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Digital maturity and AI
Where the automotive industry currently stands

Dr. Harald Proff | Partner
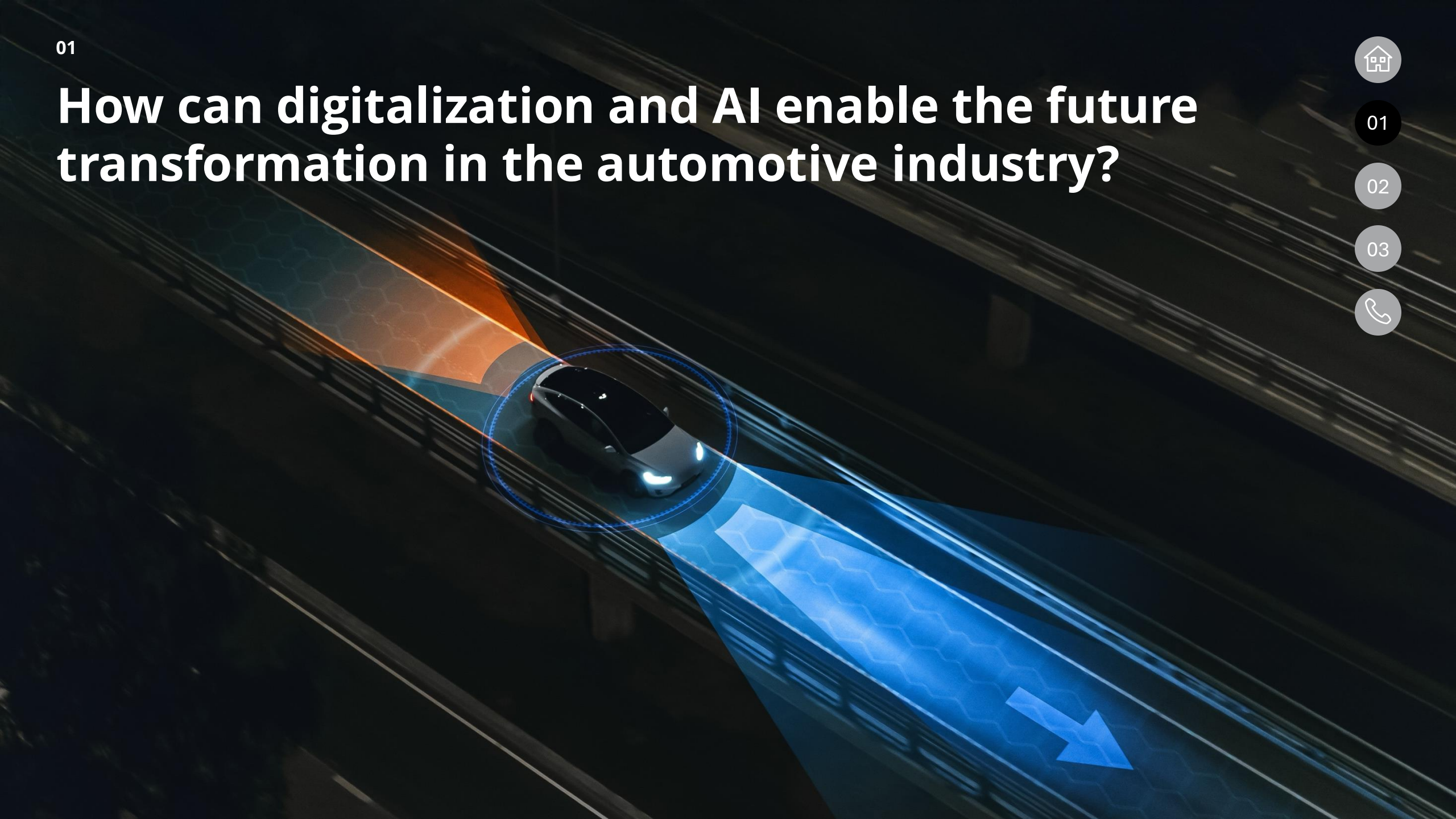**Global Automotive Sector Lead**
Deloitte Consulting GmbH

Contents

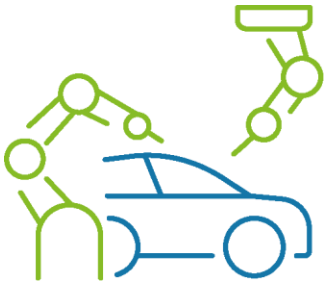# How can digitalization and AI enable the future transformation in the automotive industry?

The importance of digitalization and AI in the automotive industry today

Digitalization and AI can help established automotive players navigate these turbulent times and emerge stronger

The industry is currently facing several challenges at once:

Tariffs and trade tensions

Stricter environmental regulation

Competition from new entrants
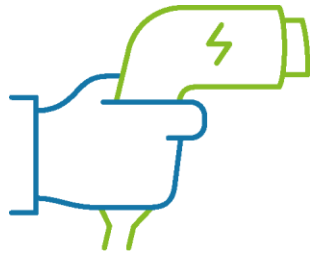
Transition to EVs and SDVs

- **Digitalization** and **AI can help address these challenges** and **drive transformation** by enabling players to **become more agile** and **resilient**.

- If done right, **AI-based business models** can even help **reduce costs and complexity**.

Successfully addressing these challenges requires a **deep understanding** of **current** and **changing consumer needs**.

What is the **consumer perspective on AI technology** today?

The consumer perspective on AI in vehicles

25% of surveyed consumers in Germany, the United States and the United Kingdom remain skeptical about the addition of artificial intelligence in vehicle systems

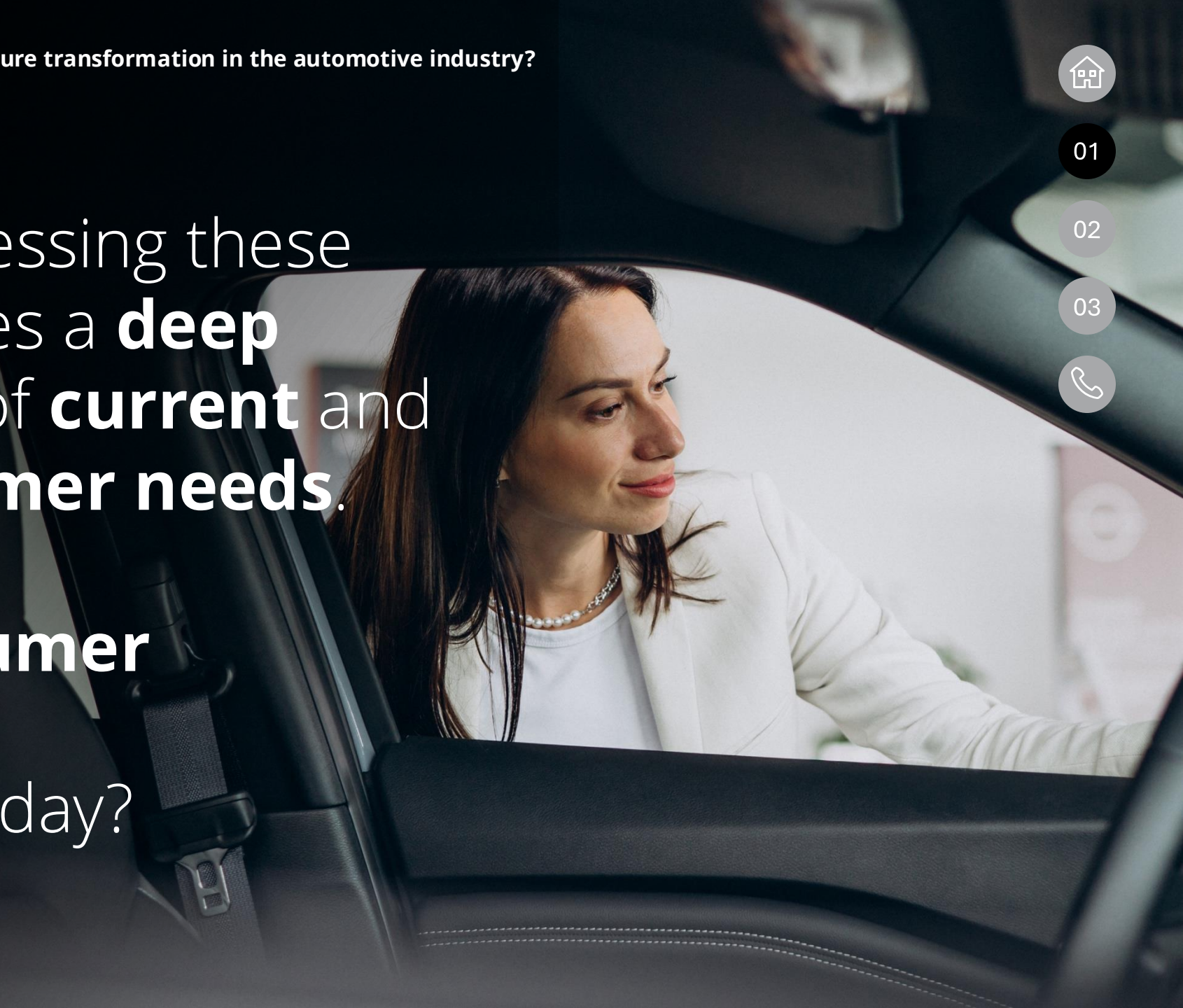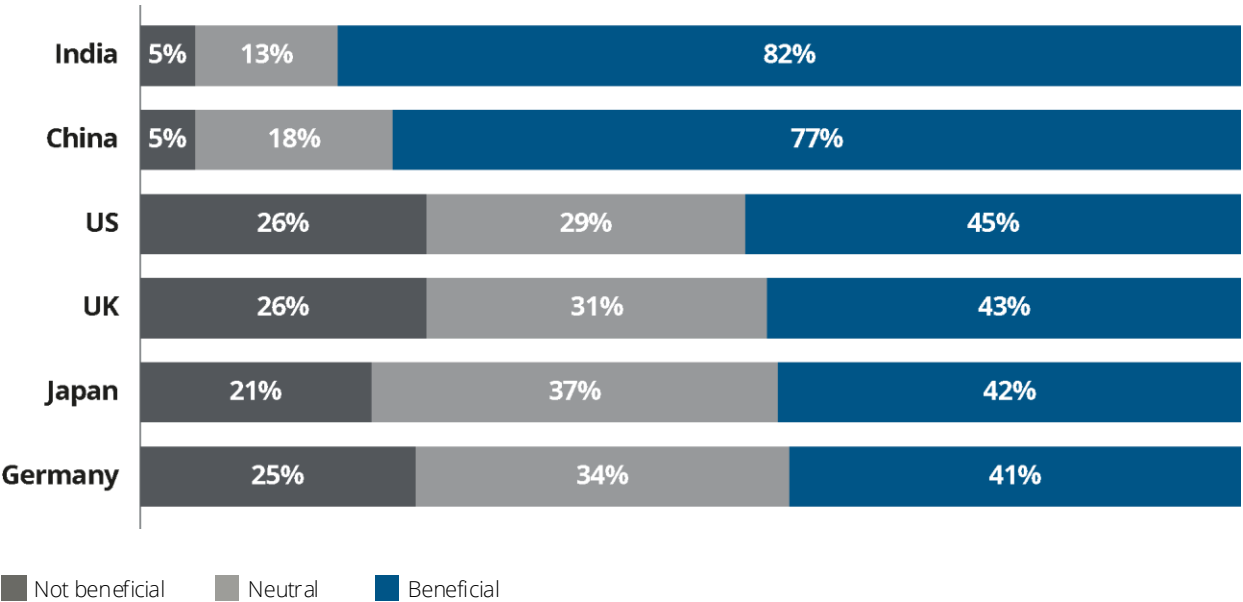- Consumers in western markets still see AI as a double-edged sword
- Understanding their perspective is crucial for developing AI-based solutions that resonate with a broader audience
- A more holistic approach instead of isolated use cases can help deliver more value to consumers

Addition of artificial intelligence in vehicle systems

	Not beneficial	Neutral	Beneficial
India	5%	13%	82%
China	5%	18%	77%
US	26%	29%	45%
UK	26%	31%	43%
Japan	21%	37%	42%
Germany	25%	34%	41%

■ Not beneficial ■ Neutral ■ Beneficial

Source: Global Automotive Consumer Study 2025

Note: Percentages may not add up to 100 due to rounding.
Q62: To what extent do you think the addition of artificial intelligence in vehicle systems (e.g., voice activated features, autonomous driving) will be beneficial?
Sample size: n=939 [China]; 1,306 [Germany]; 882 [India]; 637 [Japan]; 906 [Republic of Korea]; 5,028 [Southeast Asia]; 1,314 [UK]; 937 [US]

The consumer perspective on trust in data management
A majority of consumers surveyed in Germany do not trust any of the listed entities, which could represent a challenge for companies looking to monetize connected services.

Trust in AI is mixed; privacy and data security are major concerns

- In many markets, car manufacturers are seen by a large number of consumers as the entity to be trusted with vehicle-related data

- In order to further reduce skepticism and build trust, automotive players need to increase transparency in their handling of consumer data

- Companies need to focus on improving consumer acceptance on data-related issues

Most trusted entity for managing vehicle data

Most trusted entity	China	Germany	India	Japan	UK	US
Car manufacturer	**25%**	22%	**28%**	**30%**	23%	19%
Vehicle dealer	17%	17%	16%	**30%**	13%	16%
Financial service provider	7%	4%	11%	1%	4%	3%
Insurance company	7%	7%	10%	12%	10%	9%
Automobile club or association	6%	7%	5%	1%	4%	4%
Cellular service provider	6%	4%	7%	3%	4%	8%
Cloud service provider	8%	3%	8%	3%	6%	6%
Government agency	20%	10%	12%	3%	7%	4%
None of the above	4%	**26%**	3%	17%	**30%**	**31%**

  Most commonly cited

Source: Global Automotive Consumer Study 2025

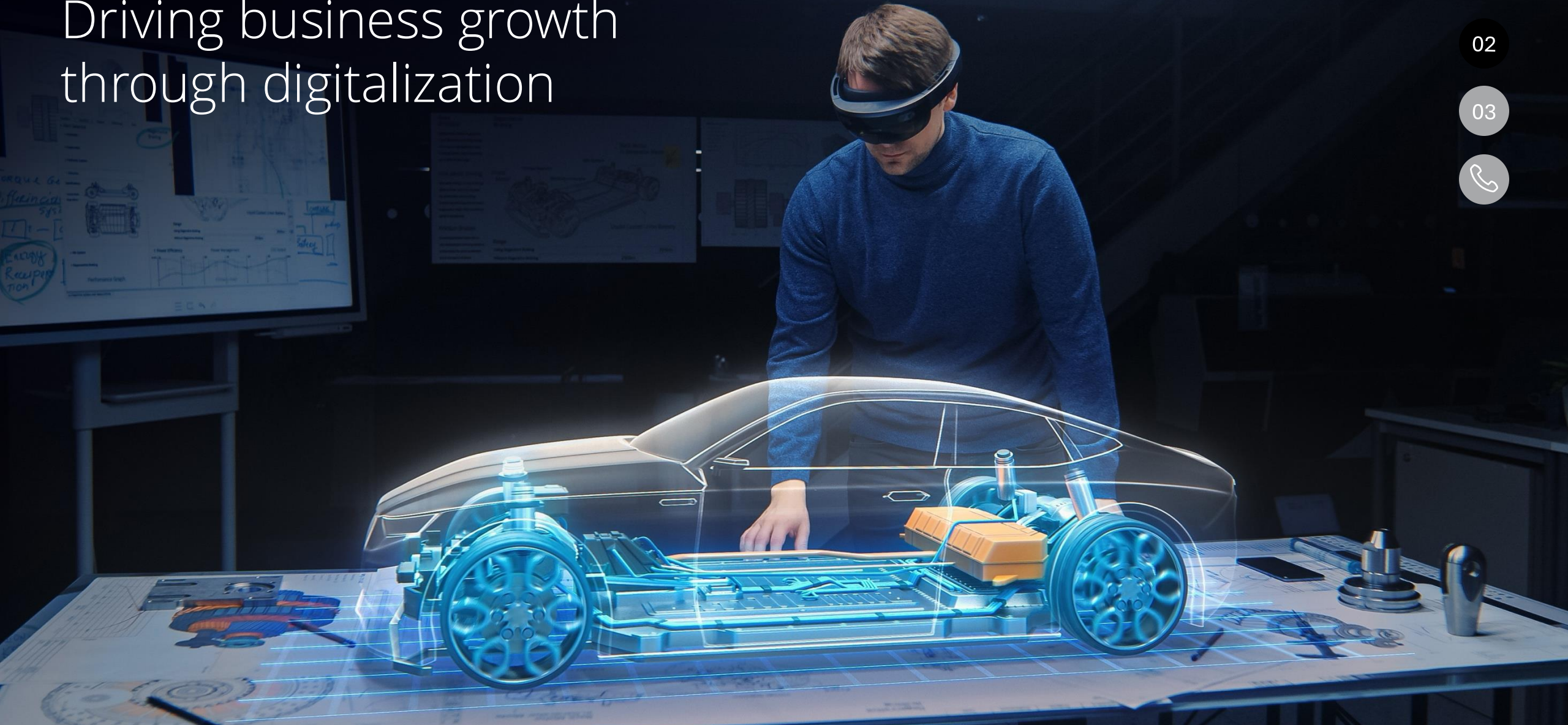Note: Percentages may not add up to 100 due to rounding.
Q59. Who do you trust most to access and manage the data your vehicle generates?
Sample size: n=939 [China]; 1,306 [Germany]; 882 [India]; 637 [Japan]; 906 [Republic of Korea]; 5,028 [Southeast Asia]; 1,314 [UK]; 937 [US]

Digital Maturity Index:
Driving business growth
through digitalization

The start of a digital transformation
Combine use cases in integrated concepts to create exponential value at lower risk through your digital transformation

From digital options, through use cases, to integrated concepts

yesterday

today

tomorrow

Digital options

Use cases

Integrated concepts/platforms

EBIT Impact
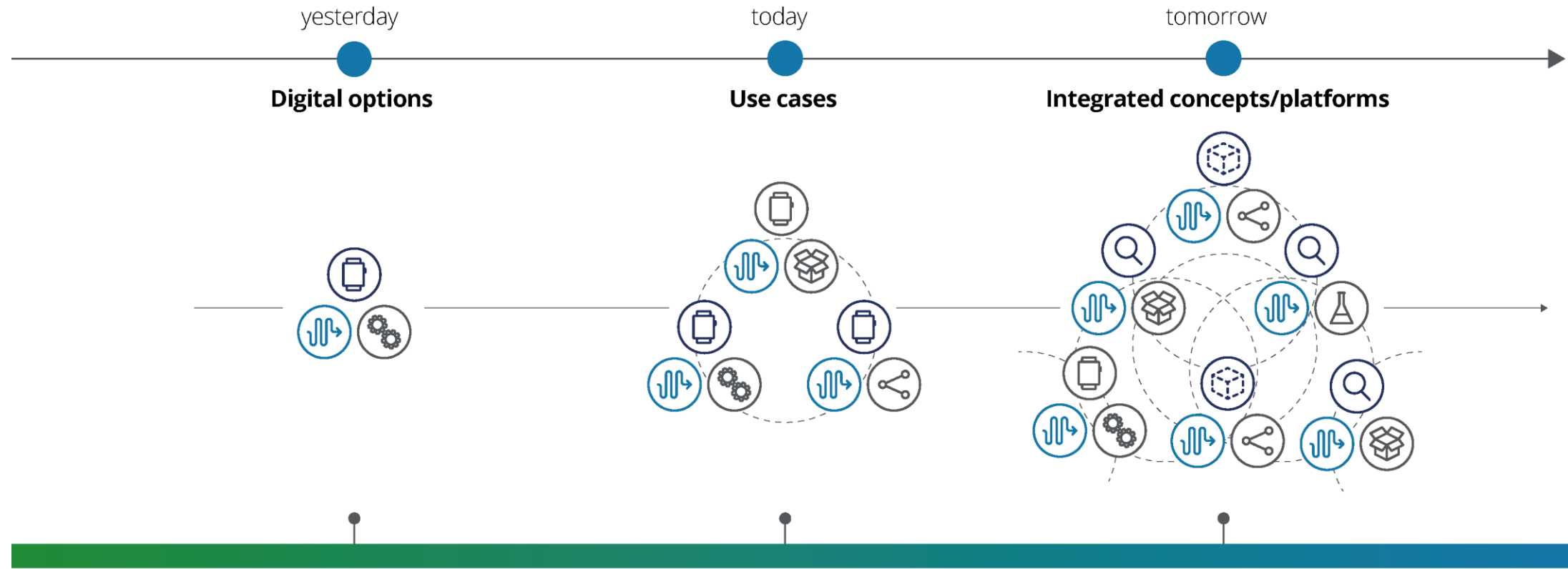
The goal is to achieve an integrated concept – or even better – a platform to overcome the silos of the "old world"

9

We've come a long way in Germany –
and there's still so much more to do

Only 2% of the companies surveyed have not yet started their digital transformation as of 2025.

Many companies find themselves in a "dangerous middle ground" between analog and digital operations, which creates complexity without delivering efficiency.

Satisfaction with transformation progress in Germany

Satisfaction rate

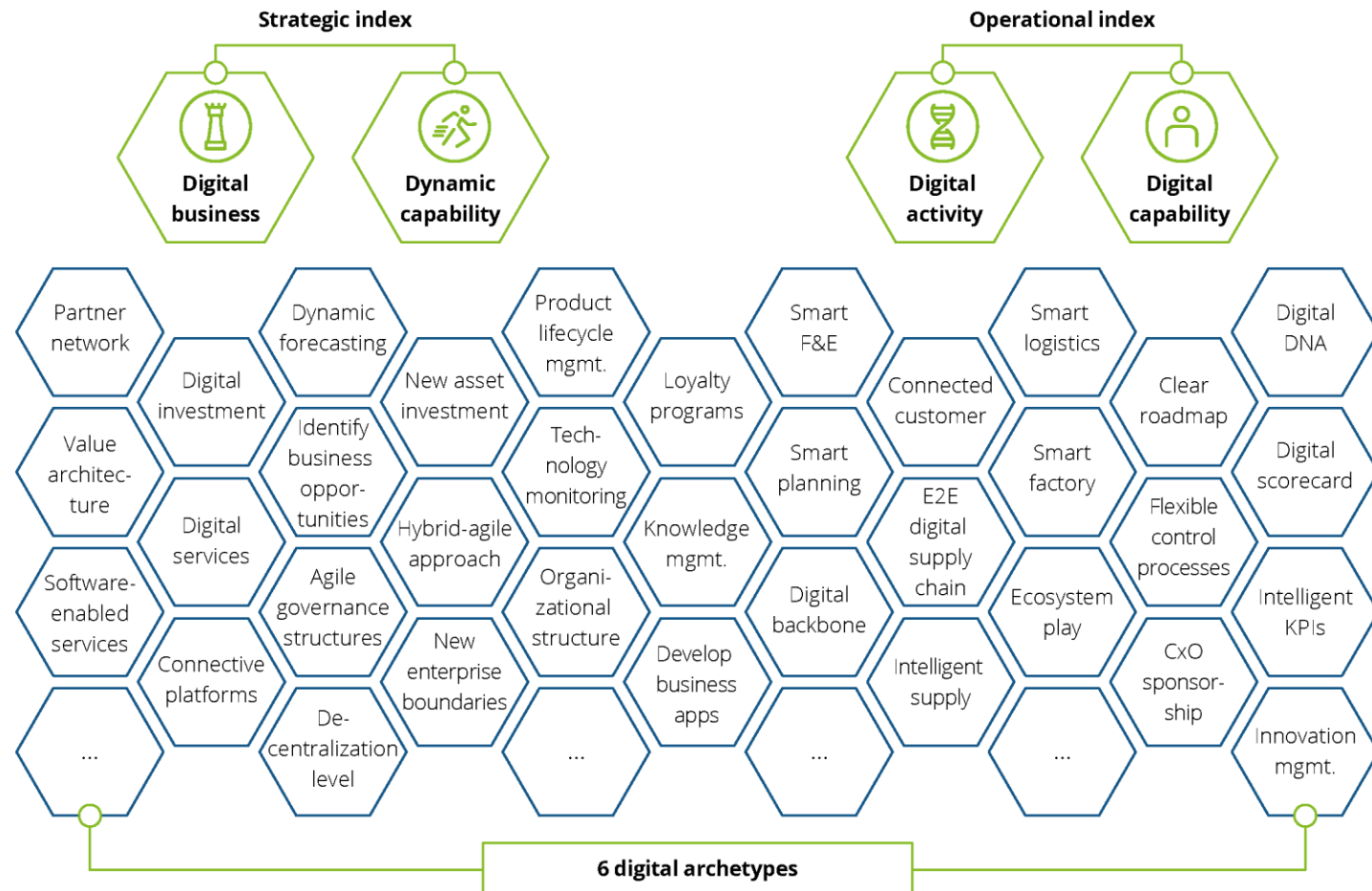| 2019	2023	2025
47%	86%	84%
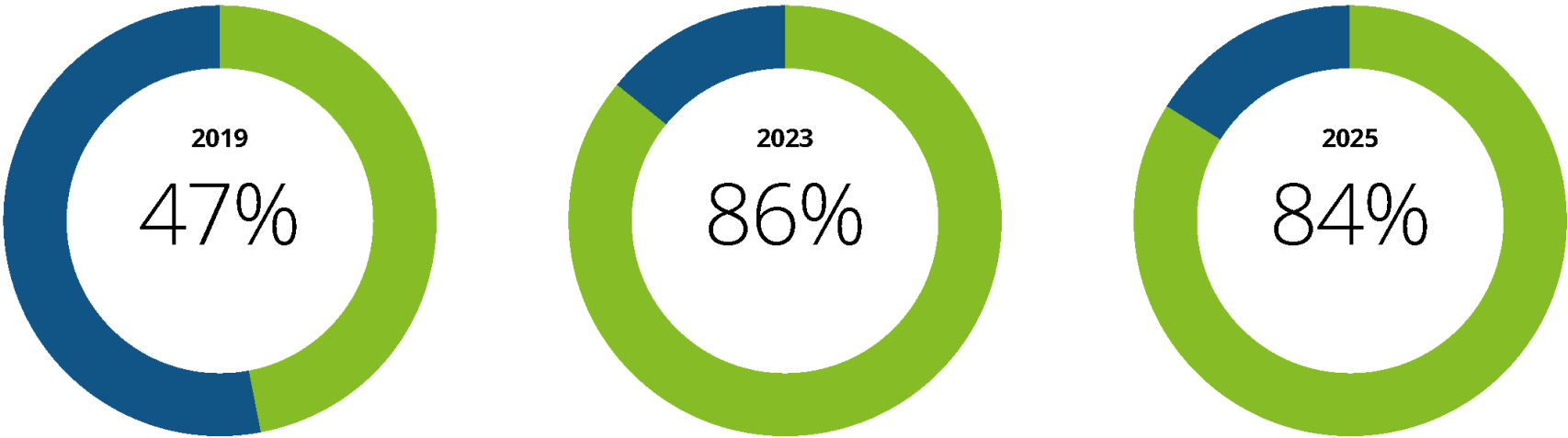
Be specific – what are we talking about?
Our benchmarking database

Our Digital Maturity Index that we developed jointly with the University of Duisburg-Essen quantifies the status quo of a digital journey covering more than 90 different operational and strategic parameters.

Based on theses parameters we have identified six different digital archetypes and allocated companies to them based on their overall digital journey and performance.

Dimensions and parameters considered for the DMI

Strategic index

Digital business

Dynamic capability

Operational index

Digital activity

Digital capability

Partner network · Dynamic forecasting · Product lifecycle mgmt. · Smart F&E · Smart logistics · Digital DNA · Digital investment · New asset investment · Loyalty programs · Connected customer · Clear roadmap · Value architecture · Identify business opportunities · Technology monitoring · Smart planning · Smart factory · Digital scorecard · Digital services · Hybrid-agile approach · Knowledge mgmt. · E2E digital supply chain · Flexible control processes · Software-enabled services · Agile governance structures · Organizational structure · Digital backbone · Ecosystem play · Intelligent KPIs · Connective platforms · New enterprise boundaries · Develop business apps · Intelligent supply · CxO sponsorship · ... · De-centralization level · ... · ... · ... · Innovation mgmt.

6 digital archetypes

11

Six evolving digital archetypes

Champions combine consistent digital strategy with operational excellence to achieve a flexibility advantage

Potentials focus on developing their digital strategy hand in hand with operational excellence to achieve cost advantages

Innovators show distinct advances in digital business through an innovative portfolio but have average operational success

Operators focus on digitalizing their core value chain, founding their success on flexibility through innovative solutions

Followers seek to consistently advance digital skills in both index dimensions. Connecting initiatives is essential to improve

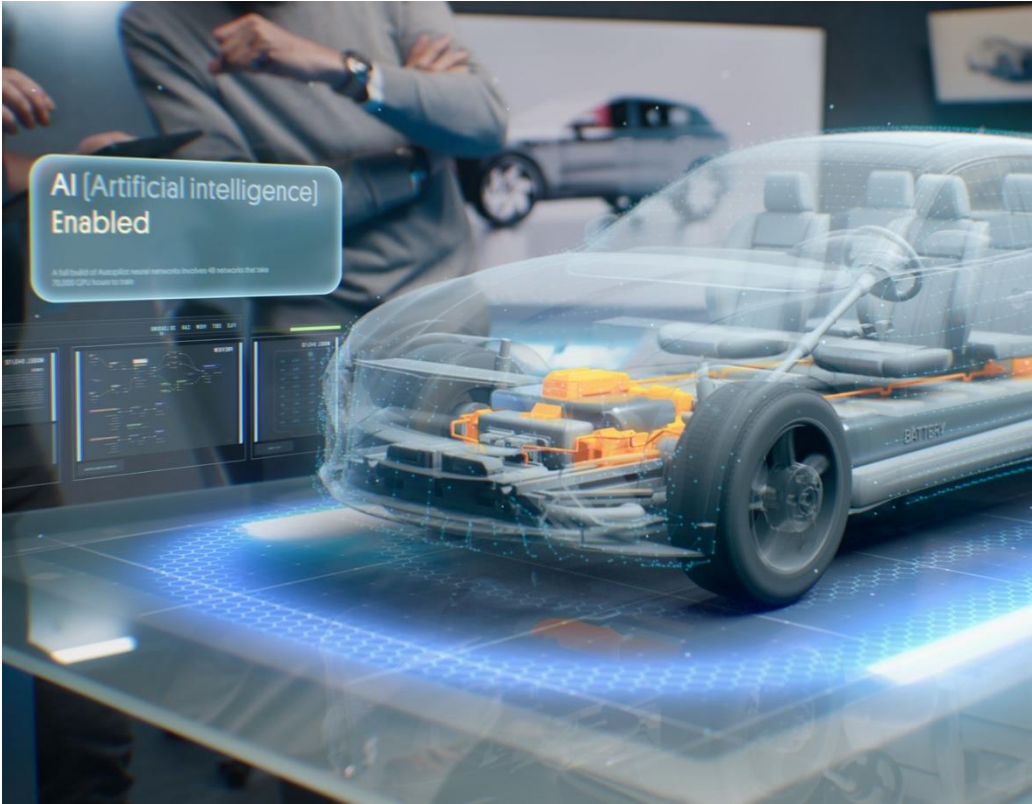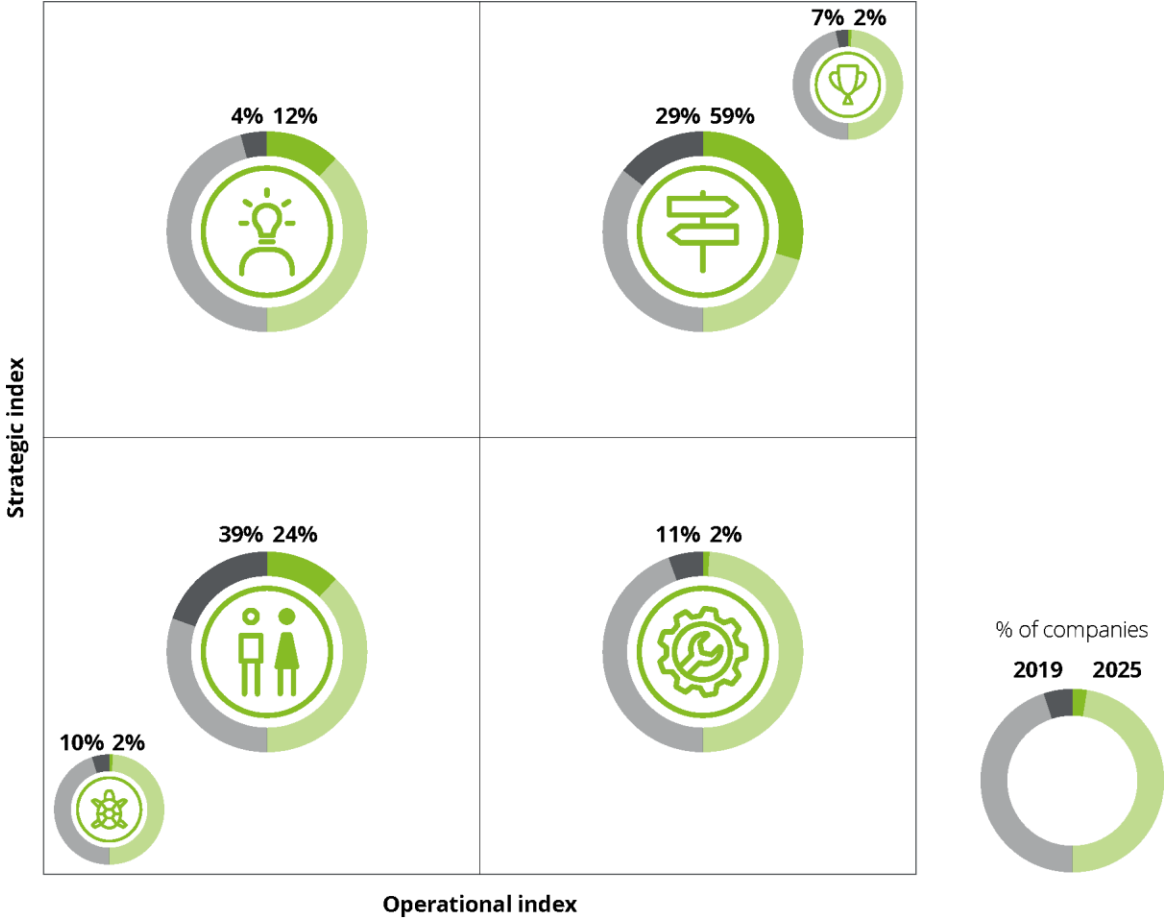**Laggards** lack digital skills in both index dimensions using digitalization to improve overall efficiency

Strategic and operational maturity

Strategic index

Operational index
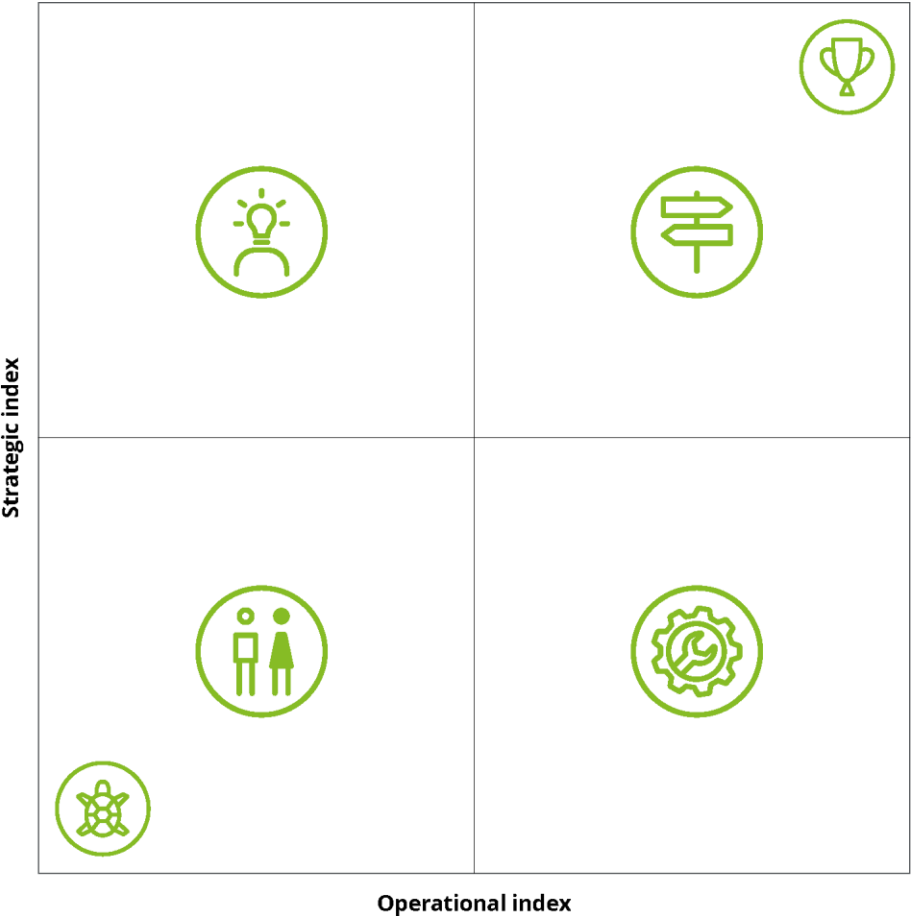
Be candid – where is company A in comparison to the benchmark?
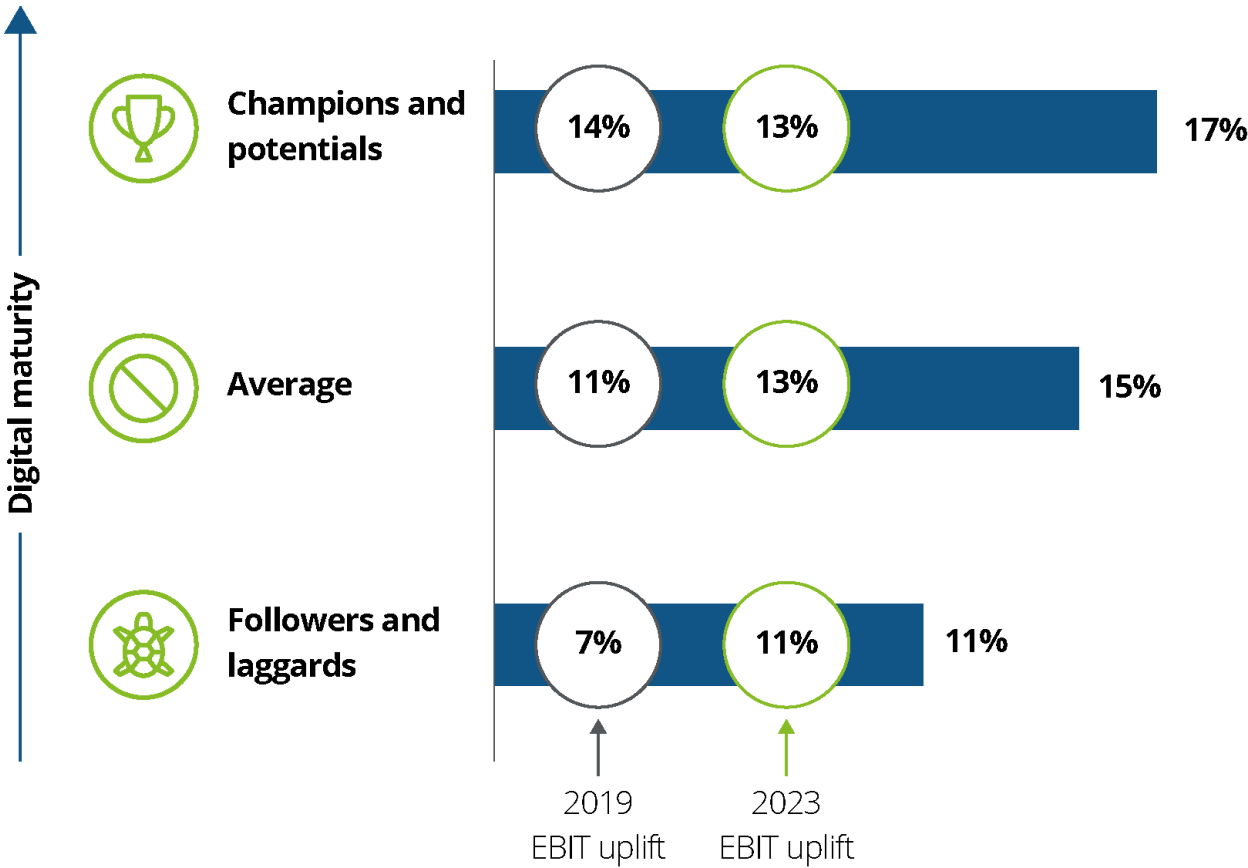More than 60% of companies are in the target area – but only 2% are champions

Archetypes distribution

4% 12%

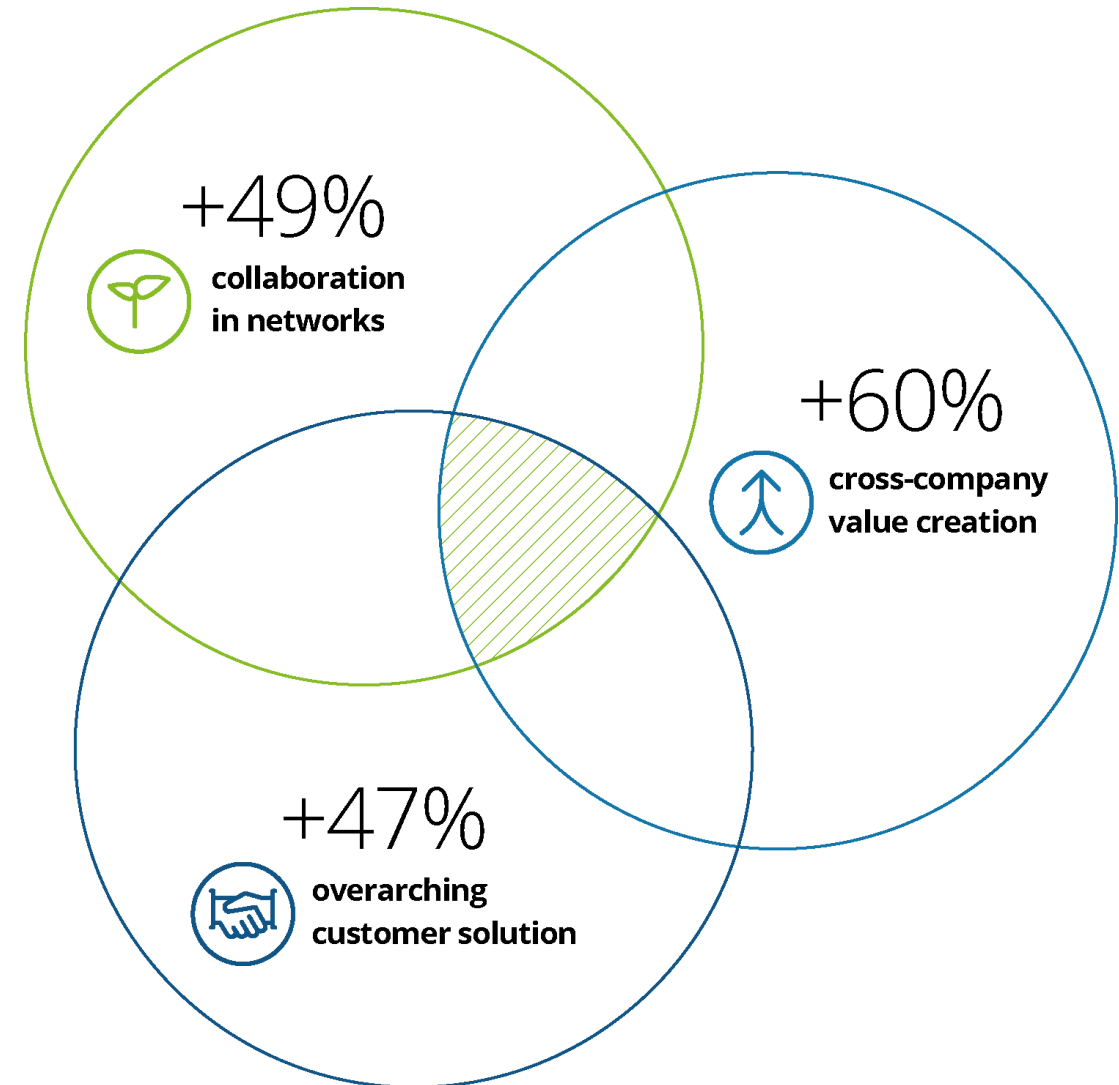7% 2%

29% 59%

Strategic index

39% 24%

11% 2%

10% 2%

% of companies

2019 2025

Operational index

AI [Artificial intelligence] Enabled

Looking ahead –
the gap between the top and bottom archetypes
will widen…

EBIT uplift 2025 Germany

Digital maturity

Champions and potentials
14% | 13% | 17%

Average
11% | 13% | 15%

Followers and laggards
7% | 11% | 11%

2019
EBIT uplift

2023
EBIT uplift

.... and circularity and ecosystems will be the mega-topics in smart manufacturing until 2030.

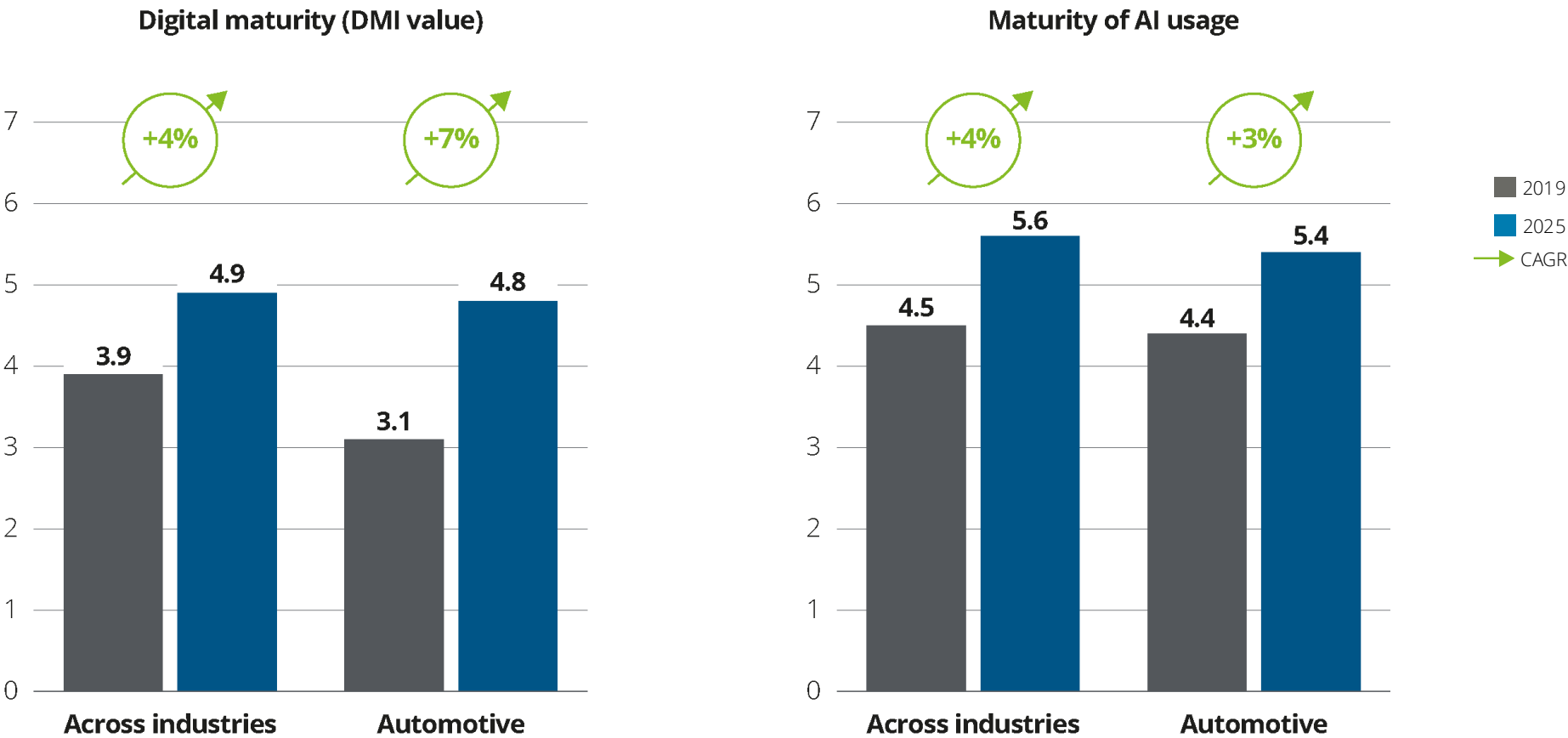**Comparison between 2019 and 2025 of the share of companies involved in ecosystem-related activities**

+49%
collaboration
in networks

+60%
cross-company
value creation

+47%
overarching
customer solution

Current state of digitalization and AI in automotive

Automotive companies are still lagging behind the industry average in terms of digitalization and AI usage, but have now started to close the gap.

Average values for German companies across all sectors and for the automotive industry
7-point Likert scale (1 very low–7 very high)

Digital maturity (DMI value)

- +4%
- +7%
- 3.9
- 4.9
- 3.1
- 4.8

Maturity of AI usage

- +4%
- +3%
- 4.5
- 5.6
- 4.4
- 5.4

Across industries / Automotive

2019
2025
CAGR

16

From isolated use cases to AI-based automotive companies

AI is key to remaining competitive in the future
Isolated use cases need to be integrated into a holistic AI-powered platform to stimulate growth

**From digital options, through use cases, to integrated concepts**

yesterday   today   tomorrow

Digital options   **Use cases**   **Integrated concepts/platforms**

1. Chatbot and digital customer support

1. AI-enabled contact center (Aftersales)
Process efficiency

2. ERP systems and business intelligence (BI) platforms

2. Automated reporting and analytics (Finance)
Process efficiency

AI-based platform that learns continuously and encompasses all functions in an automotive company

3. Digital marketing platforms and channels

3. Hyper-personalized sales and marketing co-pilot (Sales/Marketing)
Growth

EBIT Impact

The growth mechanism of AI
Asset-heavy automotive players need digital operating models to generate growth and value in the same way as technology companies

AI-based companies: leverage data for growth with minimal additional costs, contrasting with traditional capital-intensive growth models

Value

Traditional operating model

Digital operating model

Number of users
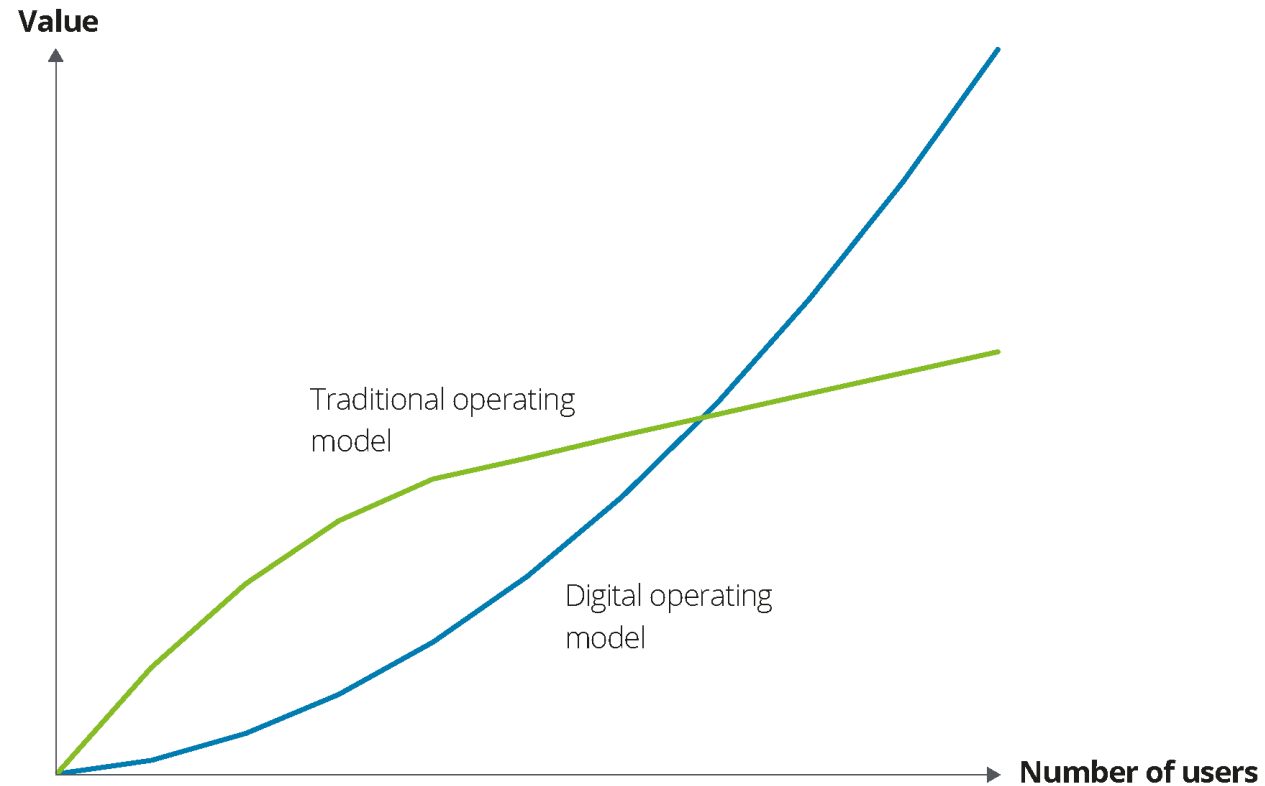
Source: Iansiti, M., & Lakhani, K. R. (2020).
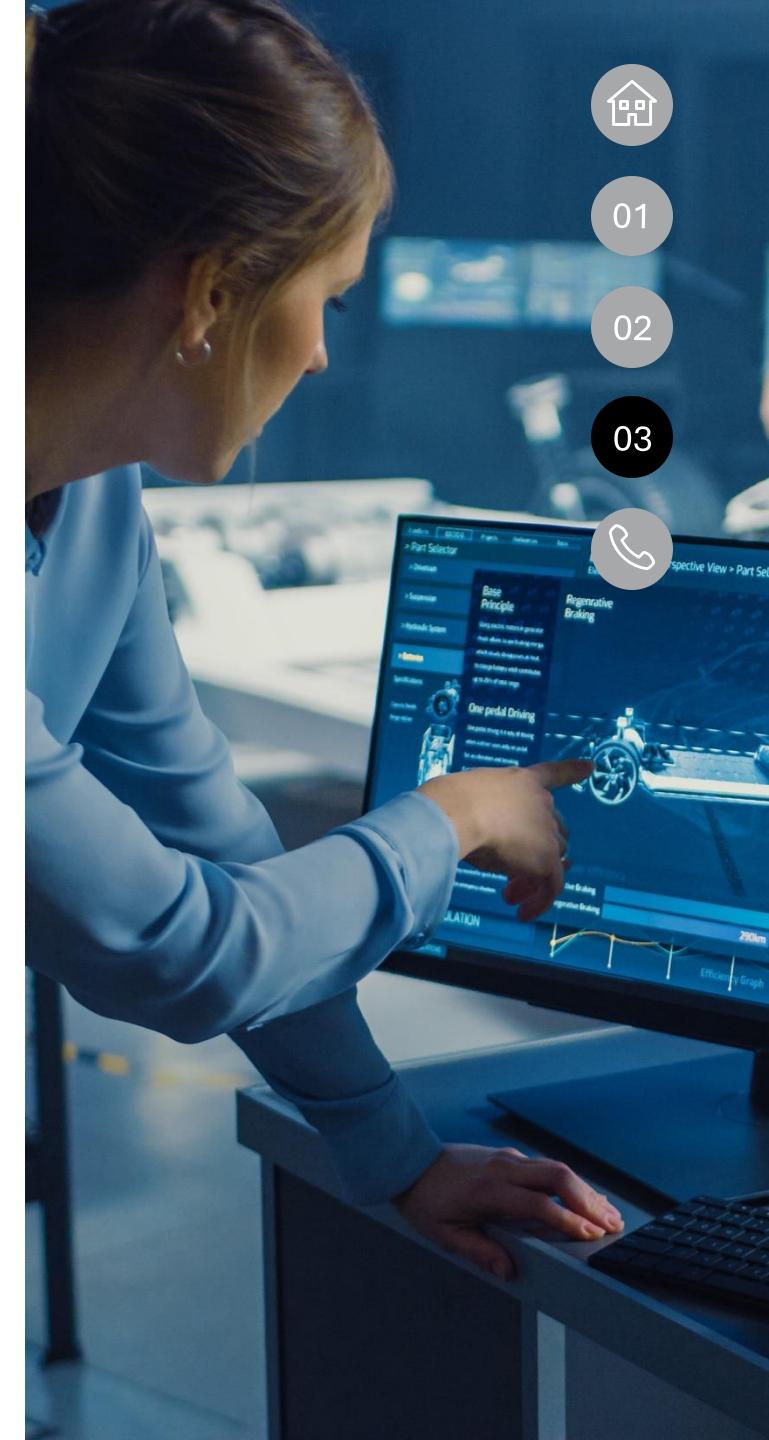
Drivers of growth
In order to achieve this growth, automotive players looking for AI-based operating models can base their transformation on three pillars

Three essential value drivers:

- Scale (expansion through isolated use cases),
- Scope (business expansion through synergies),
- Learning (continuous improvement through data analysis)

Auomotive survey findings:

- Scale and scope significantly impact value creation, but learning does not play a role – yet.

Current state of the industry regarding AI-based growth drivers

Scale (extending)

Scope (broadening)

Learning (improving)

Company value creation

Time for improvements in the automotive industry through AI

■ Significant influence
■ No significant influence
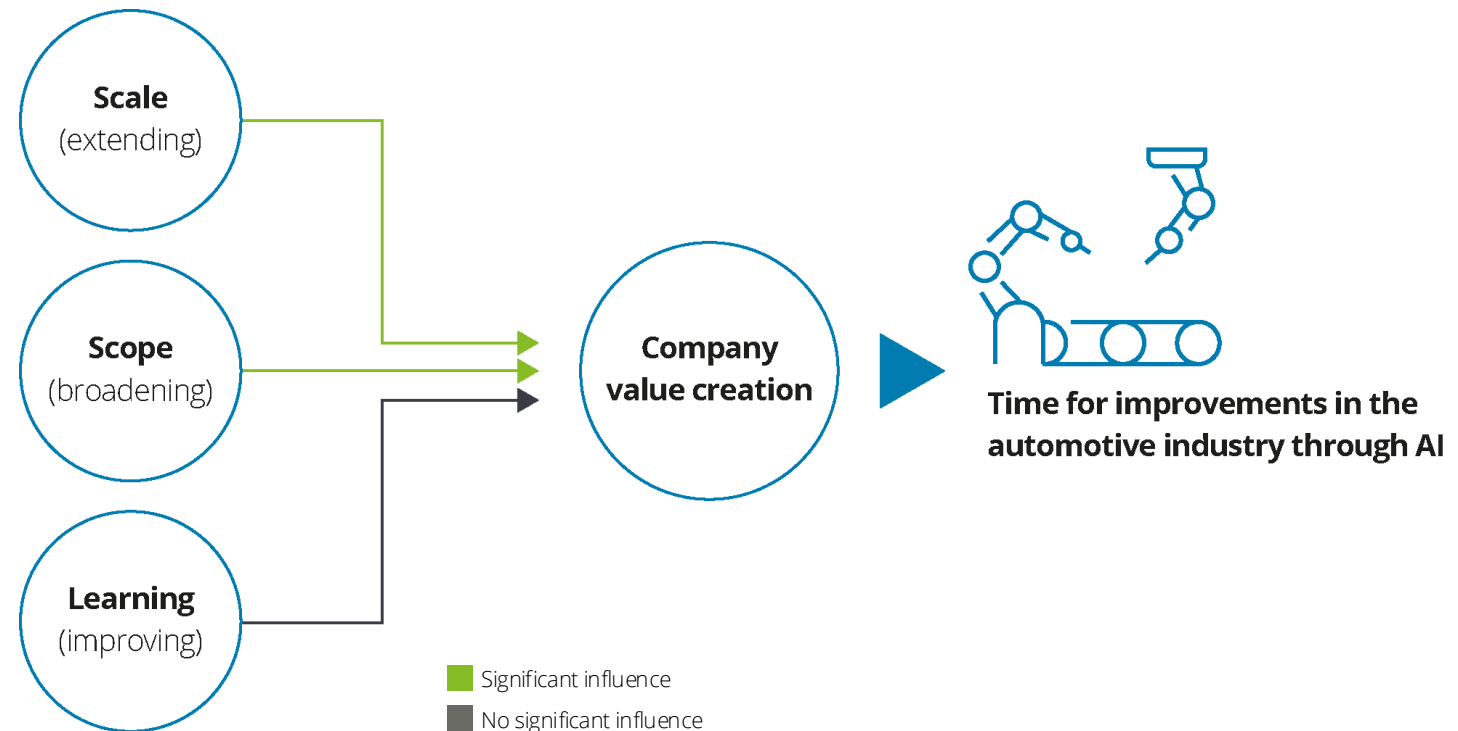
Statistical influence of important AI-based value drivers on value creation in automotive companies

Source: Iansiti, M., & Lakhani, K. R. (2020), Festing, C. & Proff, H. (2025).

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Mastering the transformation
Sustainable growth can only be achieved with a focus on network and learning effects

- The industry has traditionally focused on continuous improvement processes and the need for interconnected optimization approaches.

- Today, strong network and learning effects are needed to achieve more value

- Ecosystems and the effective management and utilization of data are key to generate a competitive advantage.

- Companies need to leverage AI to process and evaluate the huge amounts of data generated from autonomous driving and connectivity in vehicles.

The value of network and learning effects

Strong network and learning effects (market tips toward winner)

Weak network and learning effects (competitors coexist)
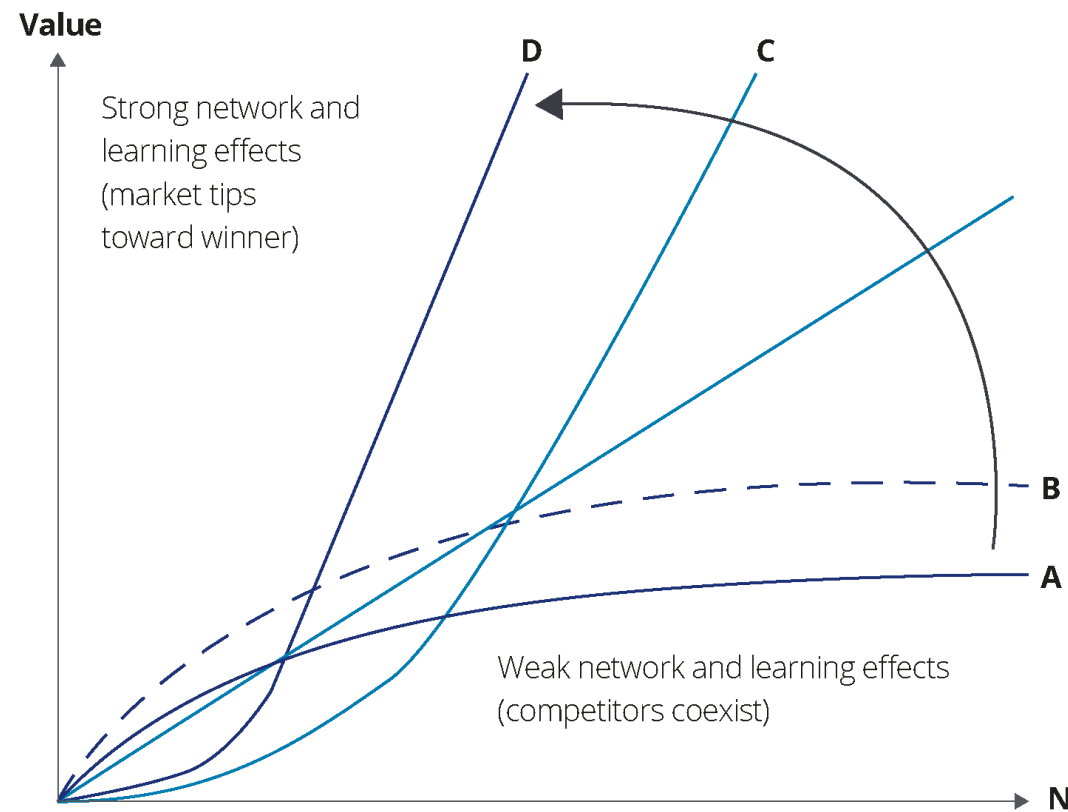
Source: Iansiti, M., & Lakhani, K. R. (2020), Festing, C. & Proff, H. (2025).

Strategic actions for companies

Building a connected data pool:
Outline the necessity of creating a connected data pool and developing algorithms for data-driven services

Cultural and operational shifts:
Emphasize the need for cultural and operational shifts towards digital technologies to remain competitive

Adapting to changing customer needs:
Highlight the importance of understanding and adapting to changing customer needs, particularly regarding connectivity and software preferences

While **embracing digitalization** and **AI** is essential for future growth, the true opportunity for the German automotive industry lies in its **proven ability to captivate customers with superior products**.

The industry has demonstrated over decades that it can **inspire customers with superior products**. Why should it have forgotten how to do that?

Contact and Downloads
Do not hesitate to get in touch!

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**Automotive Industry
Briefing on AI**

SMART
FACTORY
by Deloitte

**Our new Smart Factory
is open in Düsseldorf:**
For more infos contact us at
smartfactory@deloitte.de

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