTENTIAL

## ...in key markets



Diversification in robots will see our turnover **double** in the next 5 years in robotic applications.

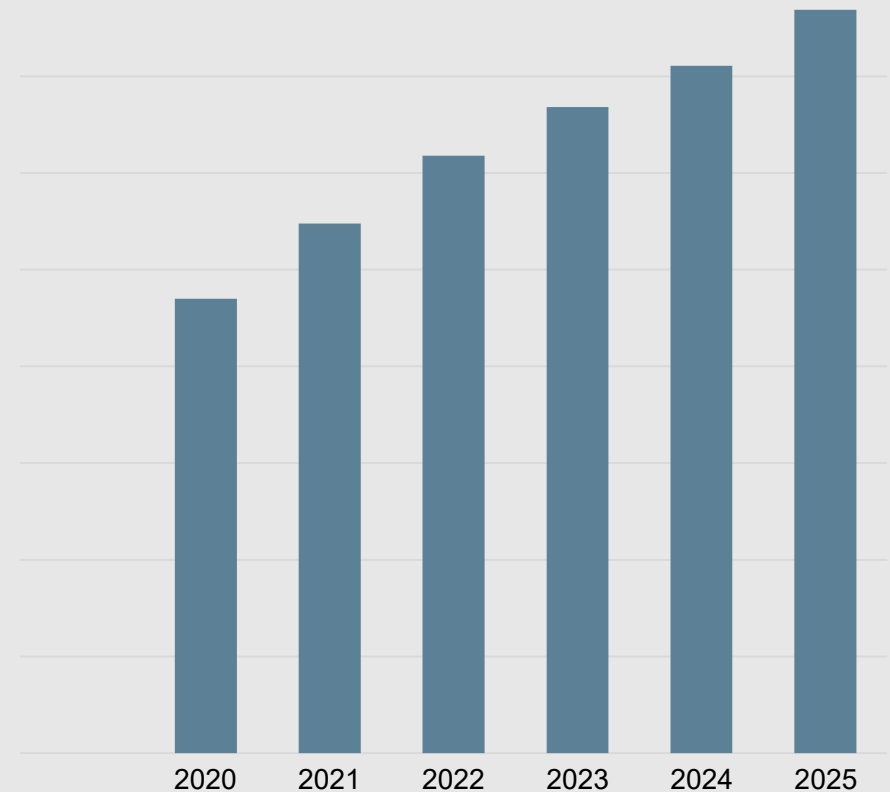


Further **expand** our position as a global player in the wind power industry with a market share of 20%.



**Build on** strong position in forklift and **introduce** current portfolio into upcoming AGV market to **gain** a market share of approx. 30%.

Portfolio and revenue trend





## OUR 4 PILLARS OF GROWTH

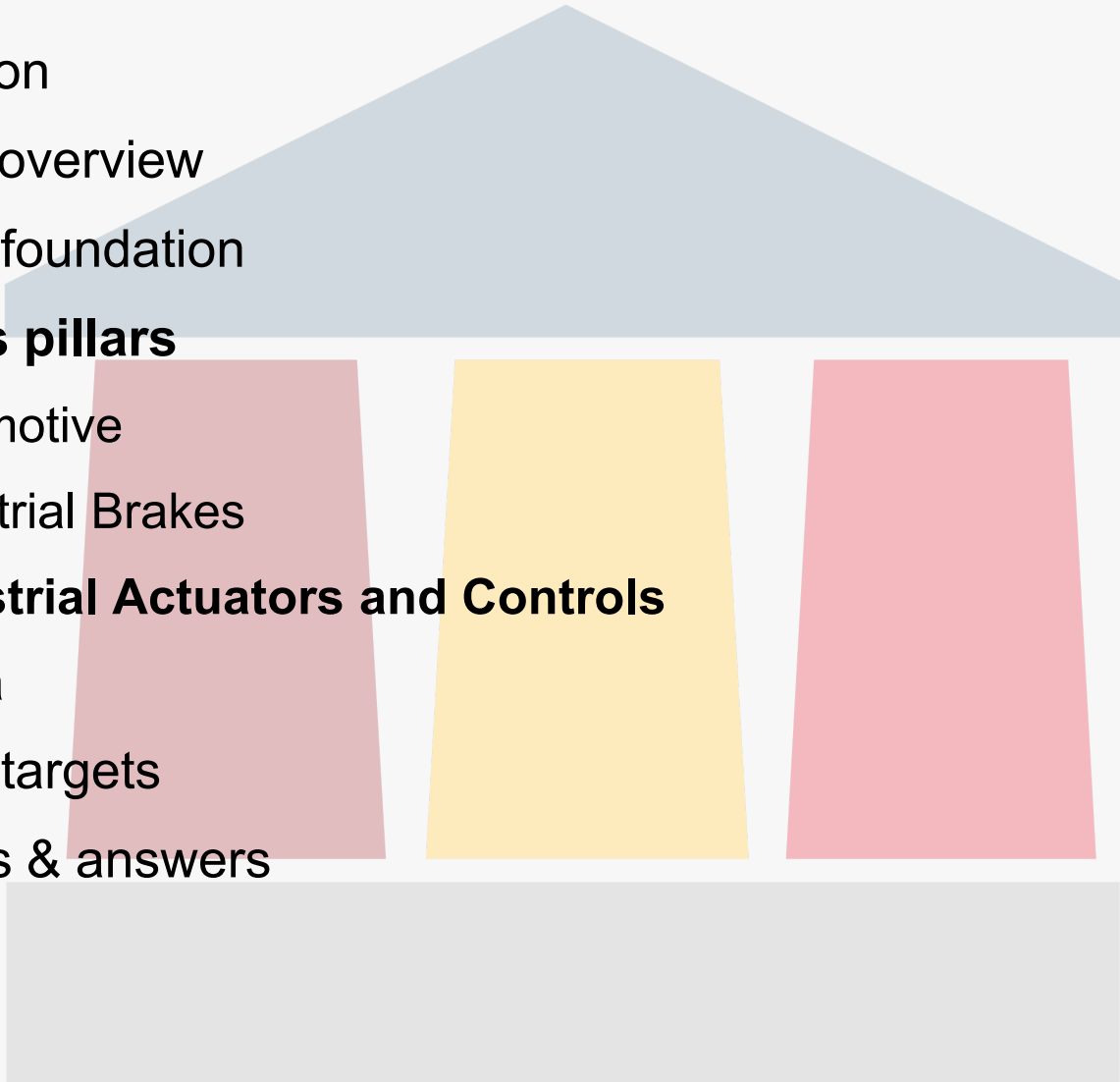
... summarised

- ✓ **Extensive product platform:** We always offer the right solution – either off-the-shelf or customer-specific
- ✓ **Focus markets:** We develop new **market-specific** applications together with our customers
- ✓ **Human capital:** **Strong, technical team** with sound and proven expertise
- ✓ **Global footprint:** **Right next door** in Germany, China, India, USA and Great Britain

**We are a reliable and innovative partner.  
We want to support our customers and grow together.**

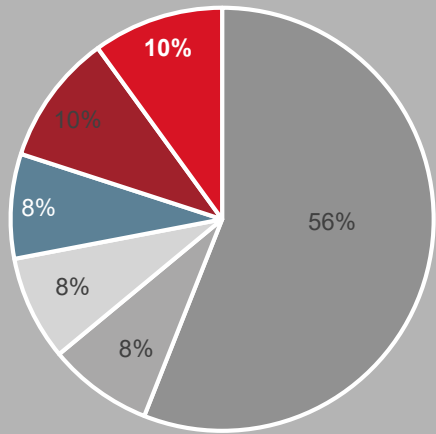


## AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - **Business pillars**
    - Automotive
    - Industrial Brakes
    - **Industrial Actuators and Controls**
    - China
  - Financial targets
  - Questions & answers



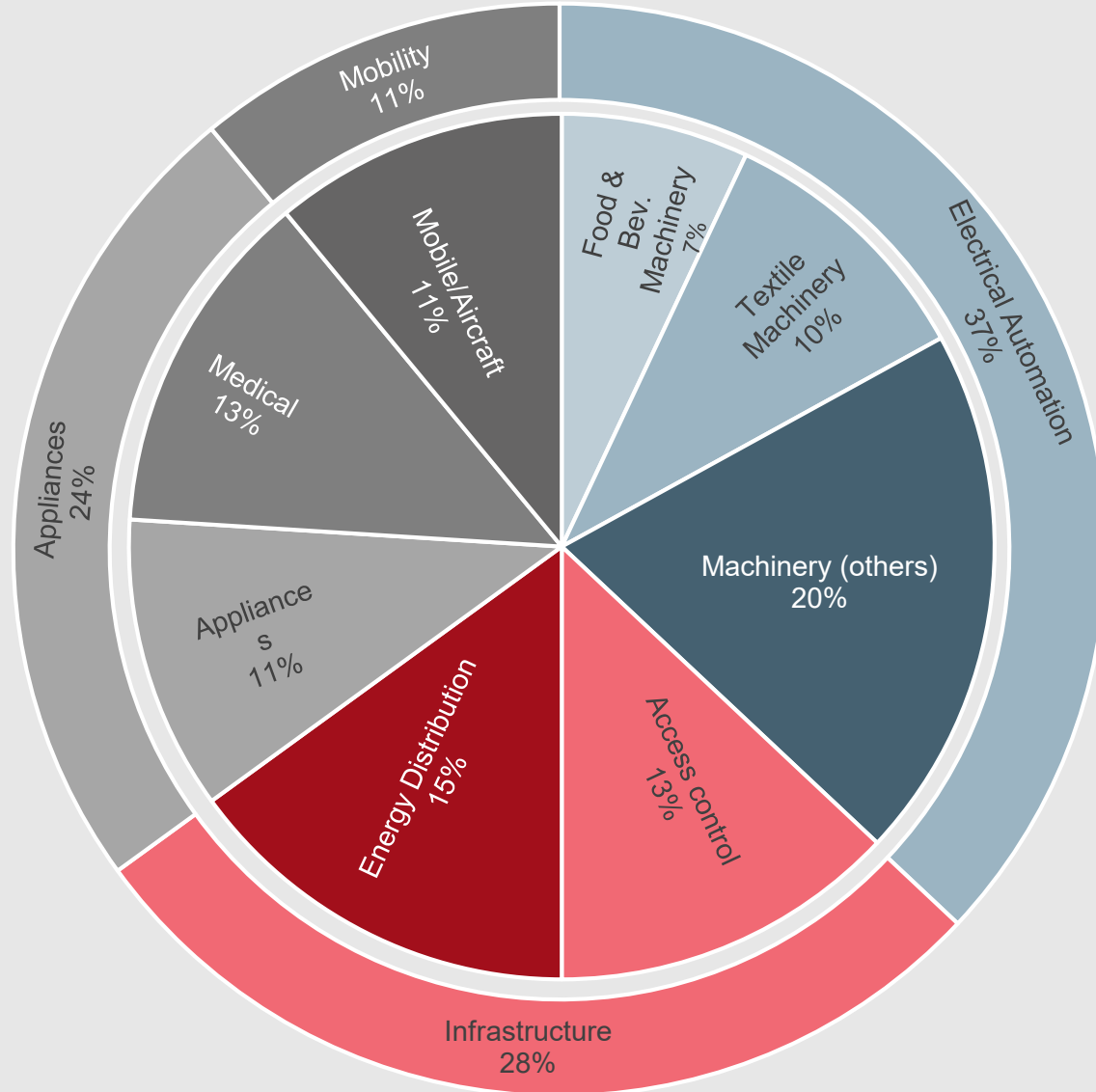
# INDUSTRIAL ACTUATORS AND CONTROLS



- Germany
- China
- USA
- Scandinavia
- Austria/Switzerland
- Rest of Europe



# IAC GROWTH SEGMENTS





## GROWTH: ELECTRICAL AUTOMATION



- Increasing degree of automation (actuators, controls and solenoids)
- Electric (inductive) heating will replace heating methods such as oil, gas and steam
- Increasing demand for hardware-independent integrated functional safety solutions for robots and machines

**Inductive heating modular controller**



**Oscillating solenoid**



**Safety controller / PLC system**



**HMI robotic control**





## GROWTH: INFRASTRUCTURE

- Circuit breakers and disconnecting switches has opportunities
- Highly integrated market where all big players (Siemens, Schneider, ABB, Eaton) continuously move into China
- Infrastructure investment programme in China runs on continuous high level (electrical grid, railway, renewable energy consumption)

### Circuit breakers and disconnecting switch





## GROWTH: APPLIANCES (MEDICAL/NON-MEDICAL)

- Covid-19 related strong demand for breathing, dialysis, PCR-tester and other medical appliances
- Pressure regulators and valves for oxygen and other media are in development
- Opportunity in washing machine locks
- New standard locks (solenoid- and motor-driven) open up additional opportunities in various appliances

### Locking line



### Valve line



# AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - **Business pillars**
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - **China**
  - Financial targets
  - Questions & answers



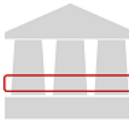
# KENDRION



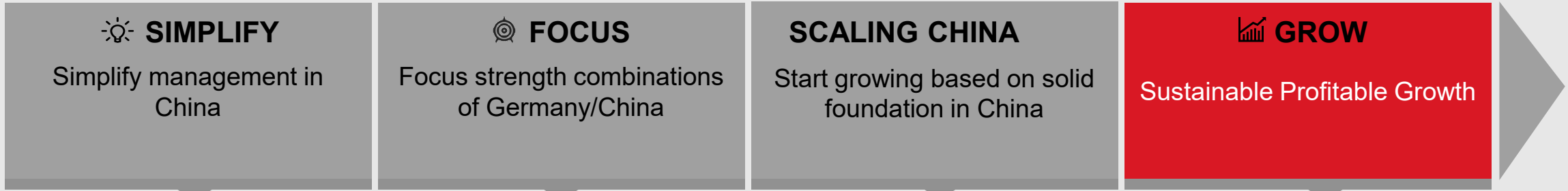
Joint Strengths

PRECISION. SAFETY. MOTION.





# ACHIEVEMENTS 2016 - 2020









**5 fingers to 1 fist,  
5 BUs to 1 China  
organisation**



Integrate business and management

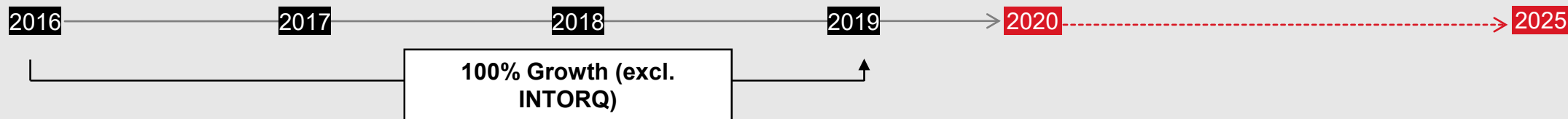
**Germany + China Strengths**



-  • Leading technology & SPEC
-  • Reliable quality
-  • Confidence/Trust
-  • Business expansion
-  • Fast response
-  • Competitive cost

**Consistent investment in growth and capabilities**

- Transform more than 300M€ nomination to successful SOP
- Continue build and train team in China





## SUZHOU FACTORY ALMOST FULL



**2017**

- SZ current plant @ 7418m<sup>2</sup> under decoration
- 3 times bigger vs. SZ 1<sup>st</sup> building @ 2400m<sup>2</sup>



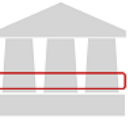
**2018**

- Just moved in



**2020**

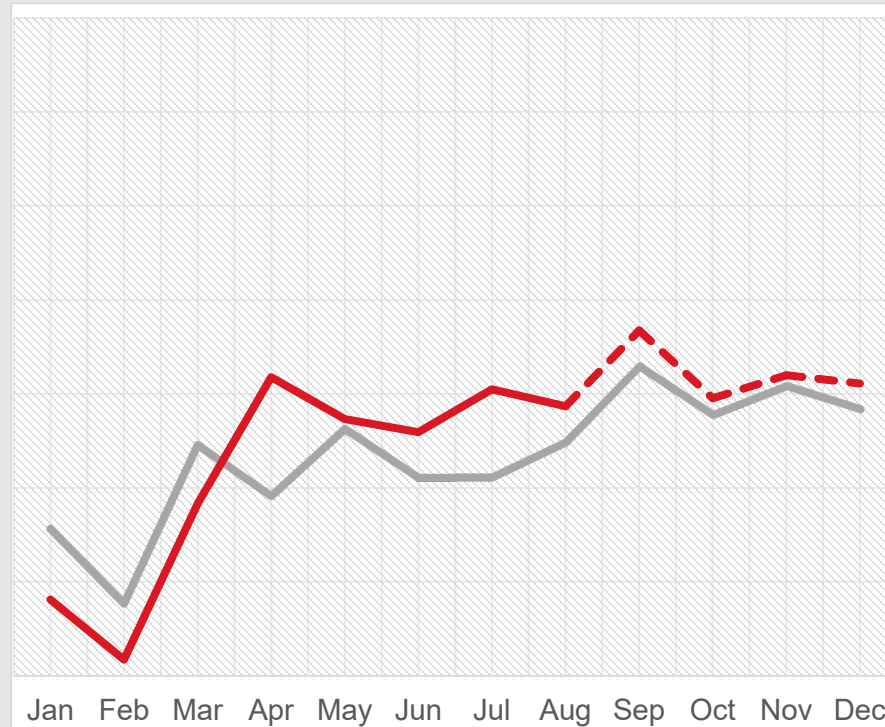
- Almost fully occupied, 93% production space utilised



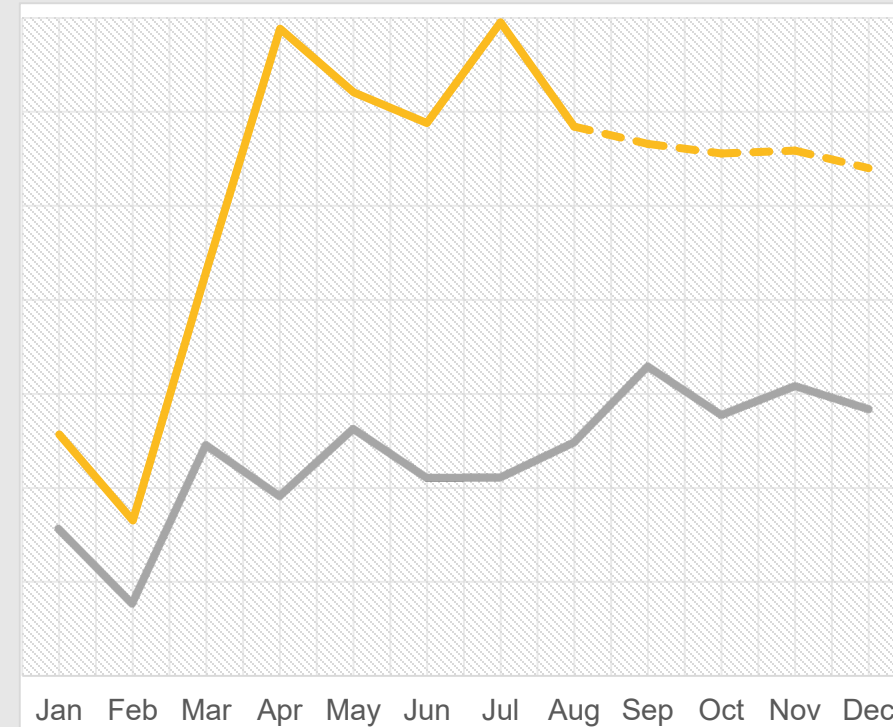
# STRONG BUSINESS RECOVERY AFTER COVID-19 SINCE Q2

## 2020 vs. 2019 monthly revenue performance of Kendrion China

Organic growth 4% in COVID-19 period



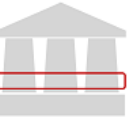
Overall growth 66% after INTORQ acquisition



(Incl. INTORQ)  
— 2020 Jan-Jul actual  
- - - 2020 Aug-Dec forecast  
  
 (excl. INTORQ)  
— 2019 Jan-Dec actual

COVID-19 in China (In 2020)

COVID-19 in China (In 2020)



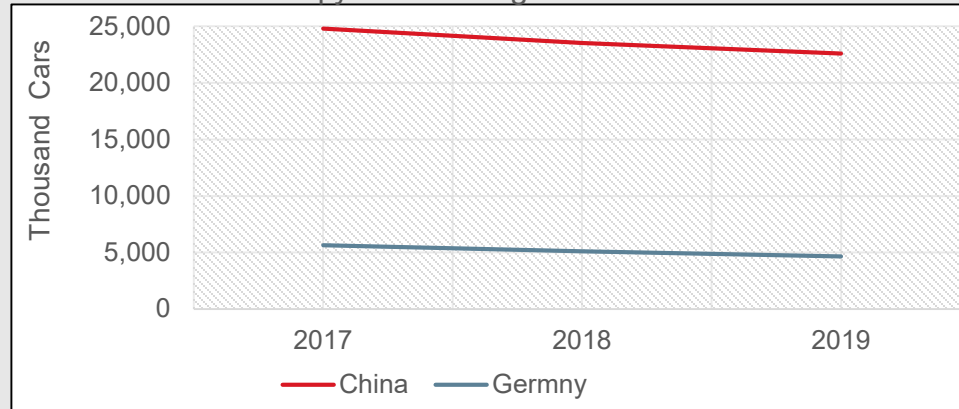
# POTENTIAL GROWTH OPPORTUNITY IN CHINA

**Aggressive growth speed,  
to get optimized growth opportunity in China**

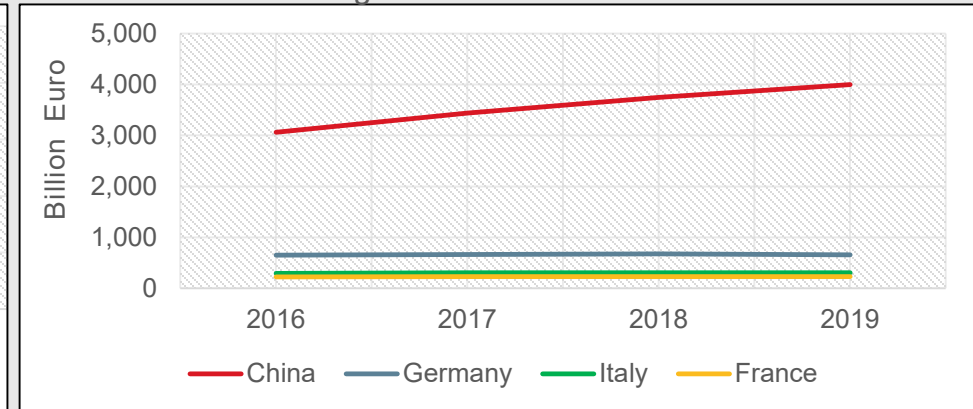
**China Automotive market size = 4.5 times of Germany**

**China GDP from manufacturing = 6 times of Germany  
= 13 times of Italy  
= 17 times of France**

Annual manufacture qty. of Passenger Cars

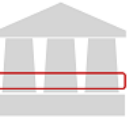


GDP from Manufacturing



**Potential Automotive market size**

**Potential Industrial (IAC & IB) market size**

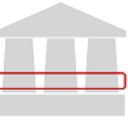


# GROWTH STRATEGY IN 2021-2025

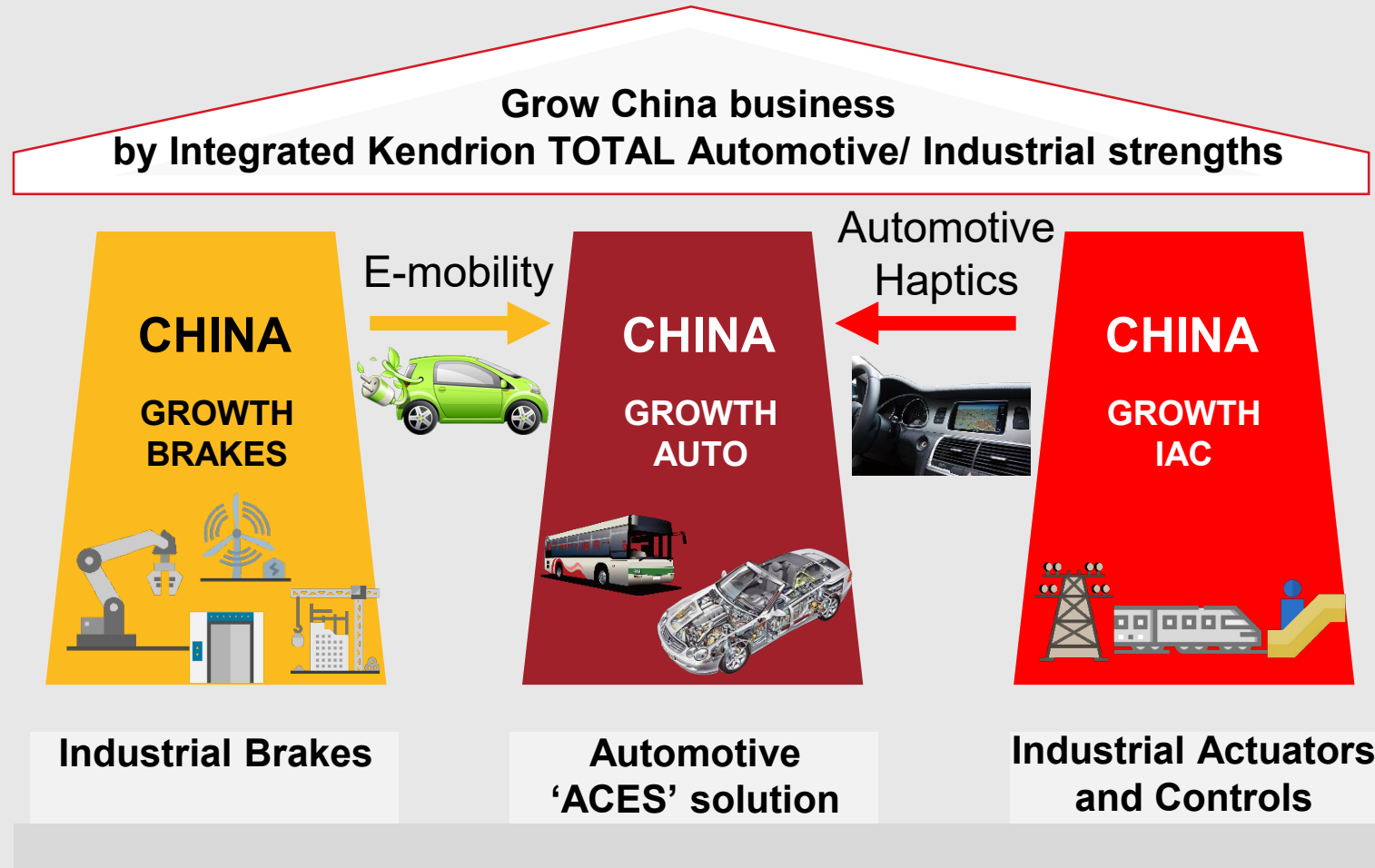
## Strategic actions

*Commercial strategic plan@100M€<sup>+</sup>  
new nominations per year*





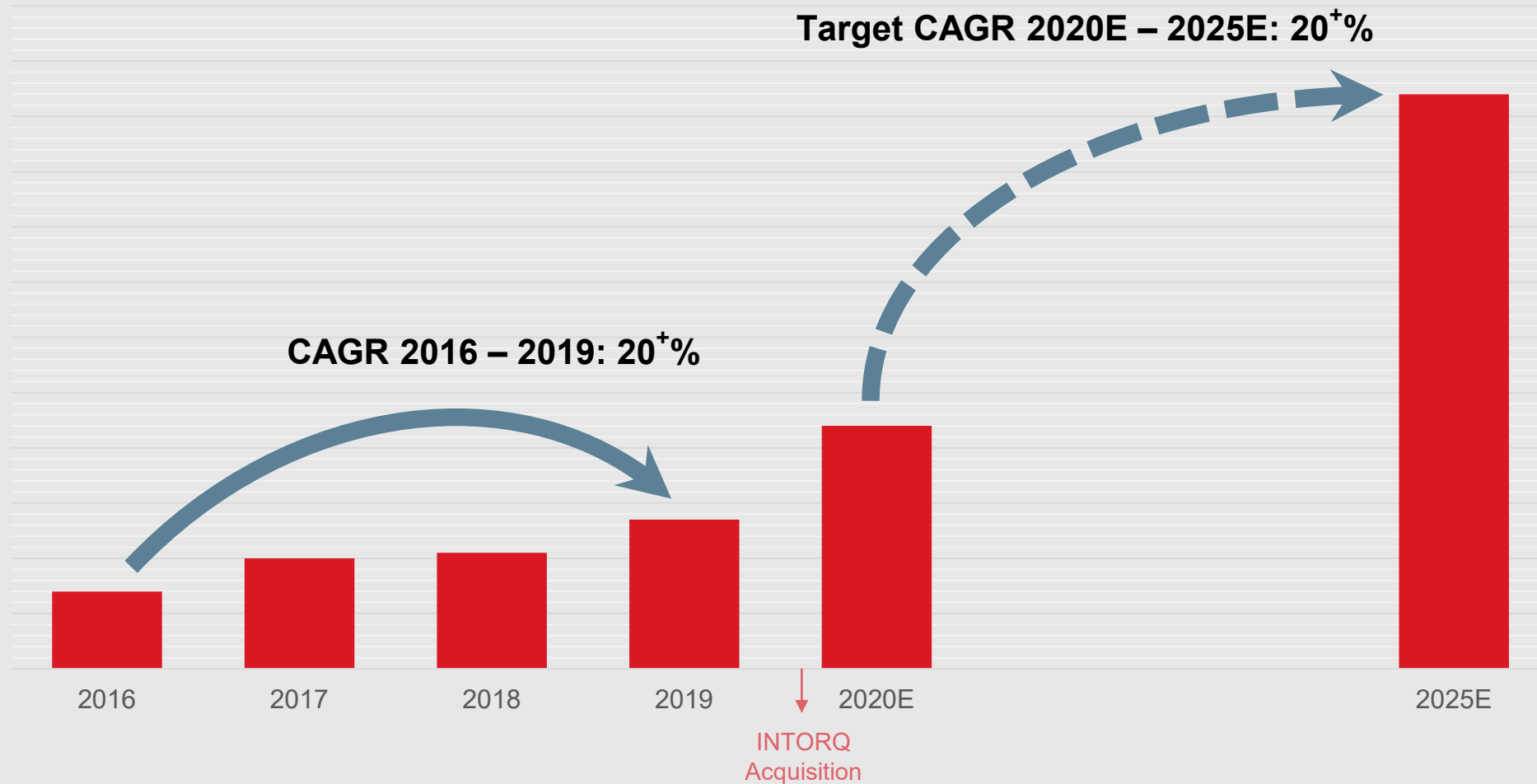
# CHINA GROWTH STRATEGY





# GROWTH PLAN CHINA IN 2021-2025

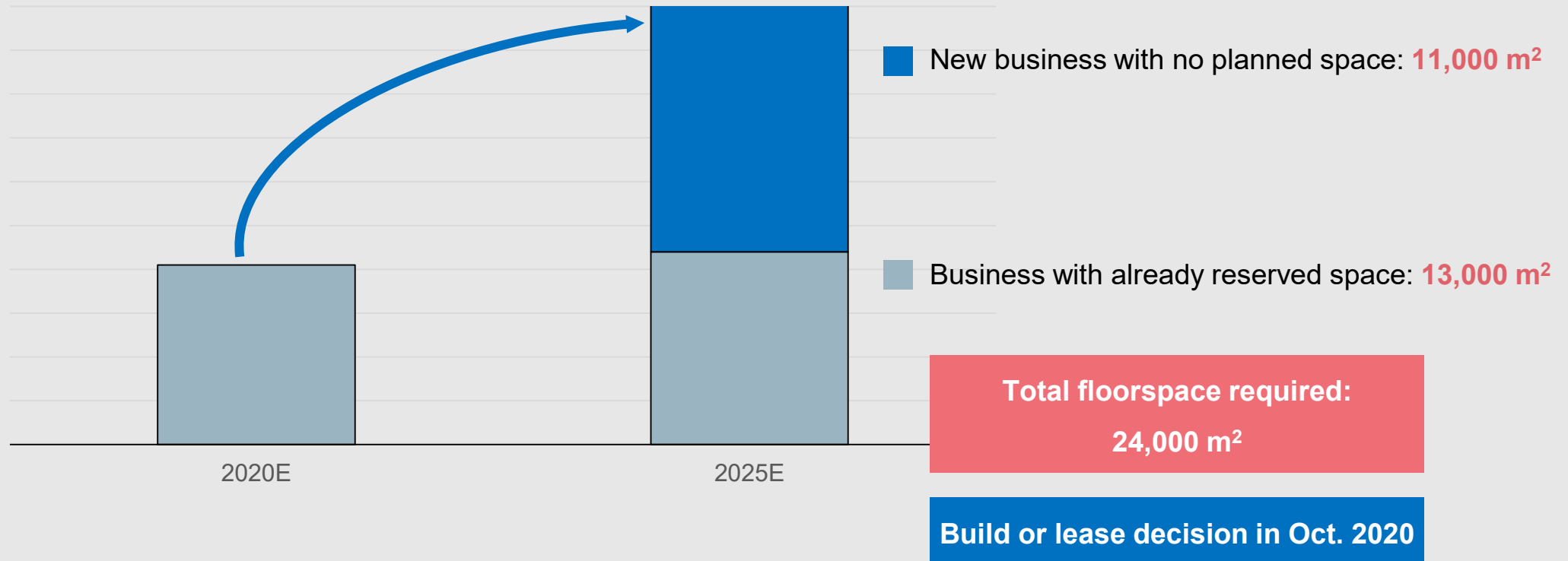
## 3.1 Aggressive growth plan till 2025





# 10-YEAR MANUFACTURING PLAN

## Space required for business growth



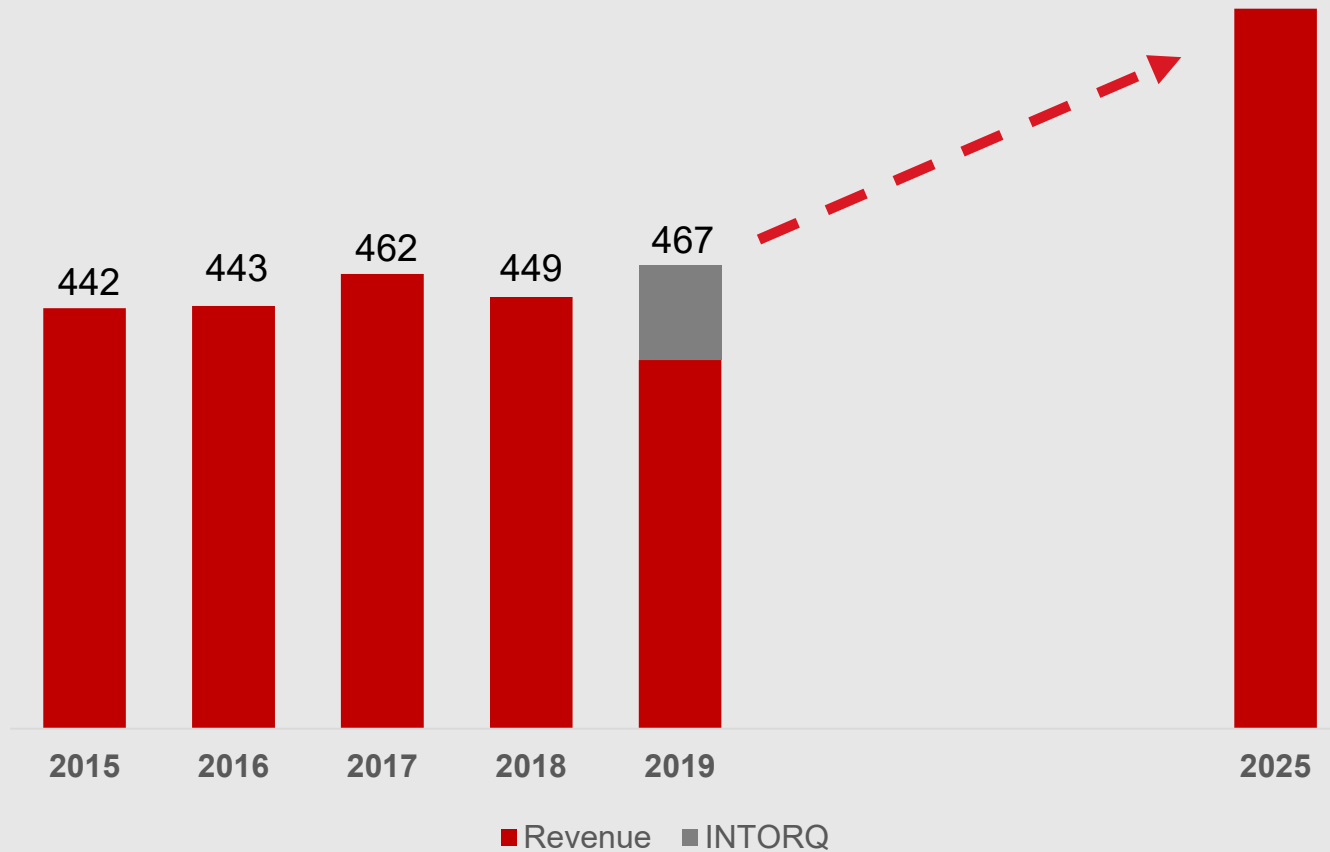


## AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - Business pillars
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - **Financial targets**
  - Questions & answers



## TARGET ANNUAL ORGANIC GROWTH AT LEAST 5%

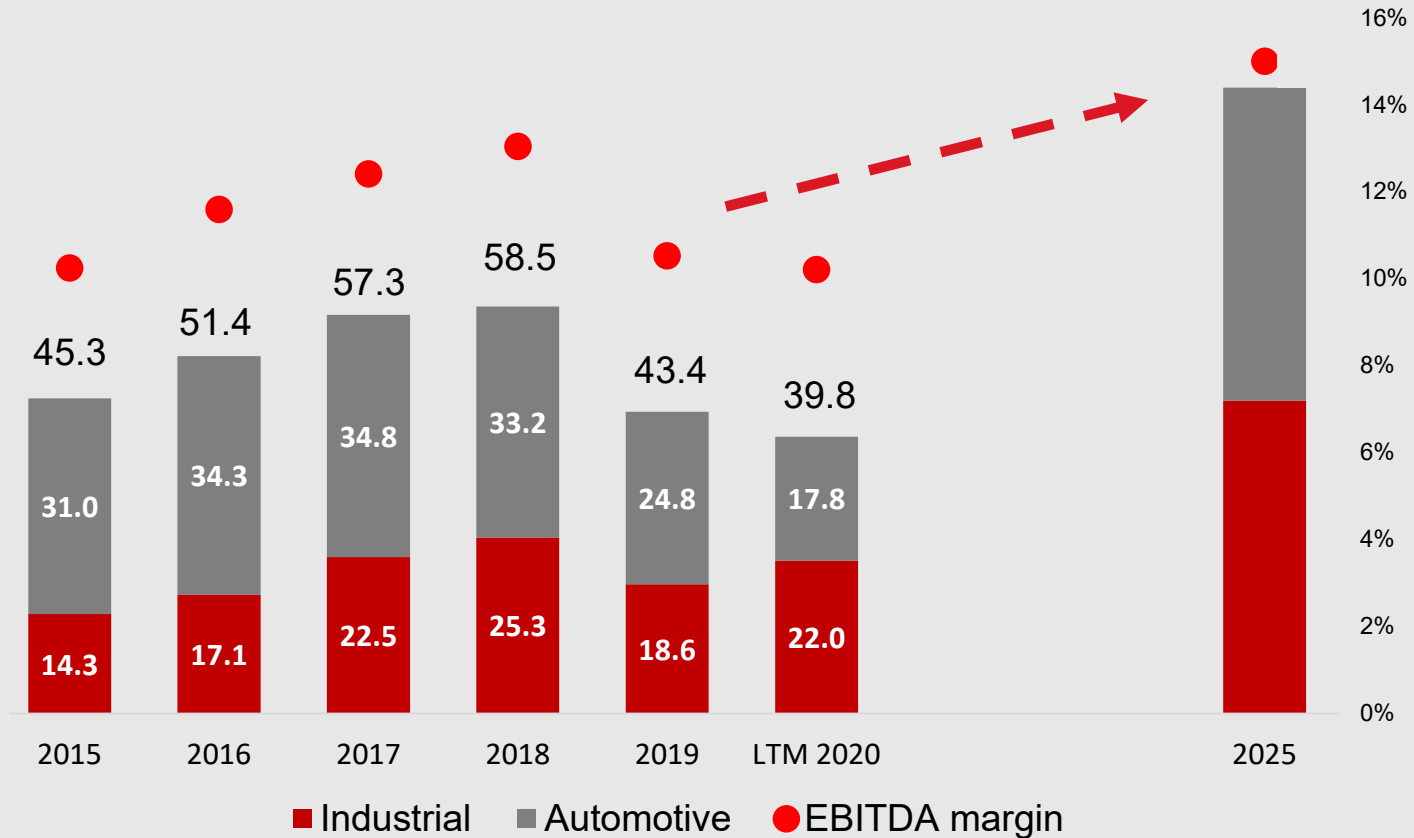


### Drivers:

- Increased content per car and increased application uptake in Automotive
- Market and application growth in industrial automation, logistics and wind power in Industrial Brakes
- Market growth and increased share in China
- Selective niche markets in Industrial Actuators and Controls



## TARGET EBITDA MARGIN AT LEAST 15%



### Drivers:

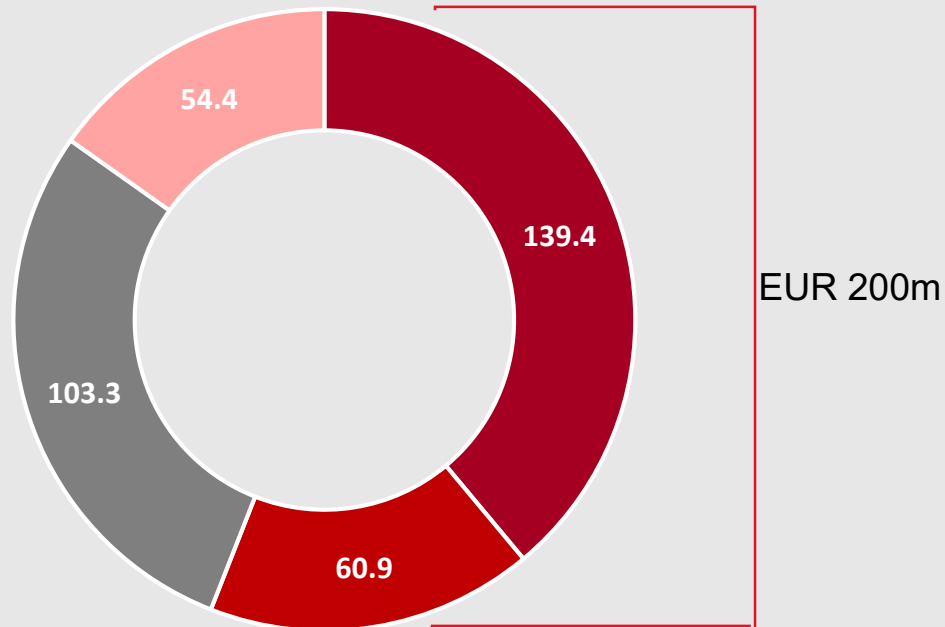
- + Operational leverage from > 5% annual growth
- + Operational excellence Automotive and synergies IB and IAC



**TARGET ROIC AT LEAST 25%**

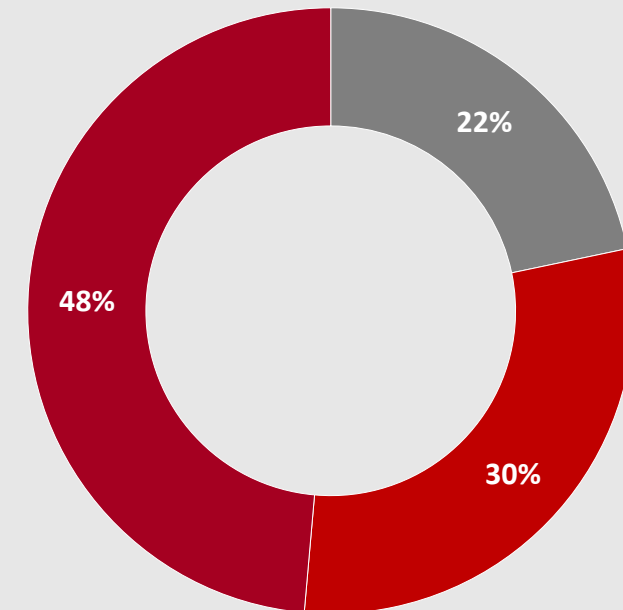
**Return calculation on operating assets (excl. intangibles arising on acquisitions)**

30 June 2020 – invested capital



- Fixed assets
- Working capital
- Acquisition intangibles
- INTORQ intangibles

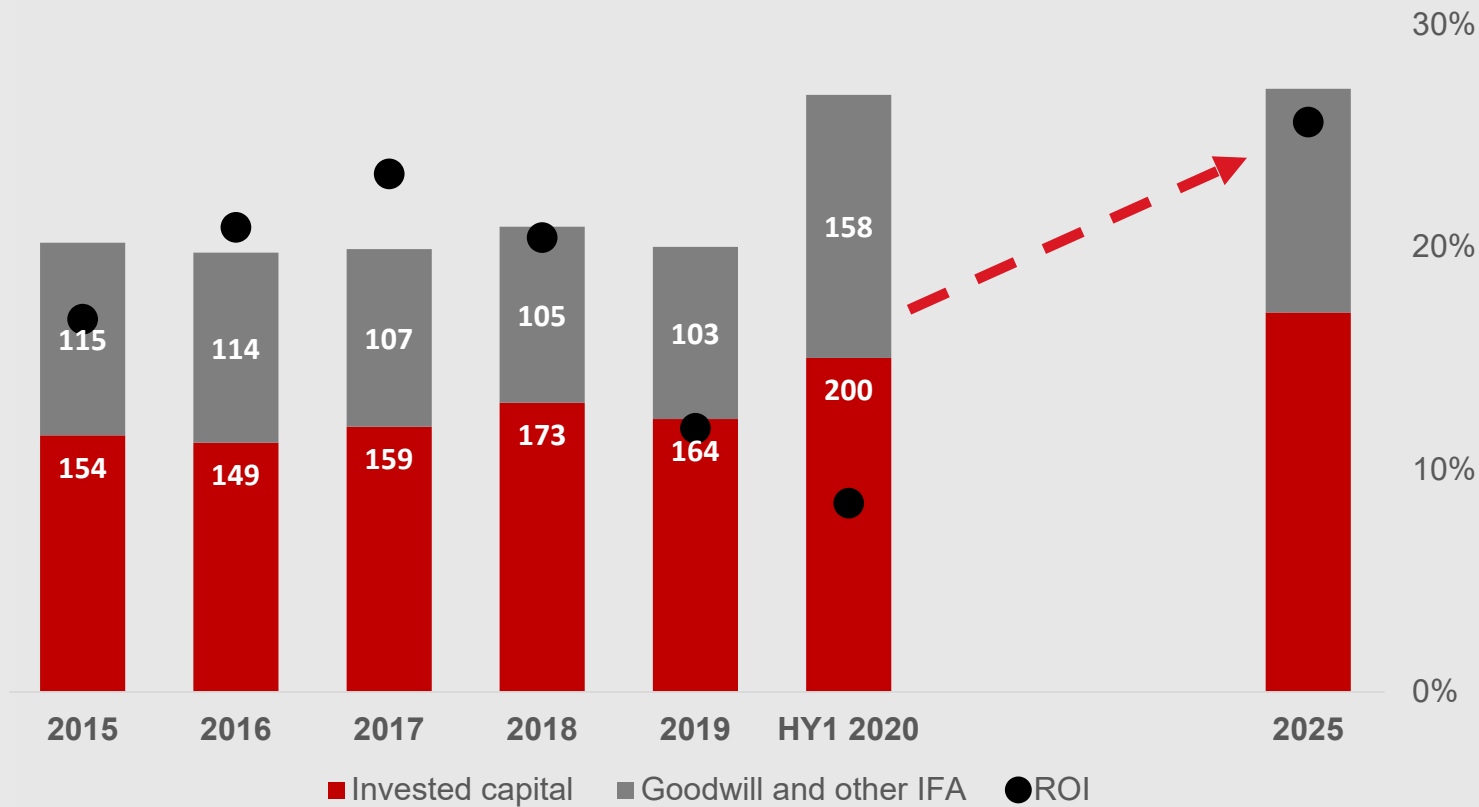
Invested capital allocation



- AIC
- IB
- Automotive



## TARGET ROIC AT LEAST 25%



### Drivers:

- + Operational leverage from ~5% growth
- + Operational excellence Automotive
- + Increase capital efficiency / scaling fixed assets
- /- Investments China to accommodate growth



## LONG-TERM TARGETS

### Revenue

Average organic growth at least 5% per year

### EBITDA margin

At least 15% in 2025

### ROIC

At least 25% in 2025

### Dividend

Between 35% - 50% of normalised net profit

*\* Invested capital excluding goodwill and intangibles arising on acquisitions*

## AGENDA

- 
- Introduction
  - Strategic overview
  - Kendrion foundation
  - Business pillars
    - Automotive
    - Industrial Brakes
    - Industrial Actuators and Controls
    - China
  - Financial targets
  - **Questions & answers**



**Questions & answers**



# KENDRION



# THANK YOU

PRECISION. SAFETY. MOTION.