



IME GROUP OF COMPANIES

Best-in-Class Design and Manufacturing Solution Provider



**Industry 4.0 Workshop
& Assessment**

www.cadcam.com.my

| Impact of Industry 4.0

... As production becomes more capital intensive, the labor cost advantages of traditional low-cost location will shrink, making it attractive for manufacturers to bring previously offshored jobs back home. The adoption of Industry 4.0 will also allow manufacturers to create new jobs to meet the higher demand resulting from the growth of existing markets and the introduction of new products and services.

Adidas's high-tech factory brings production back to Germany

Making trainers with robots and 3D printers



M2M by different industry

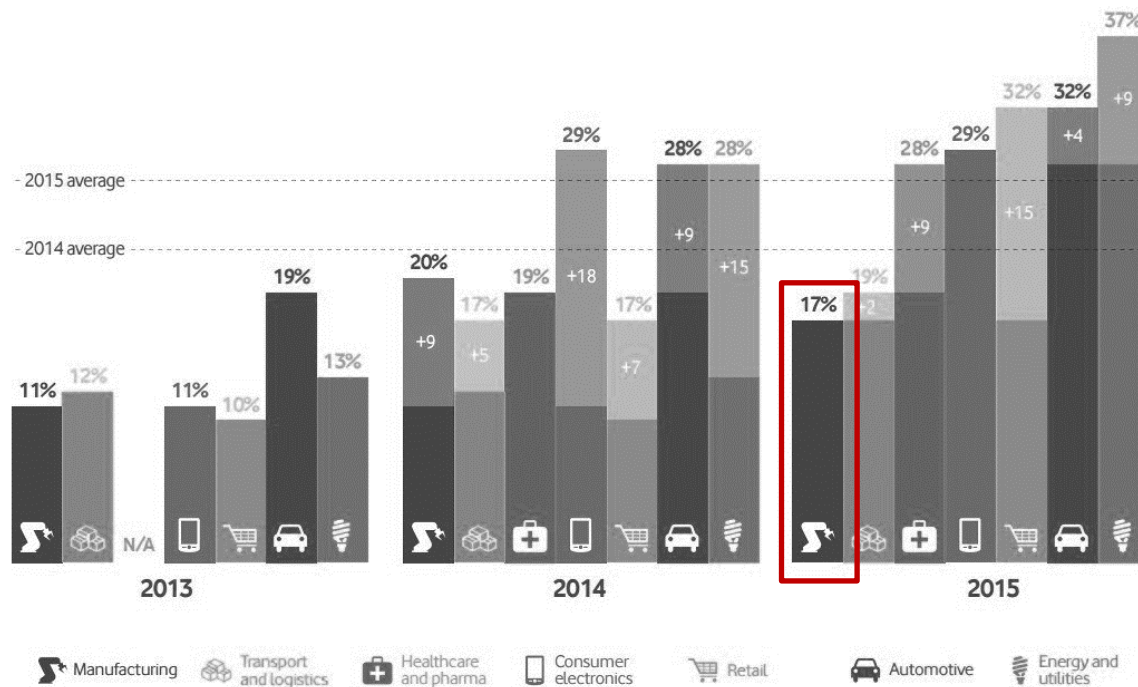
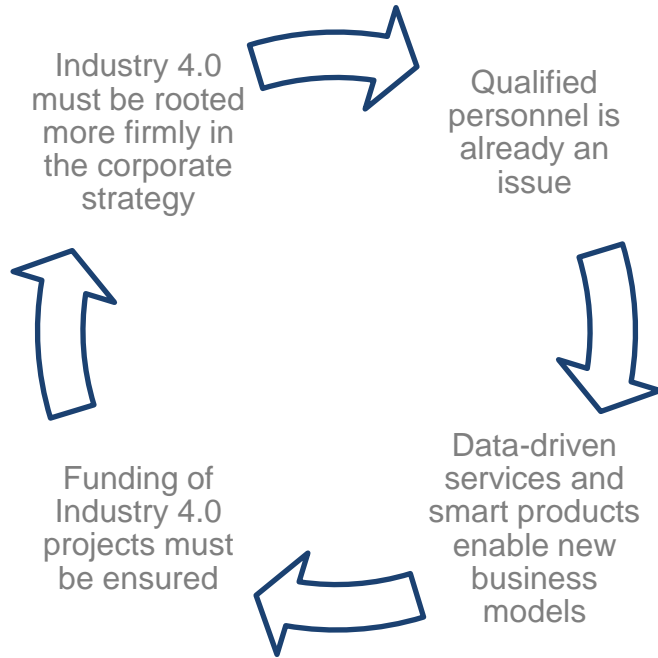


Figure 4: Adoption by industry 2013–2015 shows energy and utilities leading, closely followed by automotive and retail



Challenges in implementing Industry 4.0 in Germany



4 out of 10 companies do not have any Industry 4.0 strategy.

SME should make an effort to explore the topic through a pilot project

30% of the companies currently have no core competences in house to manage the personal demand associated with I40

Nearly 66% of companies have not yet discovered the potential of data driven services and do not offer any such portfolio.

63.4% indicate that lack of funding is preventing them from pushing further.



Challenges in implementing Industry 4.0 in APAC

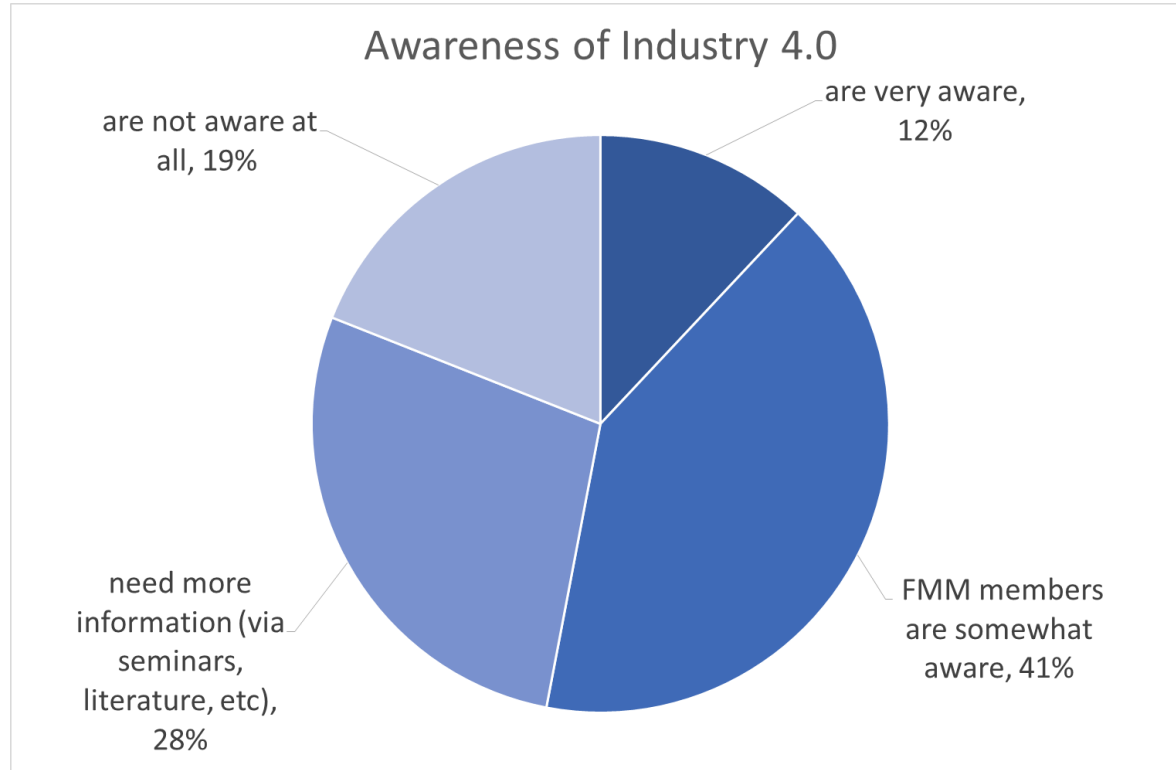
Key takeaway from Manufacturing Technology Asia 2017 Conference 2017 in Singapore:

1. Digitalisation is key to future growth in APAC
2. Resistance to Industry 4.0 within the manufacturing sector
3. Partnering to build a collaborative ecosystem

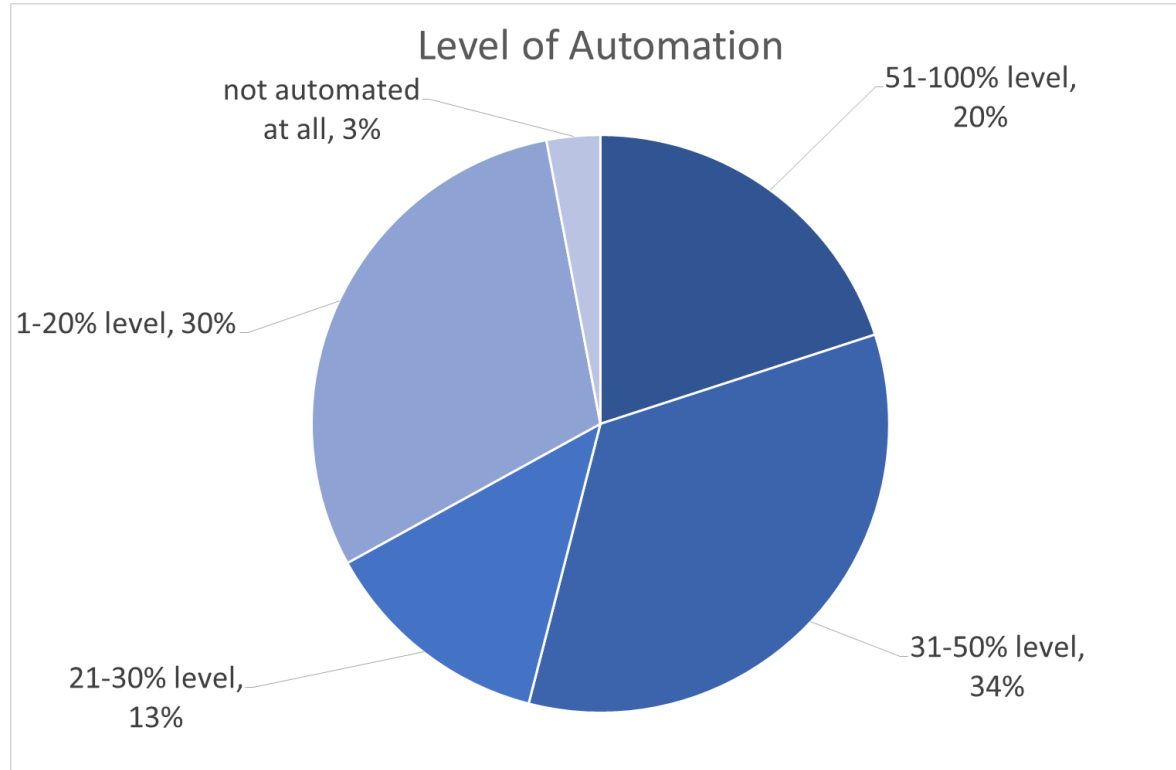
This article was written based on a panel session that Future Ready Singapore attended at the Manufacturing Technology Asia 2017 conference; April.



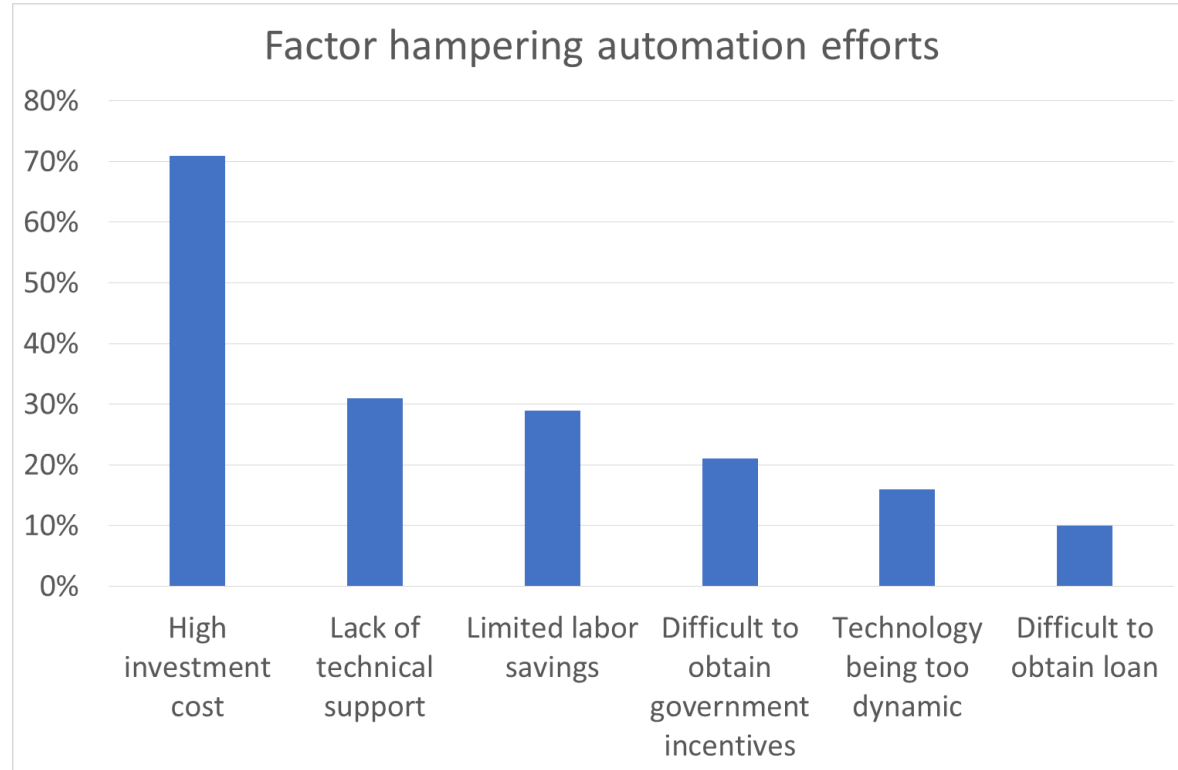
Challenges implementing Industry 4.0 in Malaysia



Challenges implementing Industry 4.0 in Malaysia



Challenges implementing Industry 4.0 in Malaysia



A dramatic landscape featuring a long, straight asphalt road that stretches from the foreground into the distance. The road is flanked by green fields and a fence on the left, and more fields and trees on the right. The sky is filled with dark, heavy clouds, suggesting an approaching storm. The overall mood is tense and contemplative.

ARE WE READY?

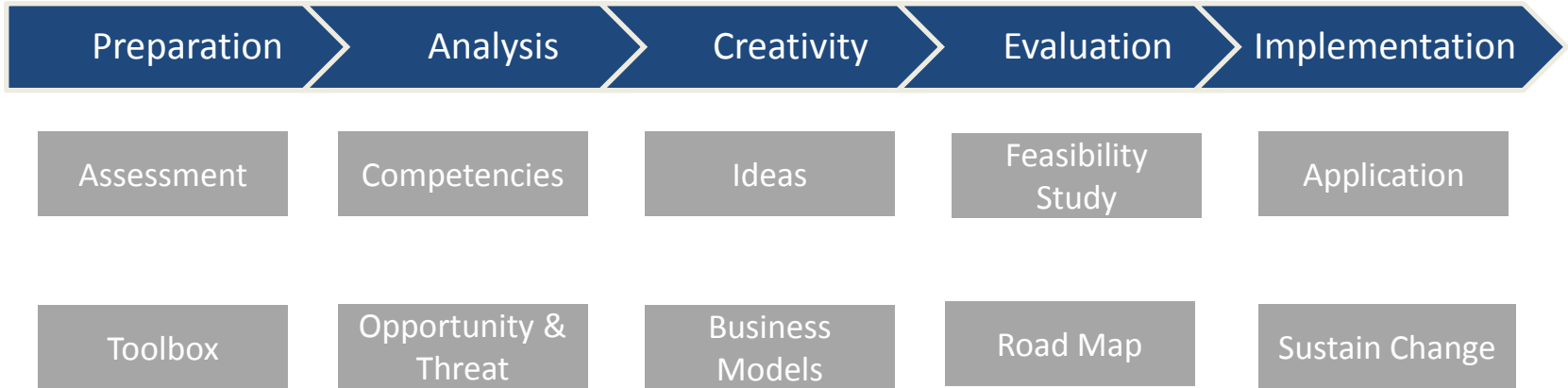
A serene landscape photograph showing a sunlit forest. The sun is positioned in the upper center, creating a strong lens flare and casting long, golden rays of light across a lush green field in the foreground. The background is filled with tall, slender trees with dense green foliage. The overall atmosphere is peaceful and bright.

5 STEPS TO START

Preparation – As-Is Situation

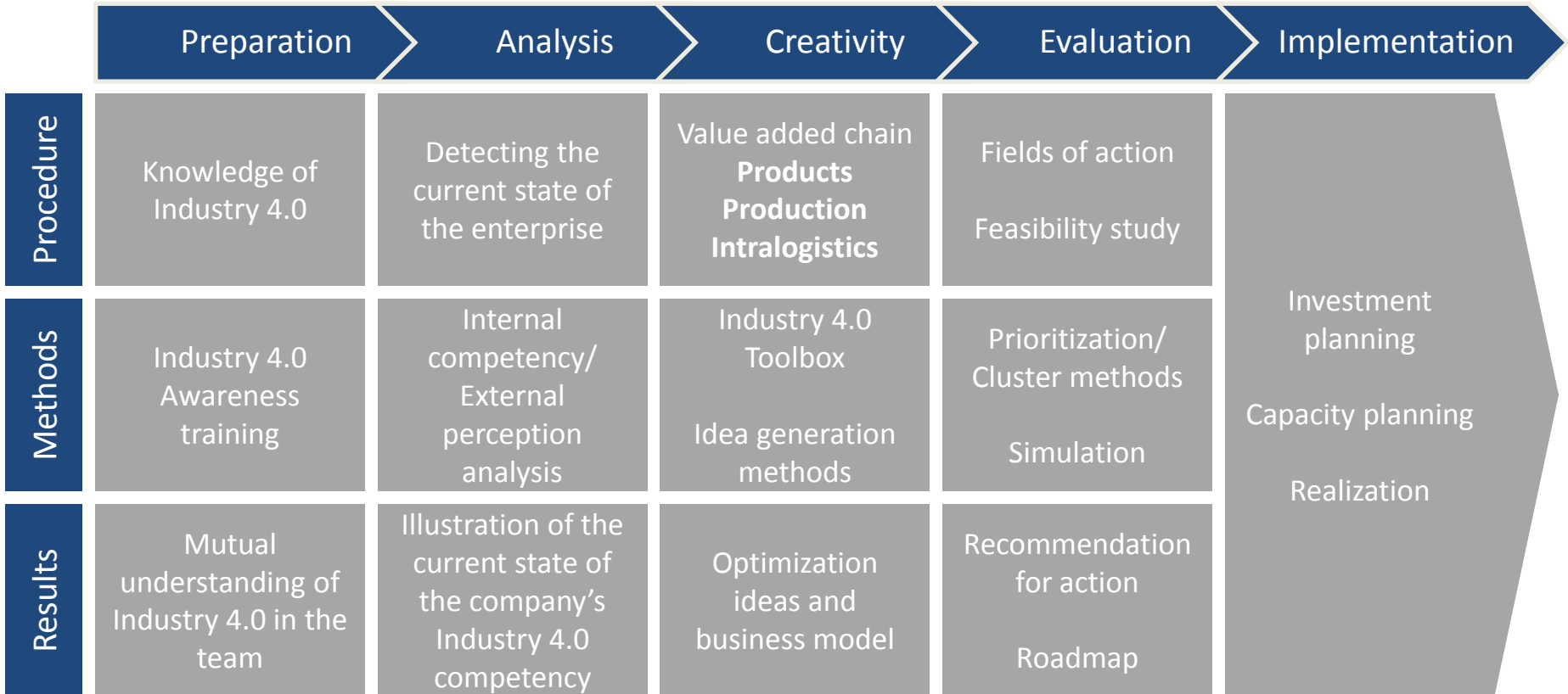
Guided and proven process by VDMA

5 steps for initiating Industry 4.0 transformation:



Preparation – As-Is Situation

Generic Process Model



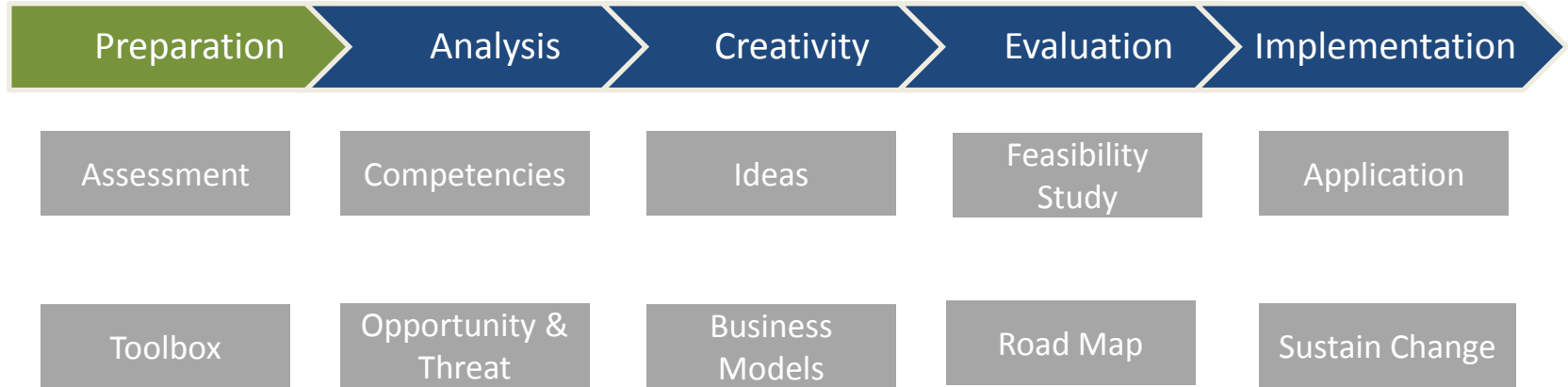
Preparation – As-Is Situation

Estimated Timeline



Preparation – As-Is Situation

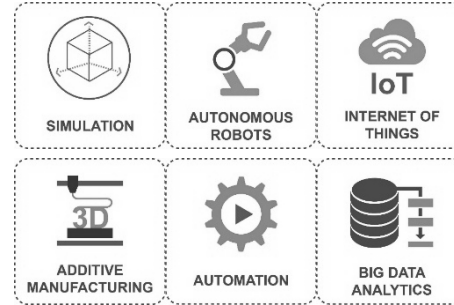
5 steps for initiating Industry 4.0 transformation:



Preparation – As-Is Situation

Industry 4.0 Awareness Training

1. Introduction and demystifying I4.0
2. Key I.40 Technologies
3. Human and machine collaboration
4. Managing I4.0 change
5. Alignment between I4.0 and business strategies

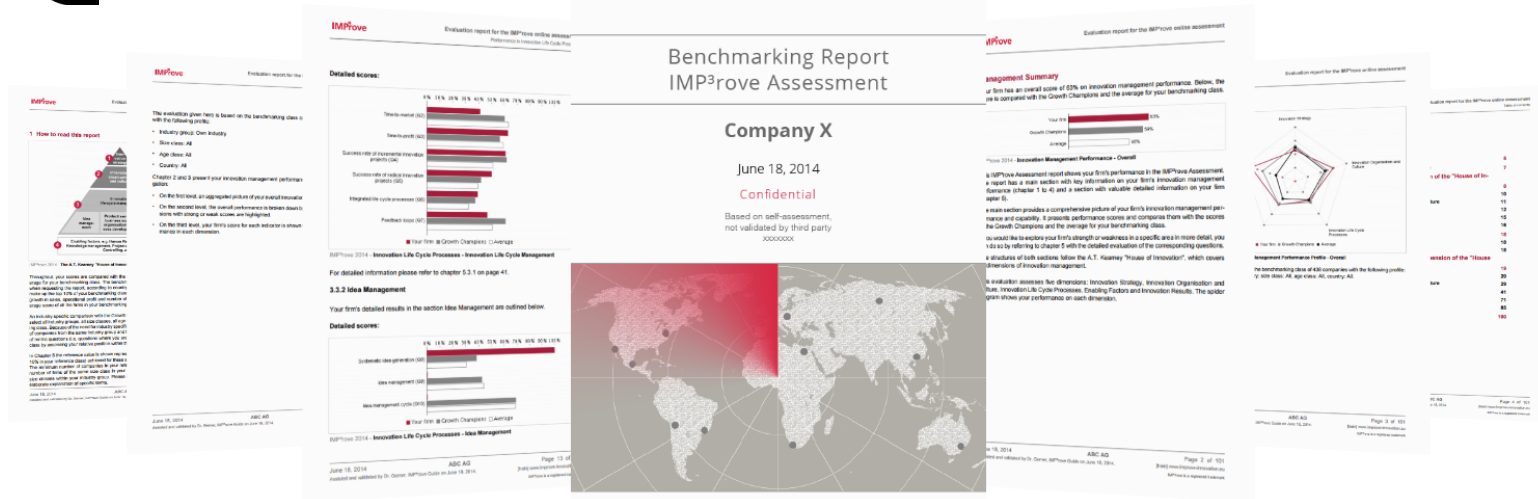


Preparation – As-Is Situation

Online Assessment



IMP³rove
European Innovation Management Academy



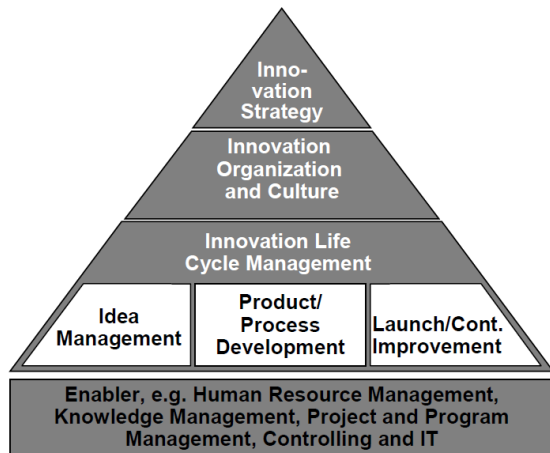
IMP³rove academy

<https://www.improve-innovation.eu/>

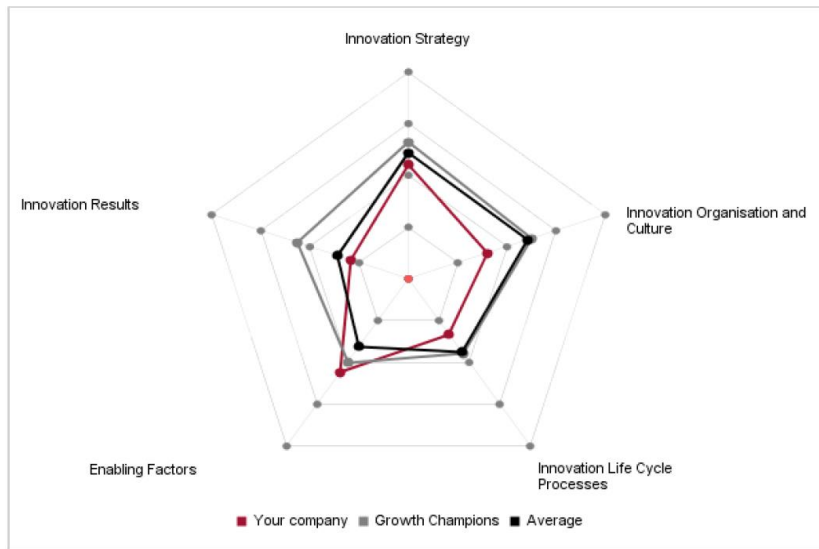


Preparation – As-Is Situation

Online Assessment



Business Impact



1) Source: A.T. Kearney, 2006
Figure 2: A.T. Kearney „House of Innovation“



<https://www.improve-innovation.eu/>

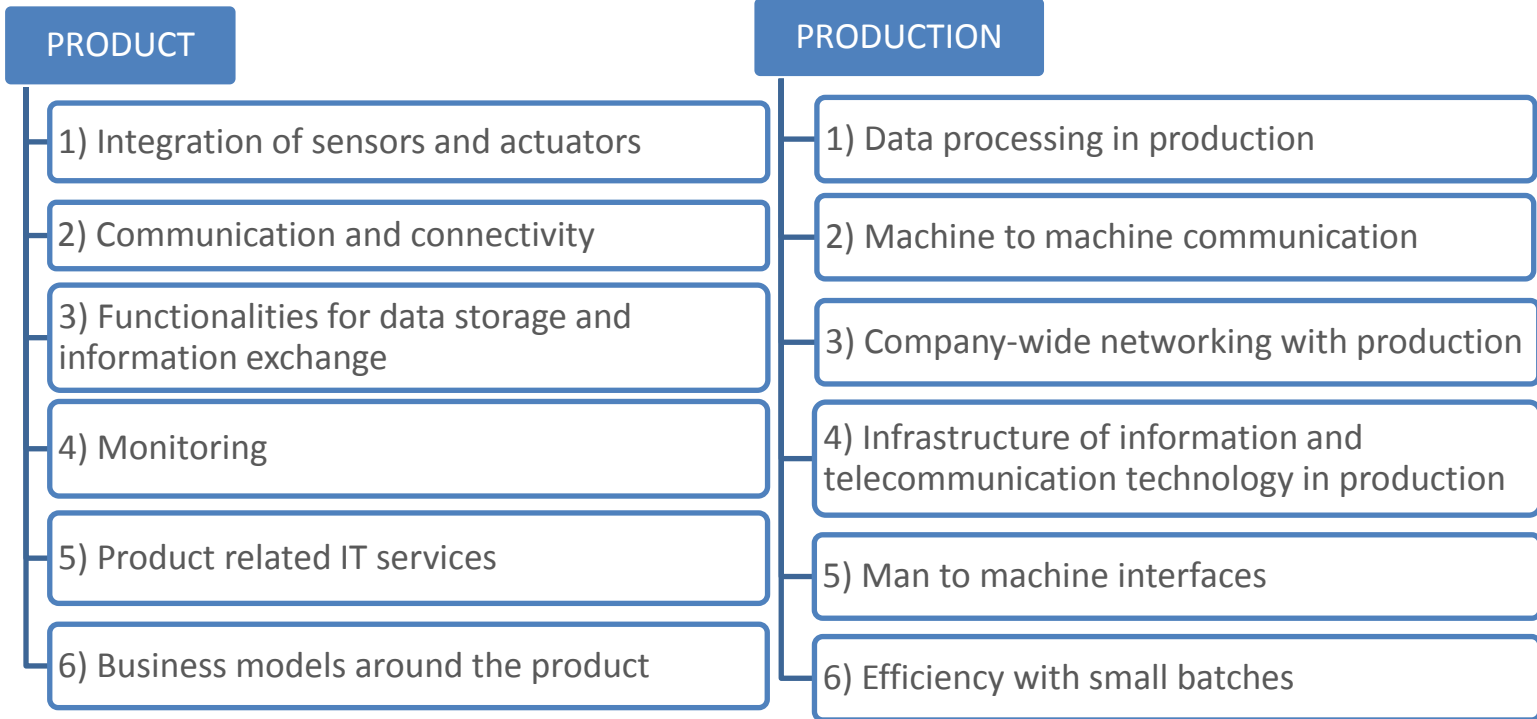
Preparation – As-Is Situation

Industry 4.0 Toolbox



Preparation – As-Is Situation

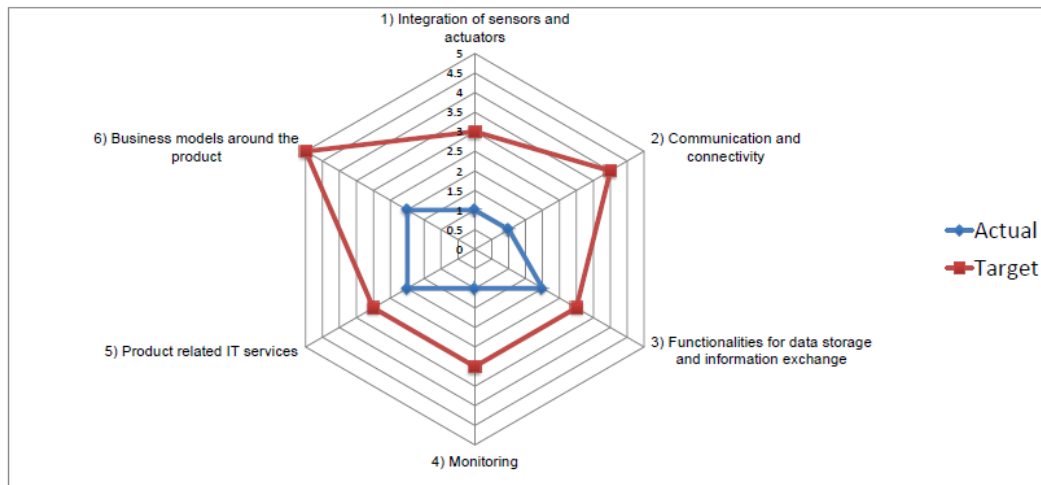
Industry 4.0 Toolbox



Preparation – As-Is Situation

Industry 4.0 Toolbox

Result: Product



Level of readiness for Products:

1.71 / 5

BEGINNER

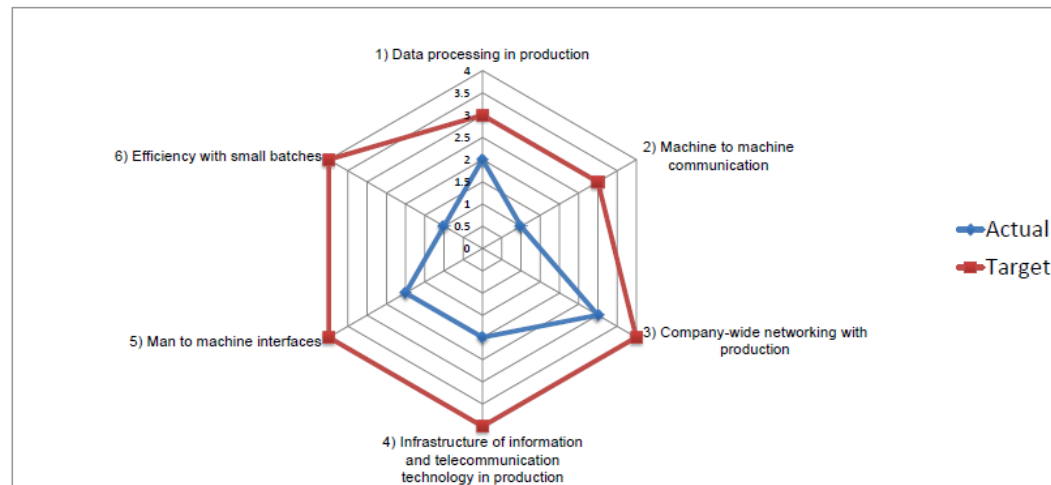
No requirements meet



Preparation – As-Is Situation

Industry 4.0 Toolbox

Result: Production



Level of readiness for Production:

1.50 / 5

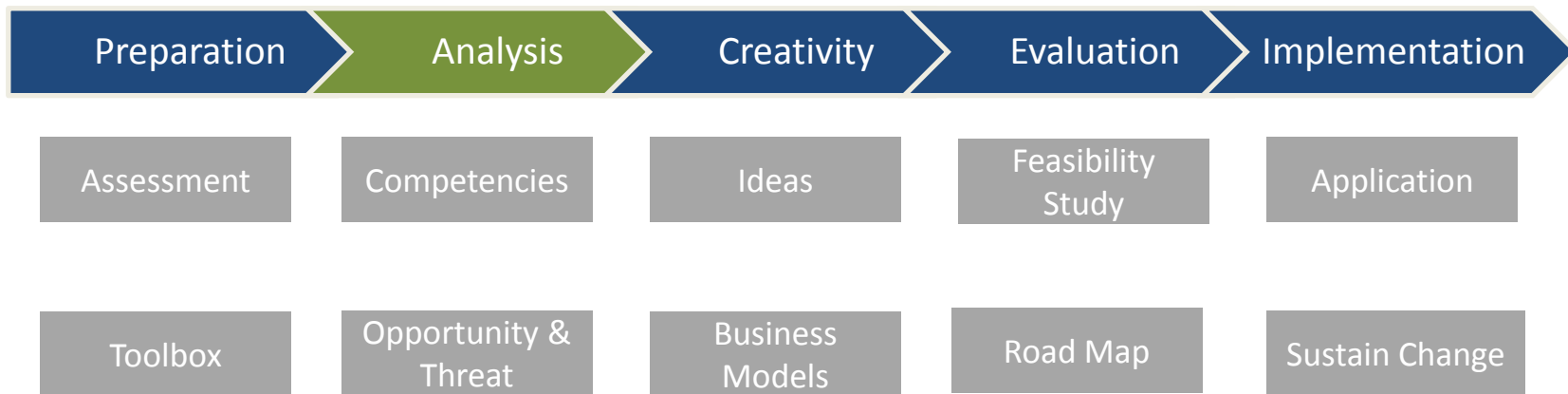
BEGINNER

No requirements meet



Analysis – Problem Statement/ Challenges

5 steps for initiating Industry 4.0 transformation:



Analysis – Problem Statement/ Challenges

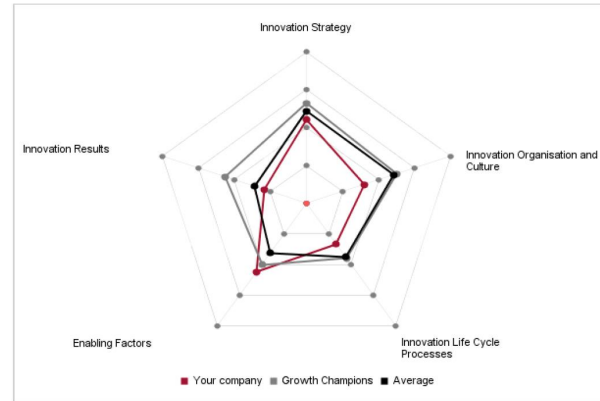
Improvement Assessment & Industry 4.0 Toolbox

Company - Internal

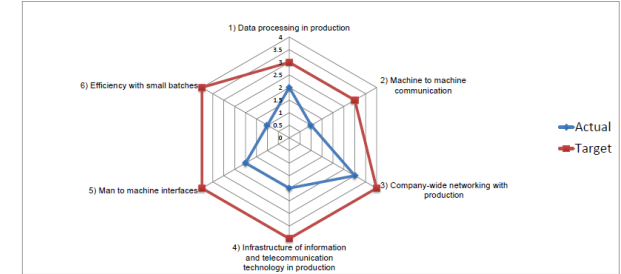
How many station are involved?
How many worker are involved?
What is the process flow?
Any material transformation?
How is the material transformed?

Supply chain

How are the products from the supply chain? (loose parts, tape and reel, magazine etc.)
Can the supply chain be changed?
Who is the supply coming from?



Result: Production



Level of readiness for Production: **1.50 / 5**

BEGINNER

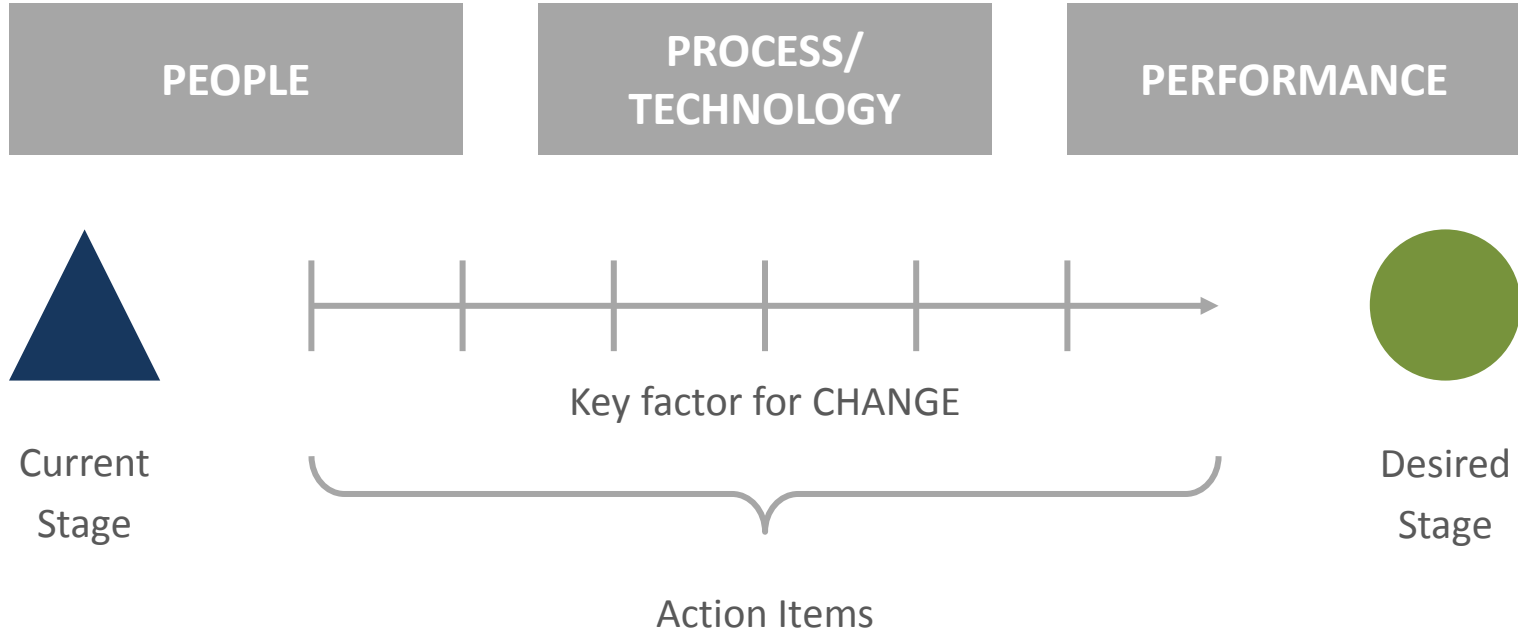
No requirements meet

On-site visit + IMP³rove Assessment + Industry 4.0 Toolbox = Current State of the enterprise



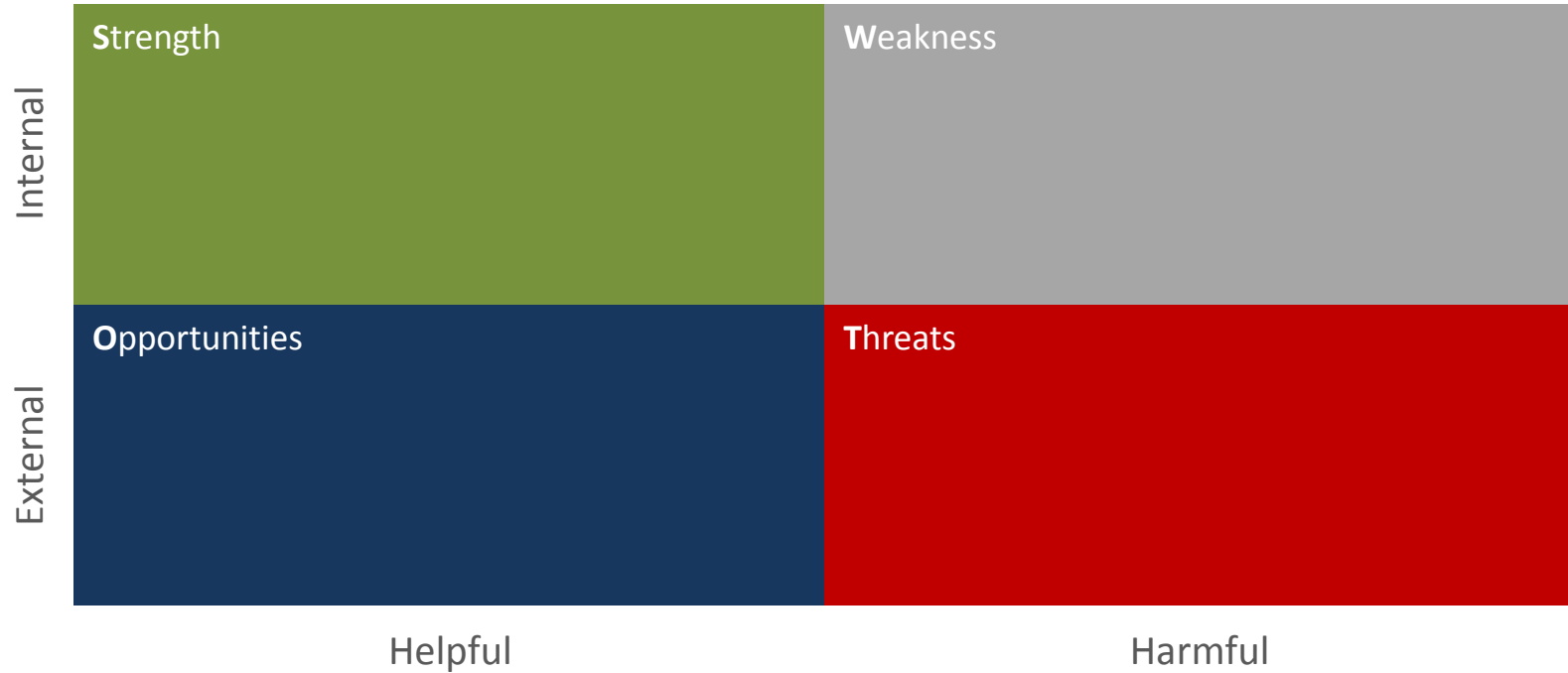
Analysis – Problem Statement/ Challenges

Gap Analysis



Analysis – Problem Statement/ Challenges

SWOT Analysis



Analysis – Problem Statement/ Challenges

Defining Competency Level



PEOPLE



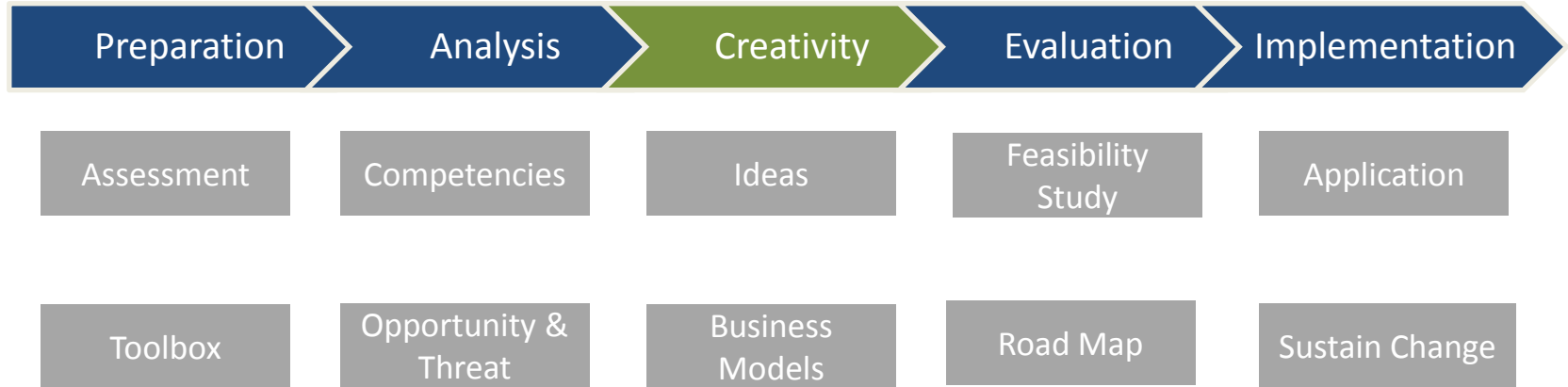
**PROCESS/
TECHNOLOGY**



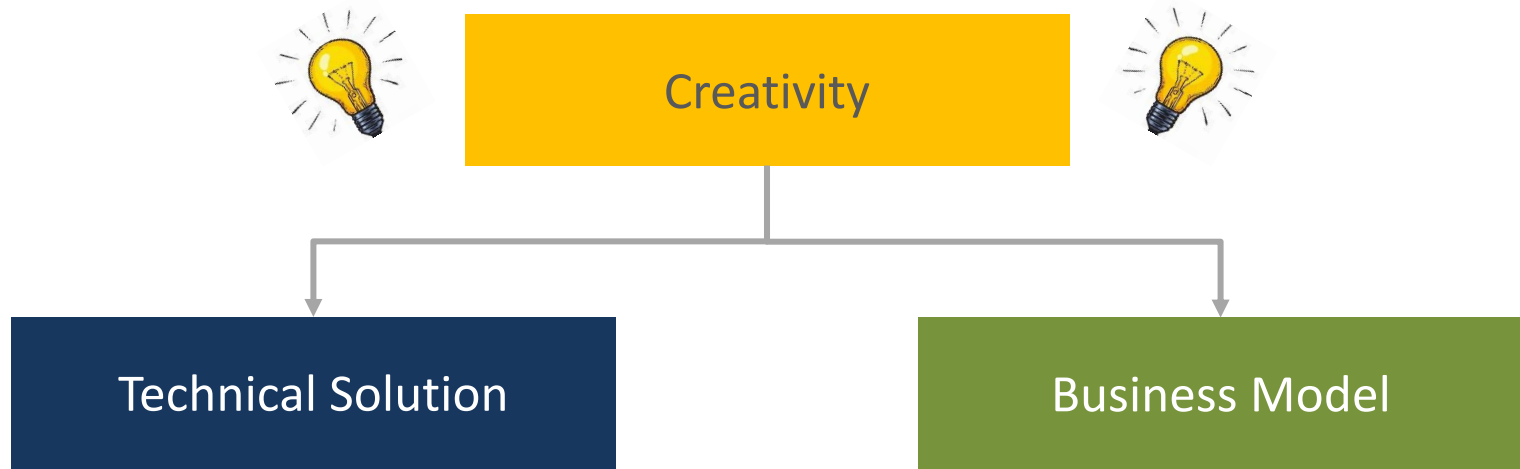
PERFORMANCE

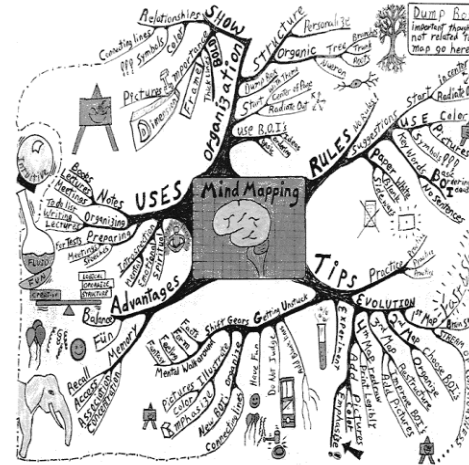
Creativity – To-Be Solution

5 steps for initiating Industry 4.0 transformation:



Creativity – To-Be Solution

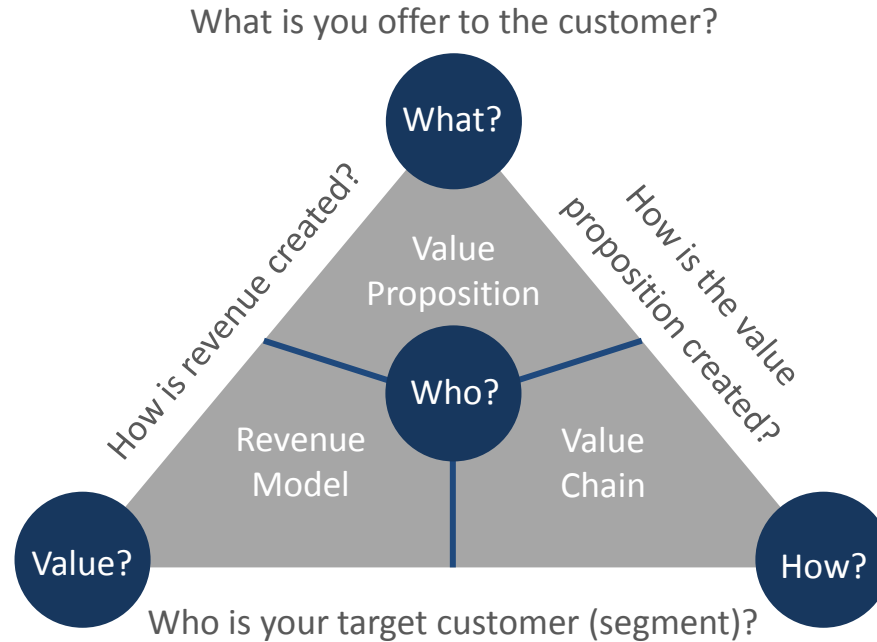




Different idea generation methods

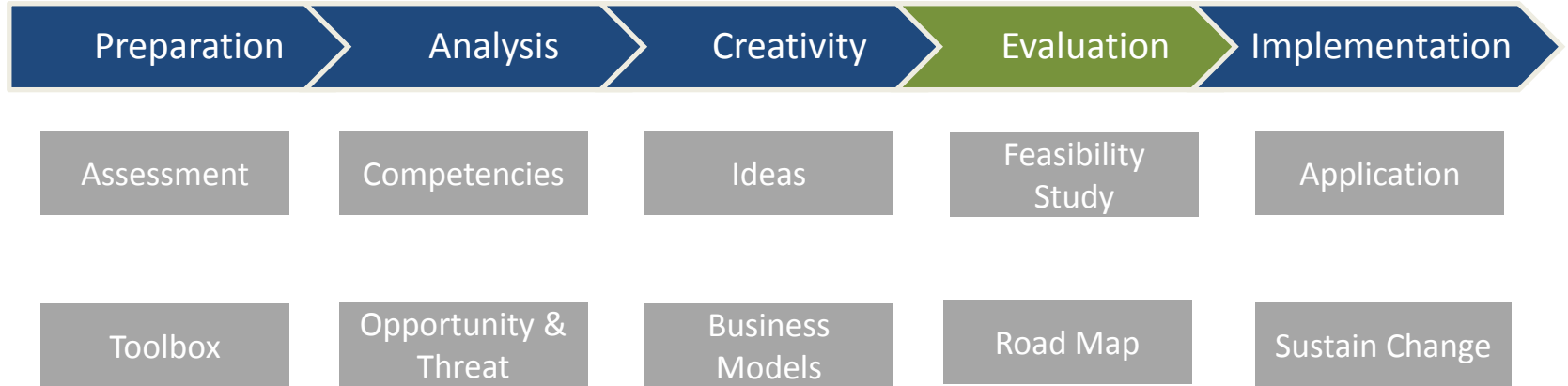
Creativity – To-Be Solution

Business Model



Evaluation – Blue print

5 steps for initiating Industry 4.0 transformation:



Evaluation – Blue print

Feasibility Study

Technical Feasibility

Method of production

Production technique

Process integration

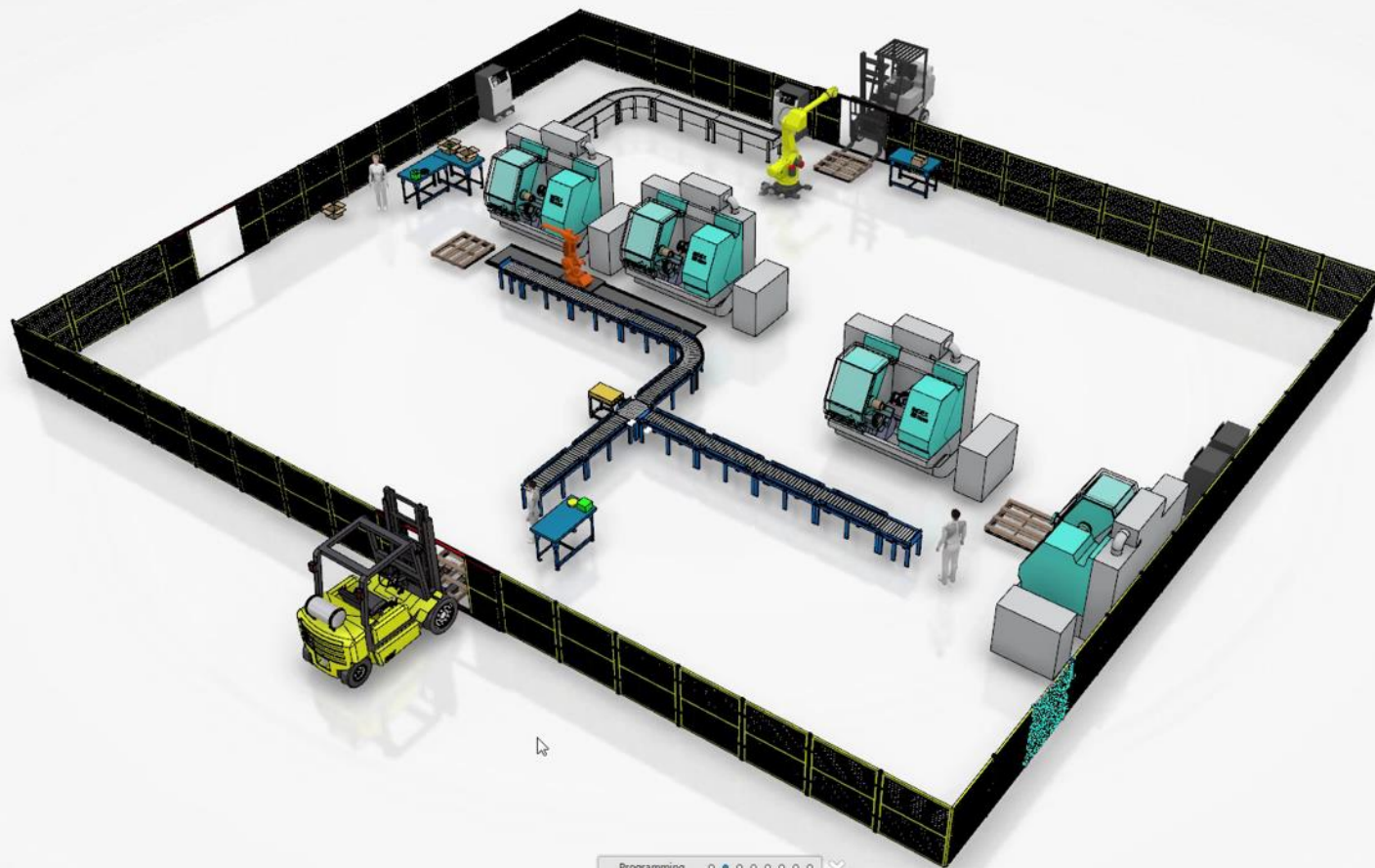
Factory facilities



Factory Simulation

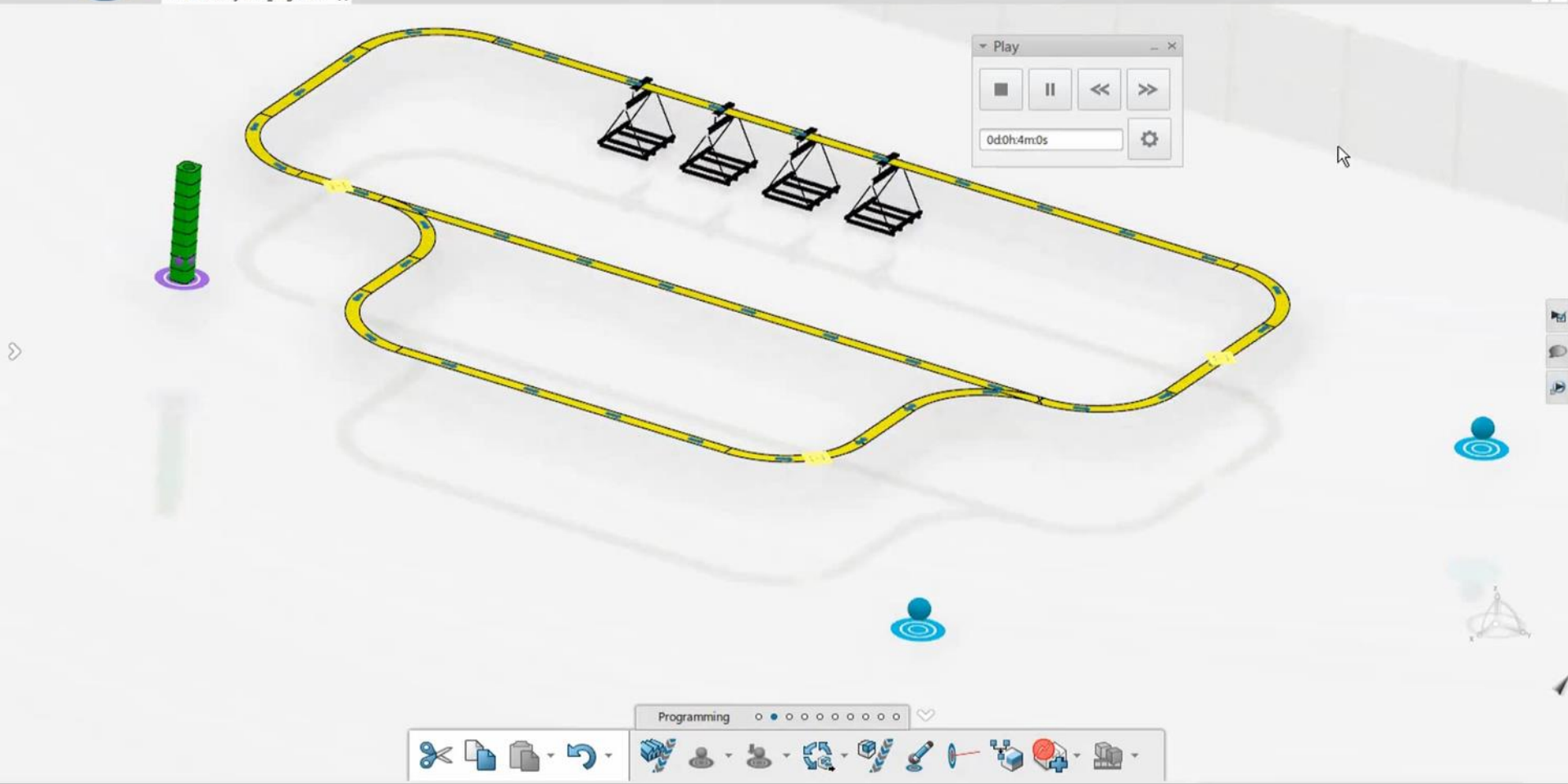
“Traditional” Methods and Tools





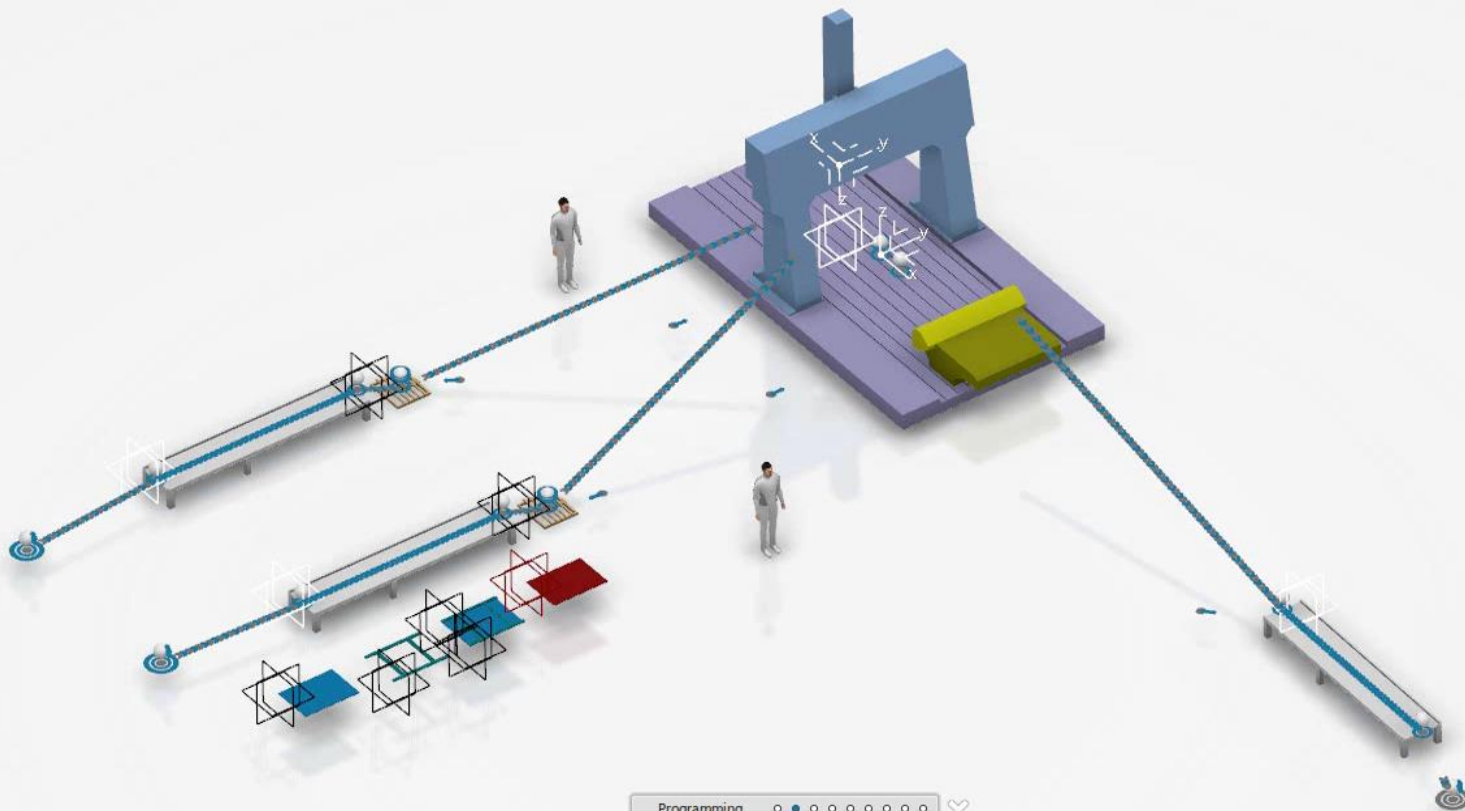
Programming



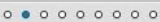




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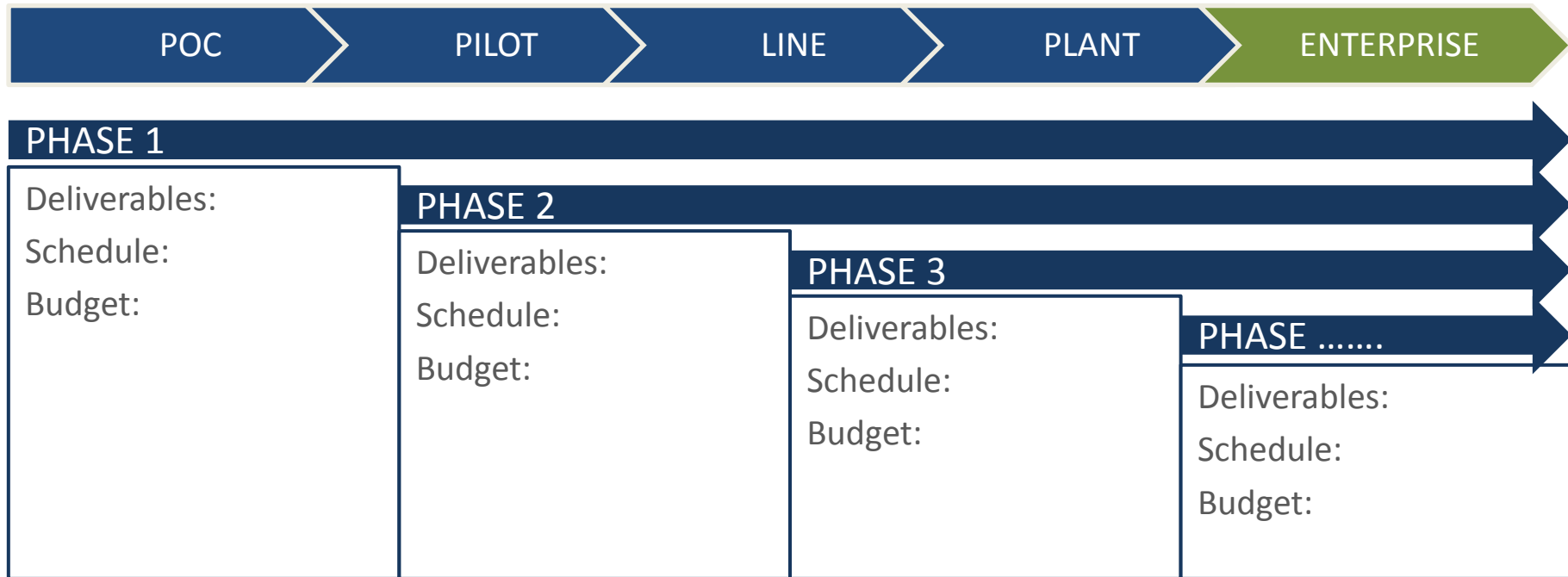
Programming





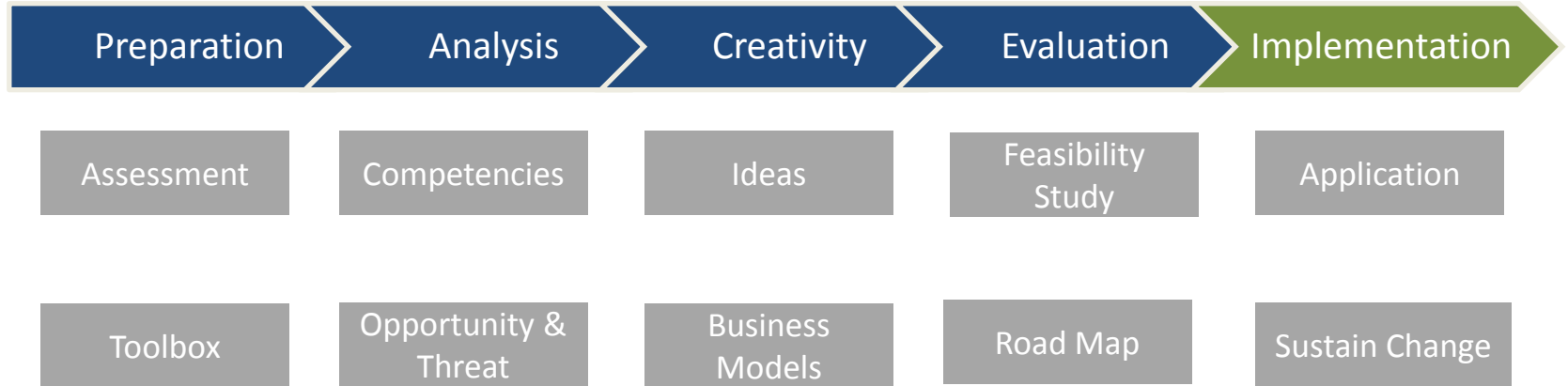
Evaluation – Blue print

Roadmap



Preparation – As-Is Situation

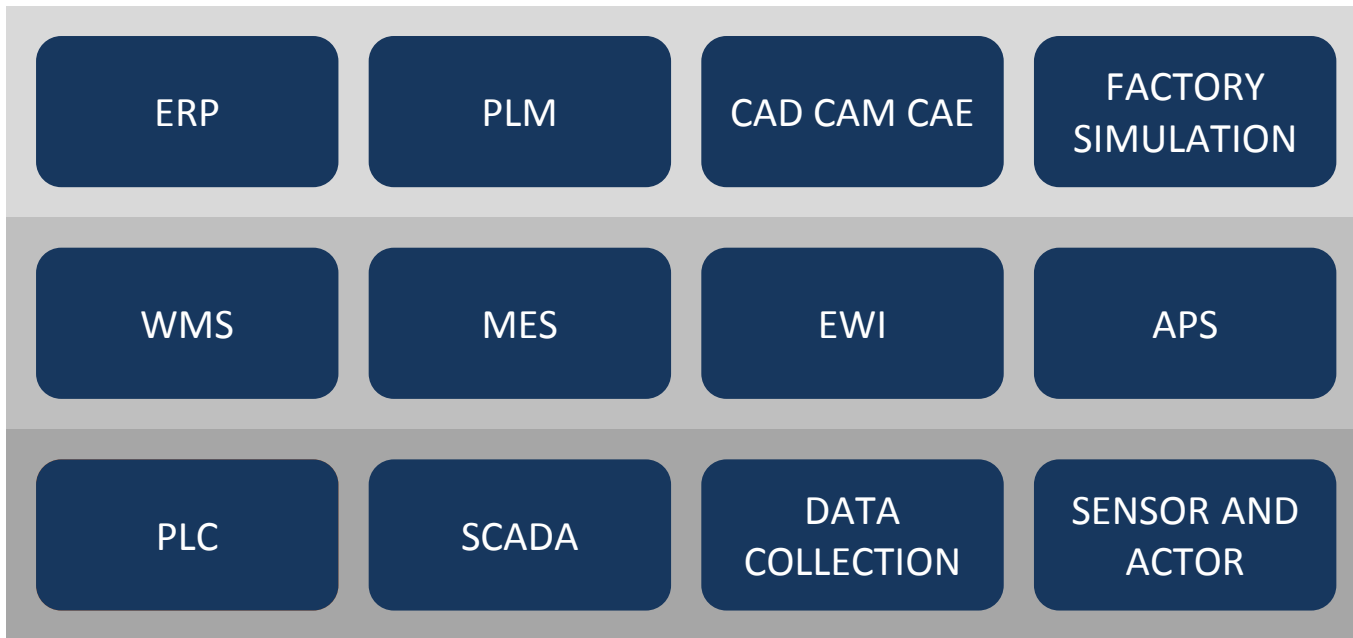
5 steps for initiating Industry 4.0 transformation:



Implementation – Go Live

Application

IME Solution



TOTAL SOLUTION PROVIDER



Implementation – Go Live

Sustain Change



PEOPLE



**PROCESS/
TECHNOLOGY**



PERFORMANCE



A bright sun is positioned in the upper right quadrant of the image, casting a strong, multi-pointed starburst of light across the sky. The sky is a deep, vibrant blue, and several fluffy white clouds are scattered throughout, particularly on the left and bottom edges. The overall scene conveys a sense of clarity, optimism, and a bright future.

14.0

BRIGHT FUTURE



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