



Global Trends and Technologies in New Industrialisation

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Picture: Demonstration Factory (INC Invention Center in cooperation with MEXT/MESS) in Istanbul, Turkey

Our Focus Areas

Where we create world class innovations



New Products & Ventures

Innovation is 1% inspiration and 99% perspiration: It's not only about ideas and great technologies. It's about turning ideas into products that customers love and creating a sustainable business. The art of successful innovation is the ability to implement with speed, experience and impact. Amazing teams build new products and ventures to future-proof your business.

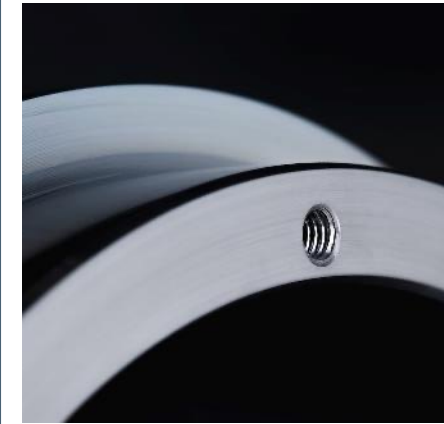


Sustainability

Overcome the dichotomy between profitability and sustainability by learning how to systematically prioritize your most impactful sustainability levers. We guide you towards a professional sustainability management in order to address increasing awareness and sustainability regulations.

Artificial Intelligence

Data is the new oil. To be ready for the data-driven future, strategic cornerstones need to be prepared and promising data-related use cases must be implemented in a scalable manner. For this, AI offers a powerful toolset to optimize processes, reduce waste and develop new digital products and services.



Industry 4.0

The digital transformation of industry offers major potential. To do it right, a proper strategic approach, infra-structure design, and development of the skills and mindset of the people and organization are needed to achieve transformative goals, not just local optimization.

Technology & Innovation Management

The ability to identify, develop and implement innovations differentiates successful companies from the others. A diligent, modern technology and innovation management drives future growth and competitive advantage to leap one step ahead.



Globally ambitious

Let's turn visions into reality



Istanbul
EXPLORE

Aachen
EXPLORE

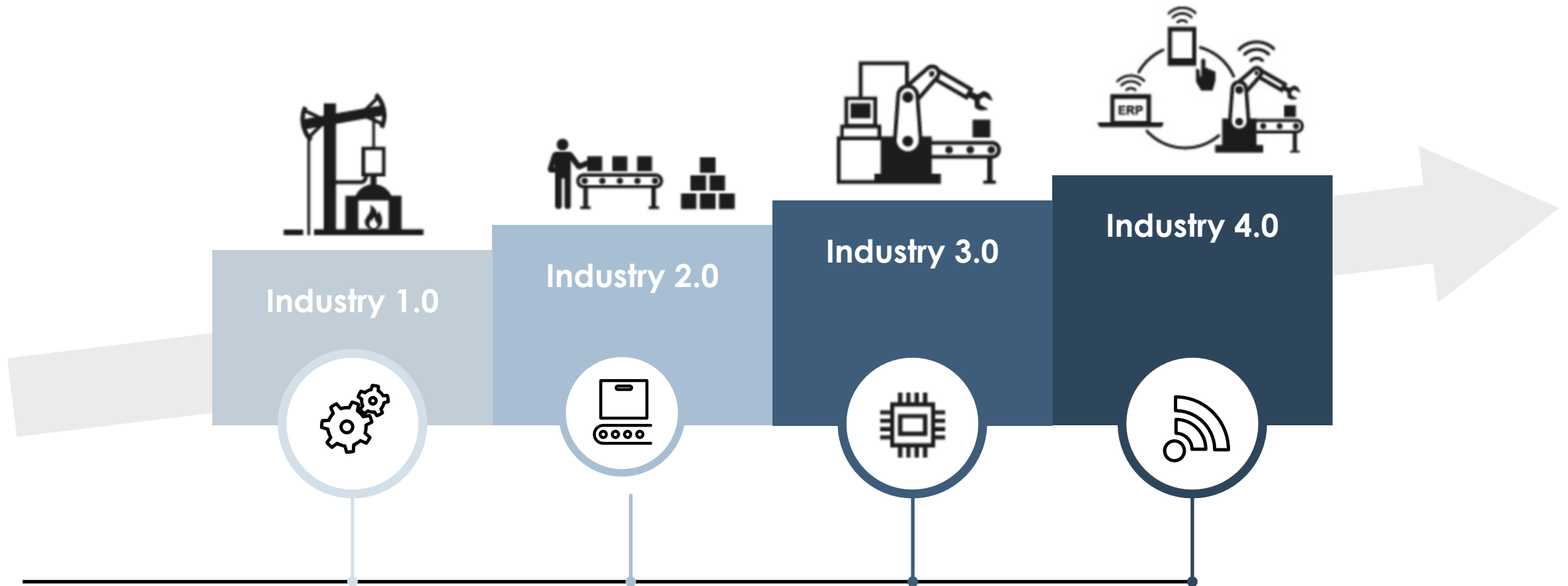
Berlin
EXPLORE

Dresden
EXPLORE

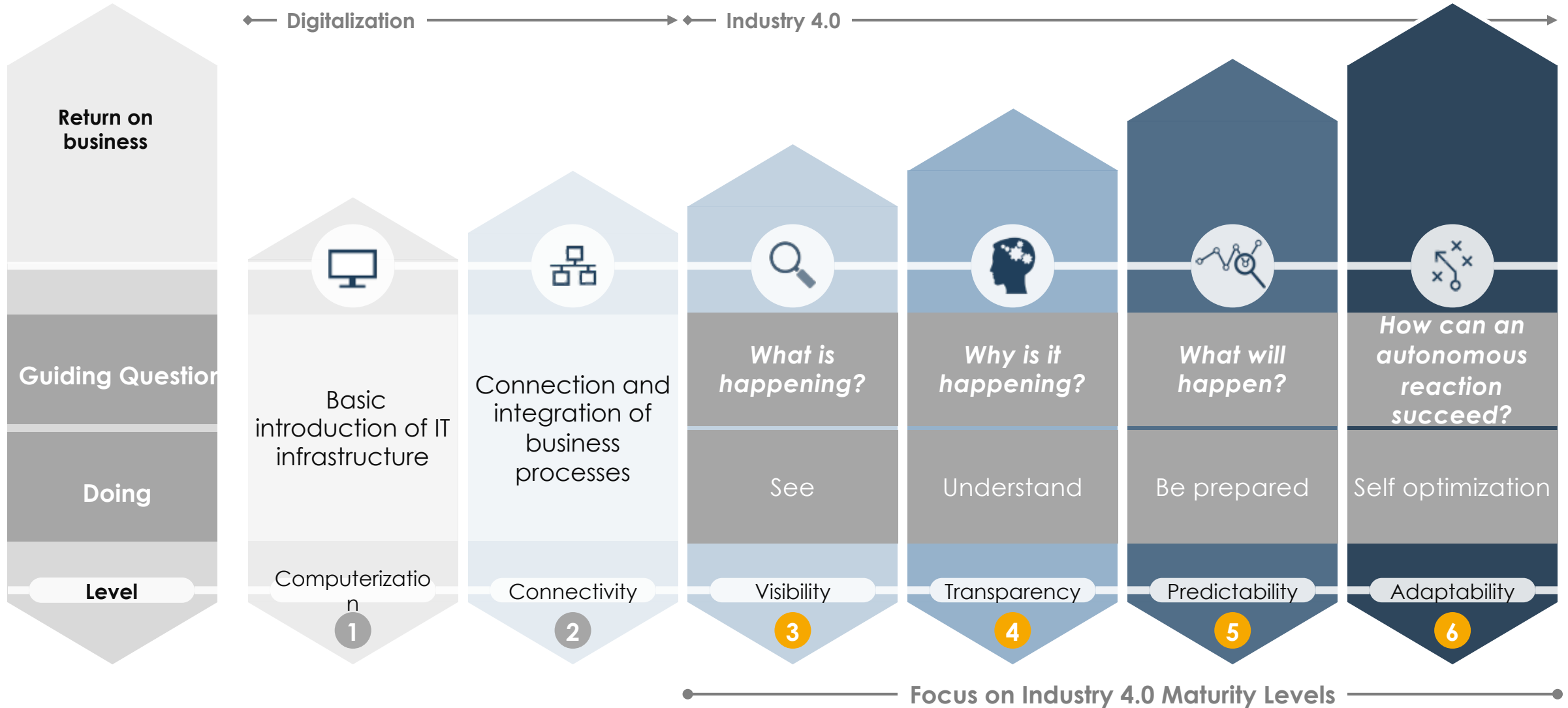
Munich
EXPLORE

Hong Kong
EXPLORE

The Evolution of Industrial Production



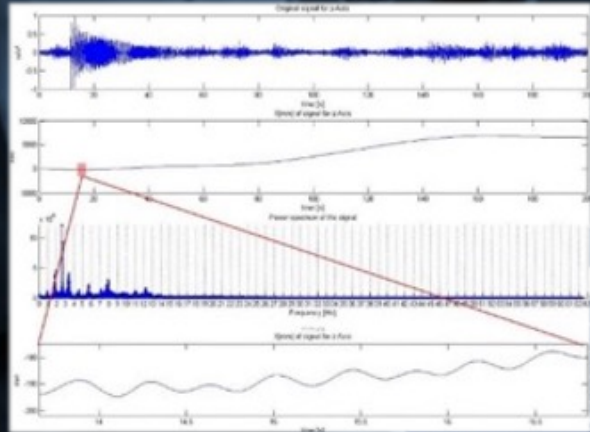
Industry 4.0 Maturity Index



Visualization - What is happening?



Transparency – Why is it happening?



Duration
2 mins
1 min
2 mins
3 mins
1 min
1 min

Safety

Safety Incidents: 0

Near Misses: 1

Daily Safety Tip

When lifting heavy parts, avoid twisting or leaning

KPIs

Shift Throughput (#)	Energy Consumption (kWh)	Quality (% Failure)
242 / 235	53 / 80	7% / 6%

Actual / Target

Barometer

Owner	Status image
Erika	☹️
Fernando	☹️
Igra	😊
Miten	😊
Team	☹️

Action Items

Issue	Potential Causes	Action	Owner	Due	RCPS Form
CNC Machine poor product tolerances	Tool end of life. No condition monitoring	Schedule replacement. Develop prev. maint. Program for CNC	Igra	08/02/19	000554
Bottleneck at CNC machine	Slow cycle time on CNC	Part program optimization CNC	Fernando	09/02/19	000555
No skilled operator on WS4 on B shift	No training	Cross-train on WS 4 Develop training matrix	Miten	01/03/19	000556

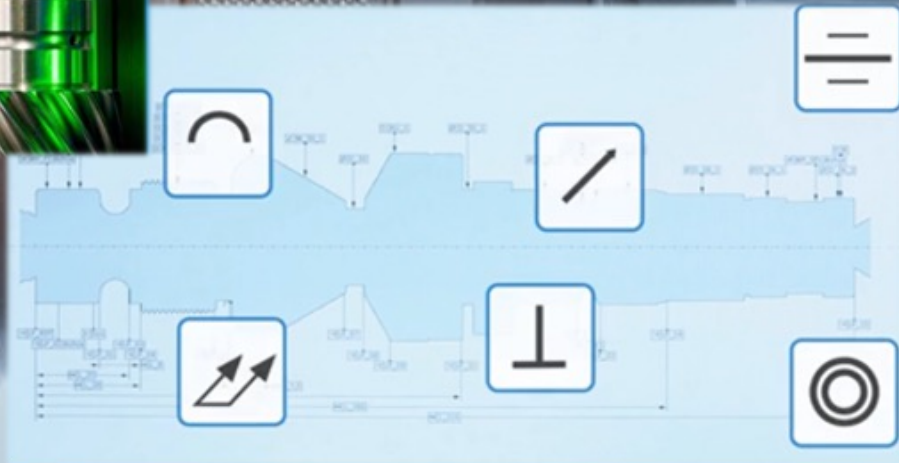
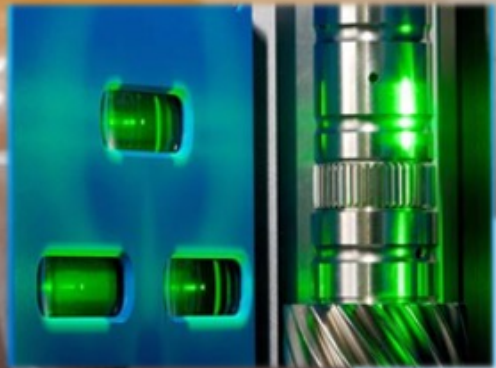
[Action Log](#)

Run RCPS

Prediction - What will happen?



How can an autonomous reaction succeed?





Production: From the line-and-workshop concepts of today to modular production

Market forces:

- High number of demanded variants
- Individualization and mass customization
- High-asset, high-mix, low-volume production demands flexibility in manufacturing



ChatGPT has been the fastest growing app in the world reaching 100 million users in two month.

Month to reach 100 Million Users



Trends in Sustainability

Society and customers continuously increase pressure to move

Some managers believe that...

- current customer behavior is driven by **convenience alone** (...which potentially holds true for generations X/Y but certainly not beyond)
- ... their responsibility is mainly towards their **financial shareholders**

The truth is that...

- ... current customer requirements **change swiftly towards circularity** (... which also opens up significant opportunities for new solutions & business models previously discarded)
- ... the balance envelope of sustainable management is not the fence around the company but **earth's atmosphere**

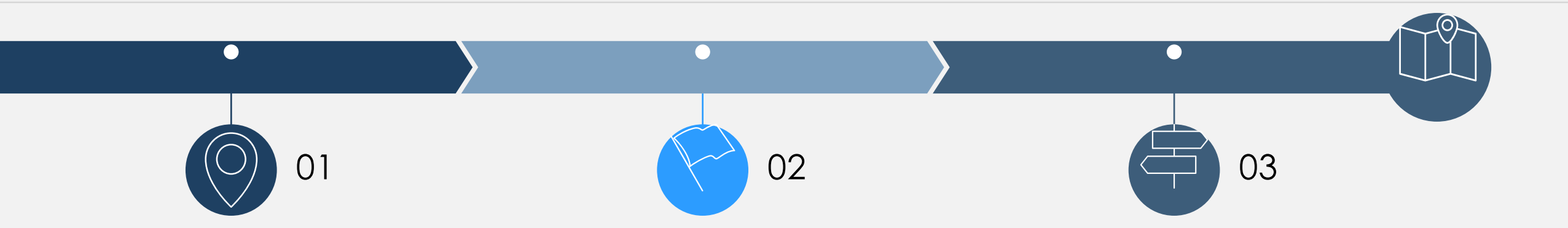


Ecologic Responsibility
"Contributing to the common good"



How to move towards Industry 4.0

The process of roadmap design



Status Quo

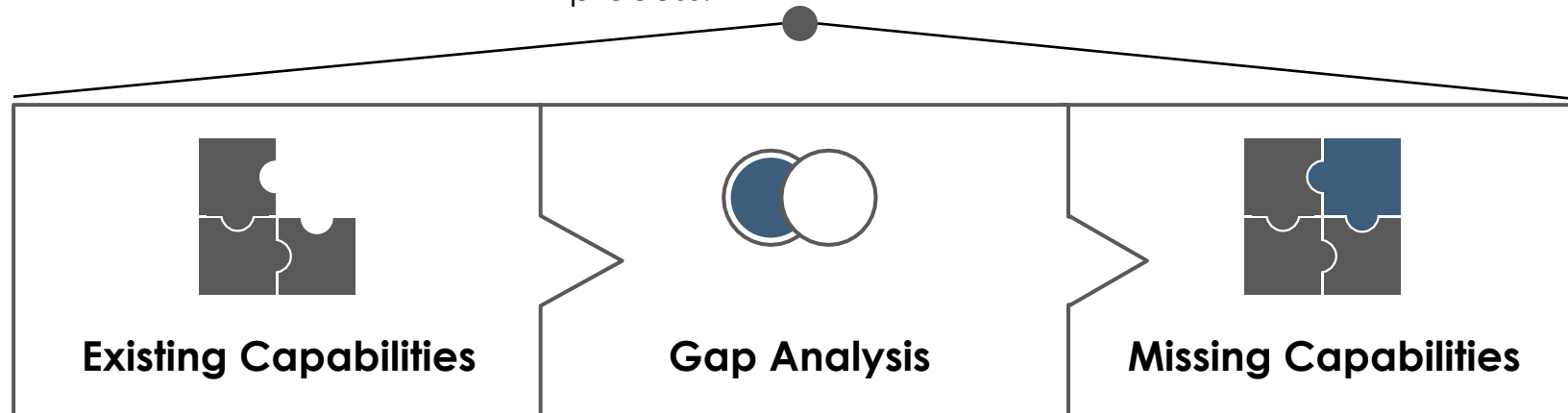
Identification of the current maturity stage through department-based assessment.

Target State

Identification of target development stage at the end of the transformation process.

Definition of Roadmap

Formulation of initiatives and incorporation into a roadmap based on conclusions from step 02.



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