

# DI4TEX

Fostering the digital transformation  
in the textile industry



Co-funded by  
the European Union

[www.di4tex.eu](http://www.di4tex.eu)

The textiles and clothing manufacturing sector in Europe is facing several challenges; owing to the financial crisis, the competition from emerging markets, the environmental demands, etc., and the crisis generated by COVID-19.

The sector, one of the largest and most important in Europe, needs to reassess its position by assuming the two drivers of competitiveness: **green transition and digital transformation.**

**The main objective of DI4TEX is to foster the digital transformation of the textile industry by providing its employees with the required skills to face the current challenges of the sector.**



# Topic 01: Digital Maturity

## DI4TEX



### Disclaimer

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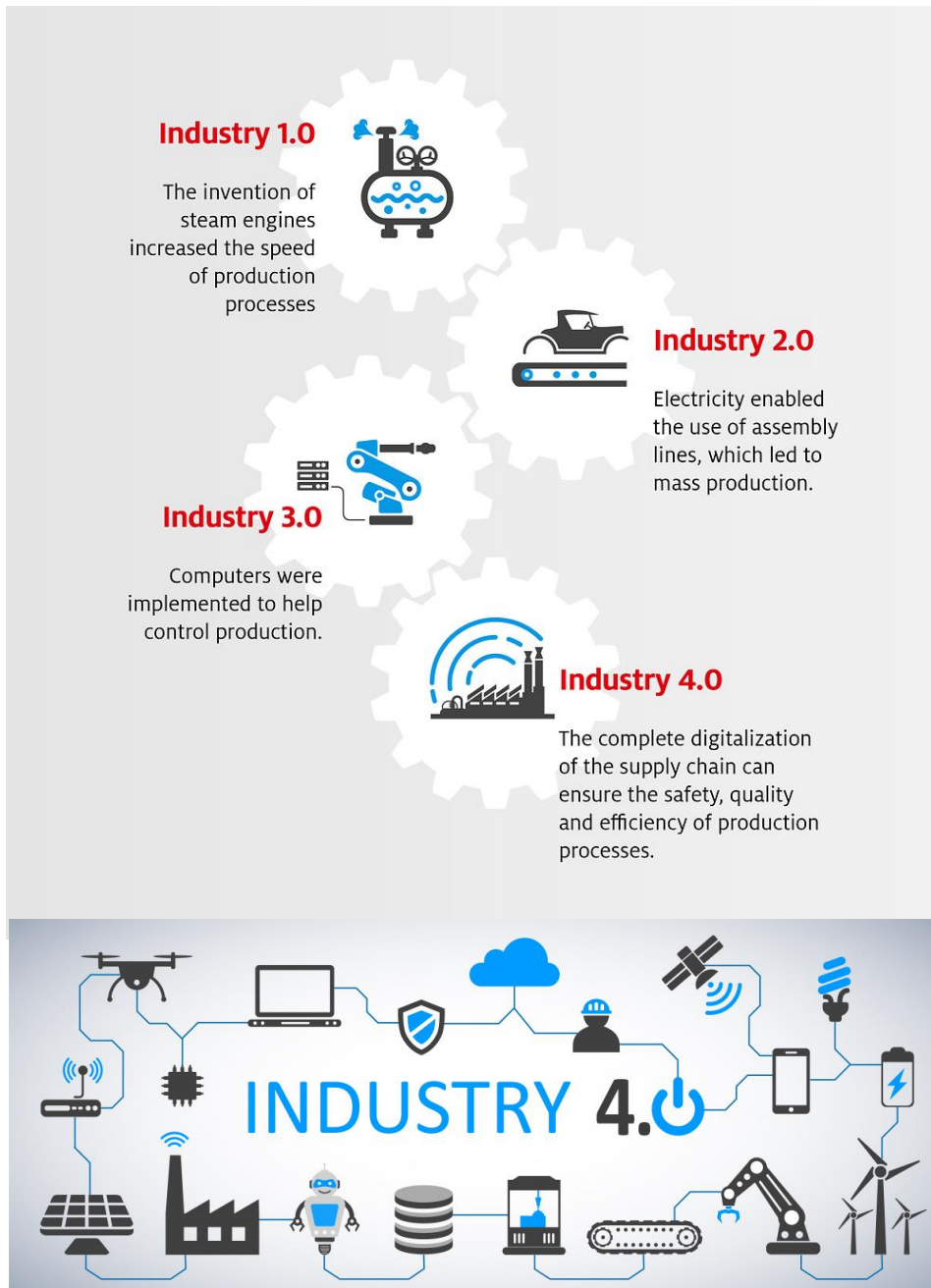


### Acknowledgement

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- Digital Transformation applied to the industrial context is described as Industry 4.0, and is based on the application of cyber-physical systems that connect processes, people, machines and products to each other.
- Connected machines collect a tremendous volume of data that can inform maintenance, performance and other issues.
- Analysis of that data can identify patterns and insights that would be impossible for a human to do in a reasonable timeframe.
- Industry 4.0 offers the opportunity for manufacturers to optimize their operations quickly and efficiently by knowing what needs attention.

# Digitalisation Strategy

Existing studies show that firms with higher digital maturity have superior corporate performance.

Key challenges for companies to overcome include;

- Leadership (difficulty in creating urgency, vision and direction for the digital transformation)
- Institutional (resistance to change in the form of attitudes of old employees, legacy technology, innovation fatigue and politics)
- Knowledge (available skills and competence)

# Digital Maturity Index



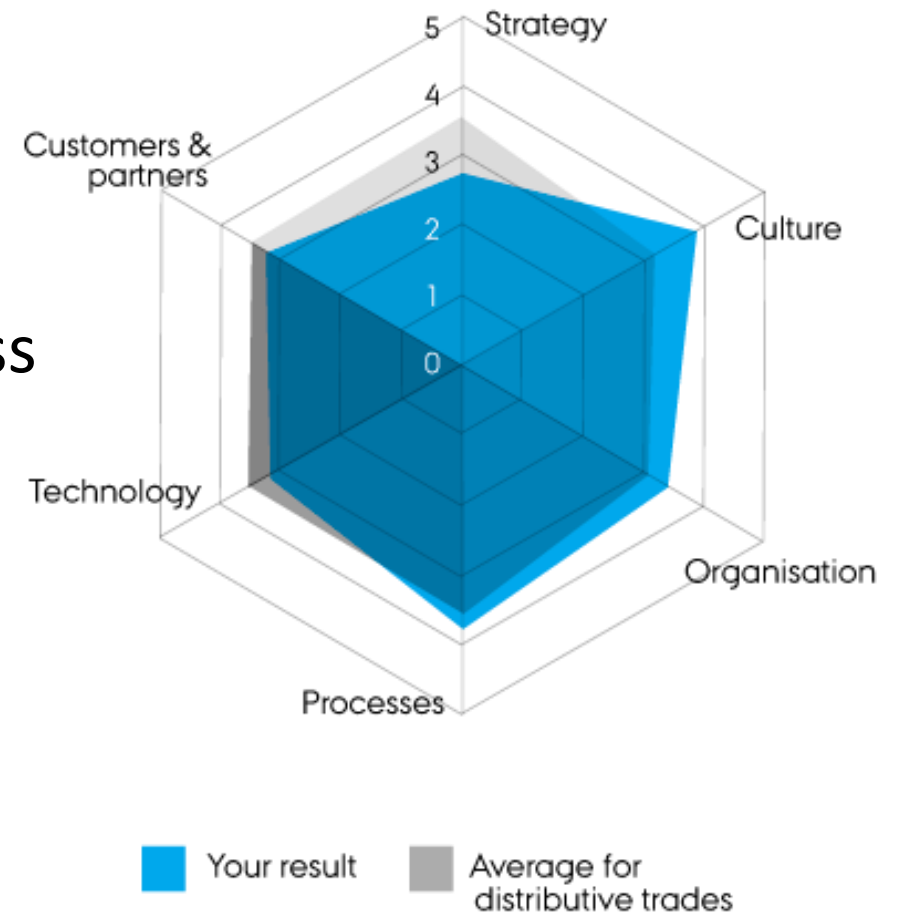
- Snapshot in time
- Bias, Subjectivity and Expertise?
- Used to drive engagement and prioritise actions
- Best viewed over time
- Assessment needs to be followed by a more detailed implementation plan
- Two approaches
  - Online, self-assessment, 5-30 mins questionnaire.
  - Expert led, customised, 4-6 weeks, sites visits, etc.

# Maturity Models

1. MDI 4.0 Model for Industry 4.0. TECNALIA, Spain
2. VTT's DigiMaturity tool, AI DigiMaturity and Manu Maturity, Finland
3. ACATECH MATURITY INDEX, Germany Academy for Science and Technology, Germany
4. The IMP<sup>3</sup>rove Digital Innovation Quotidient (DIQ), Germany
5. Connecting Europe Facility (CEF) Monitoring, EC
6. COTEC Maturity Tools: THEIA, THRUST, Innovation Scoring, Portugal
7. The Digital Maturity Assessment Tool (DMAT), Aarhus University Denmark
8. DREAMY 4.0, Politecnico di Milano, Italy
9. HADA Advanced Digital Self-diagnostic Tool, Industria conectada 4.0, Spain
10. ATI- Advanced Technologies for Industry, EC
11. Ipar 4.0, Hungary
12. The European Enterprise Network, EC

# Digital Maturity Assessment Tool (DMAT)

- <https://dbd.au.dk/dmat/>
- 500 Enterprises
- This survey is conducted by the Interdisciplinary Centre for Digital Business Development (DBD) at Aarhus University
- Six Pillars, comparison with sectors.
- Followed by;
  - Industrial Internet Playground (IIP) pilots,
  - Shadow Infrastructure (SI)





# Portugal



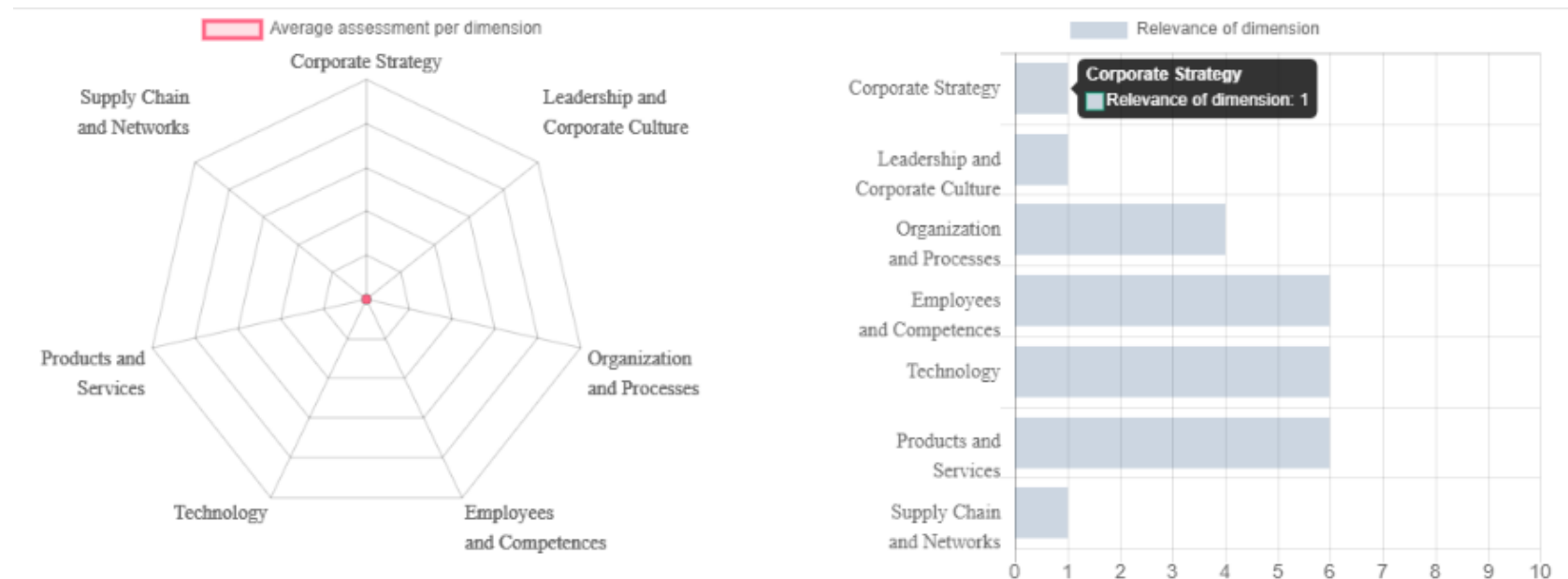
Technological and  
Holistic Engagement for  
Industry 4.0 Assessment

- <https://theia.cotec.pt/en>



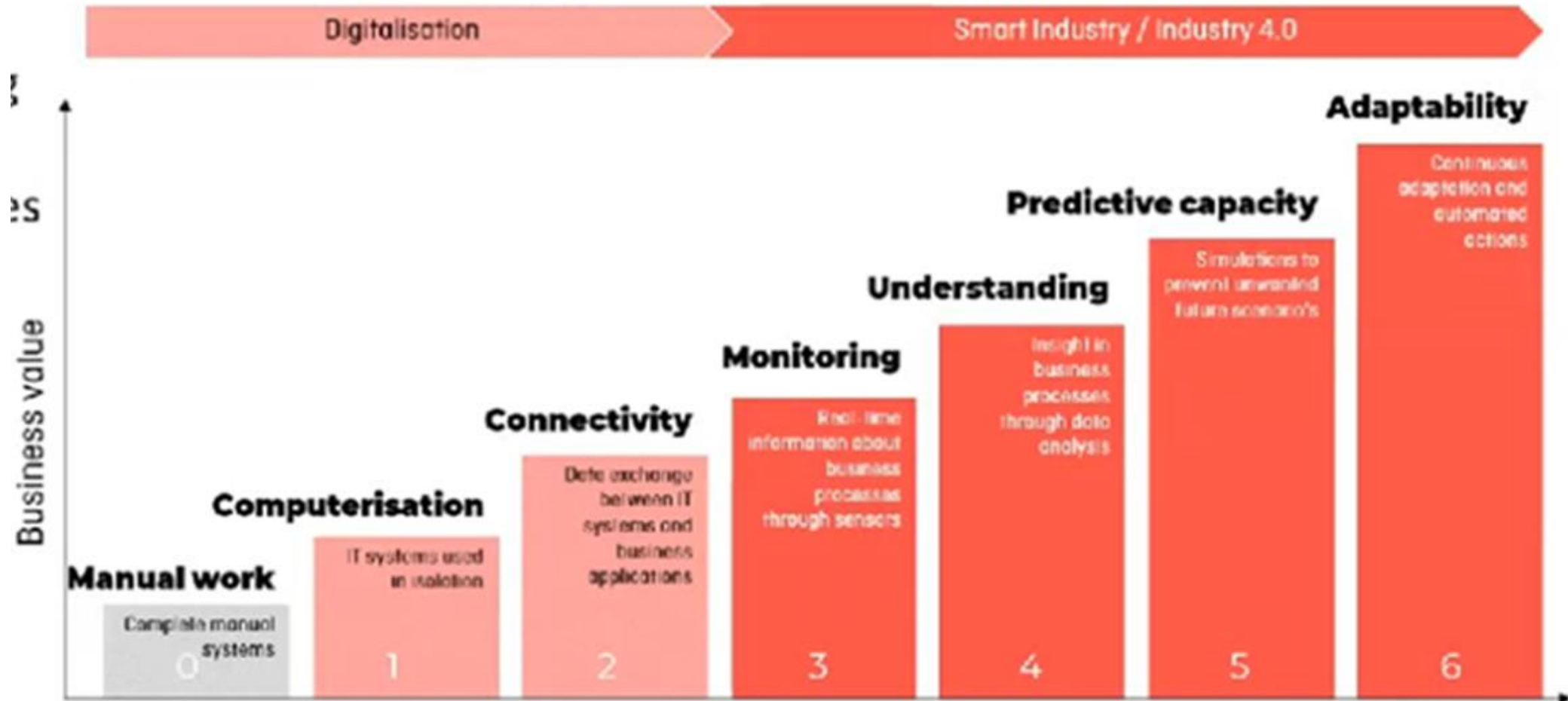
# Digital Transformation Assessment

- [https://websites.fraunhofer.de/Digital\\_Transformation\\_Assessment/index.php/222723?lang=en](https://websites.fraunhofer.de/Digital_Transformation_Assessment/index.php/222723?lang=en)





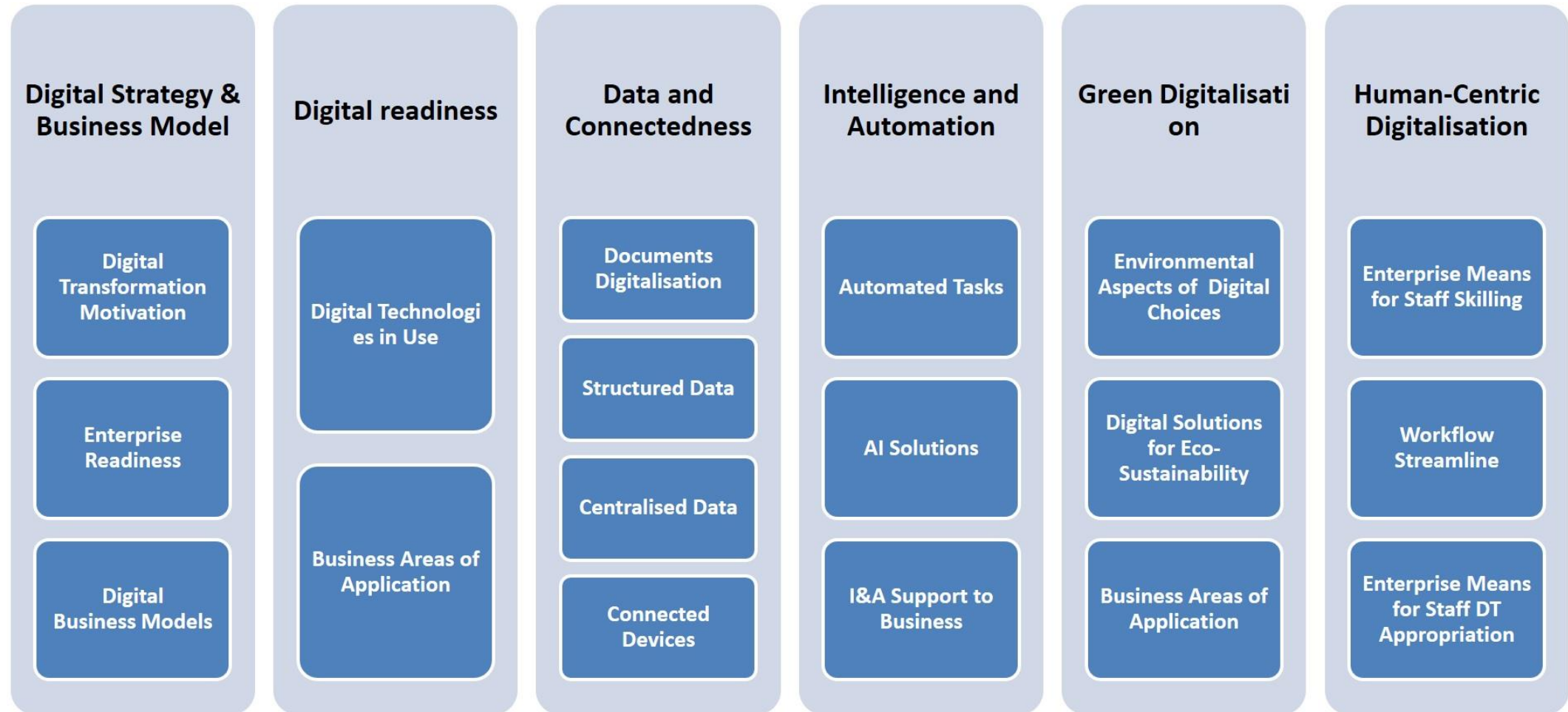
<https://www.change2twin.eu/>



Source: Schell, G. et al (2019) Industry 4.0 maturity index: Measuring the digital transformation of companies.  
Dr. U.S. von Jan, Fraunhofer IPA

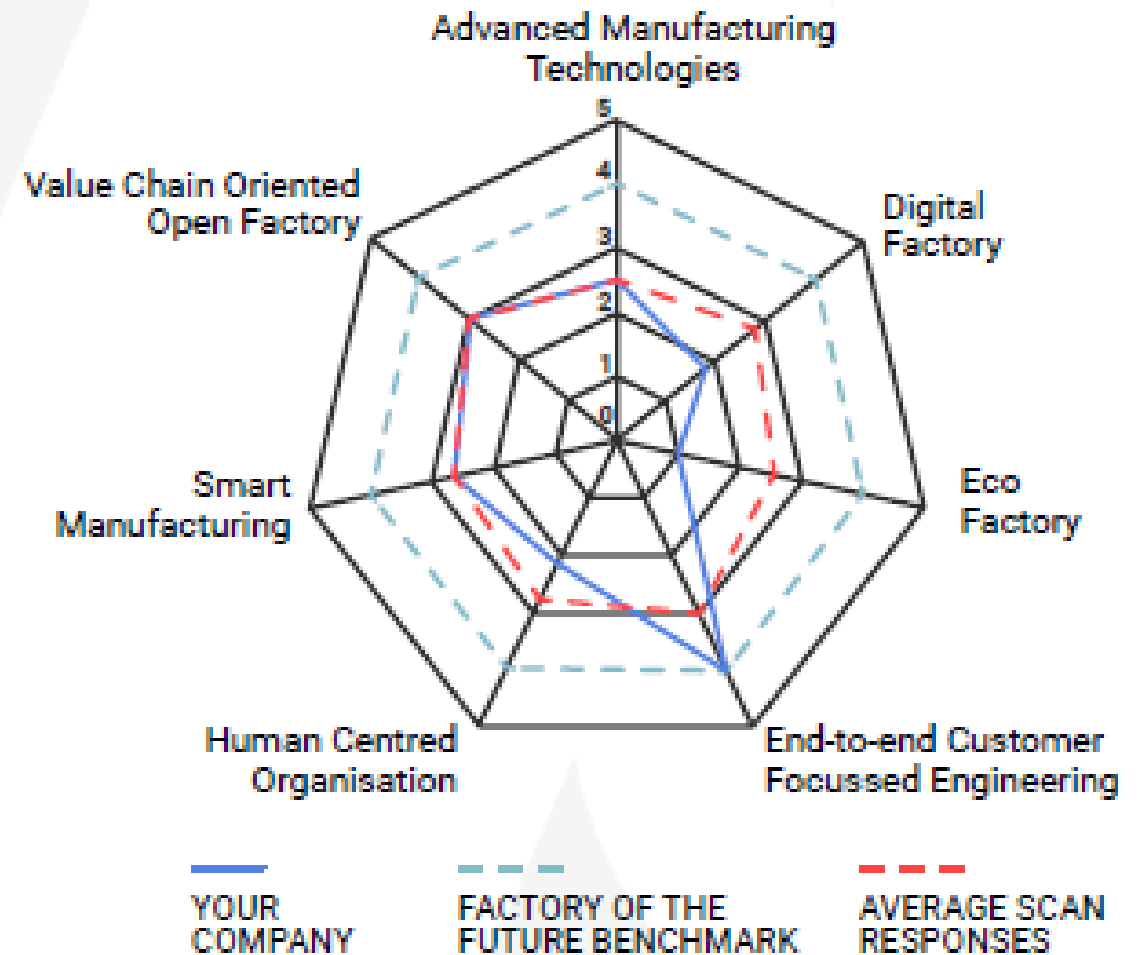
# EU Digital Maturity Assessment Tool

- *Digital maturity will be defined based on a **questionnaire** to Industry.*

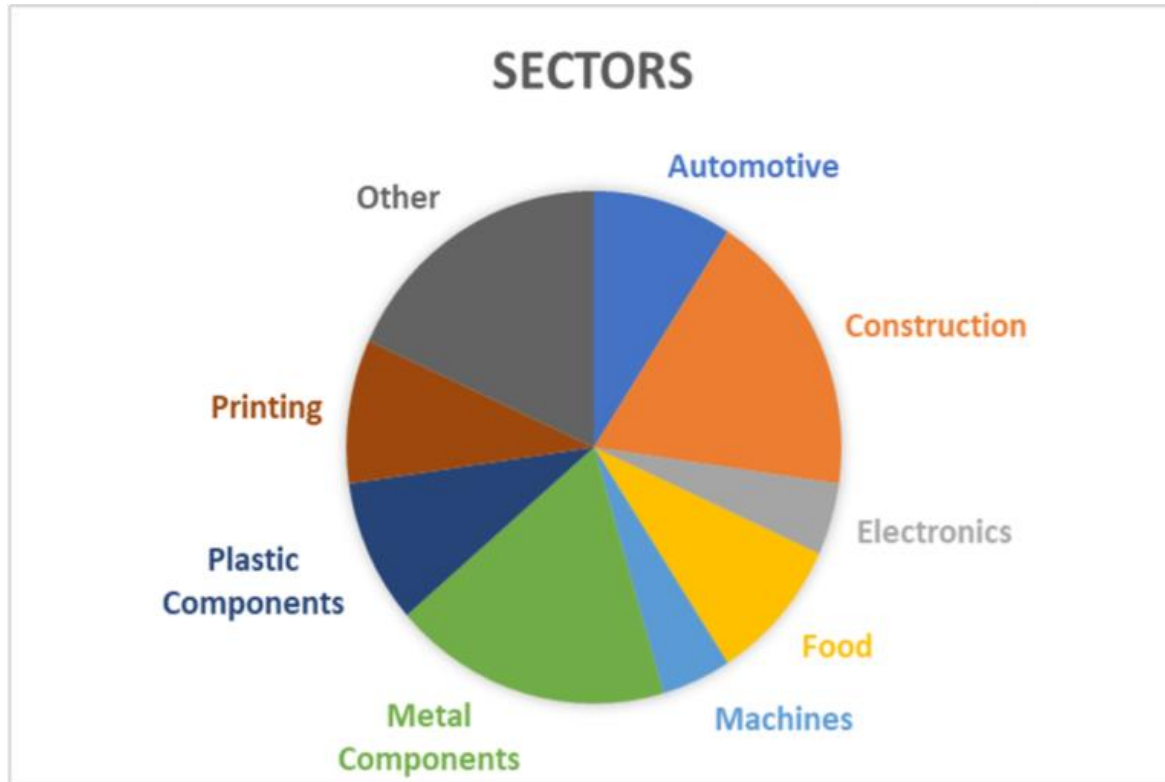


# EU Advanced Manufacturing Support Centre (ADMA)

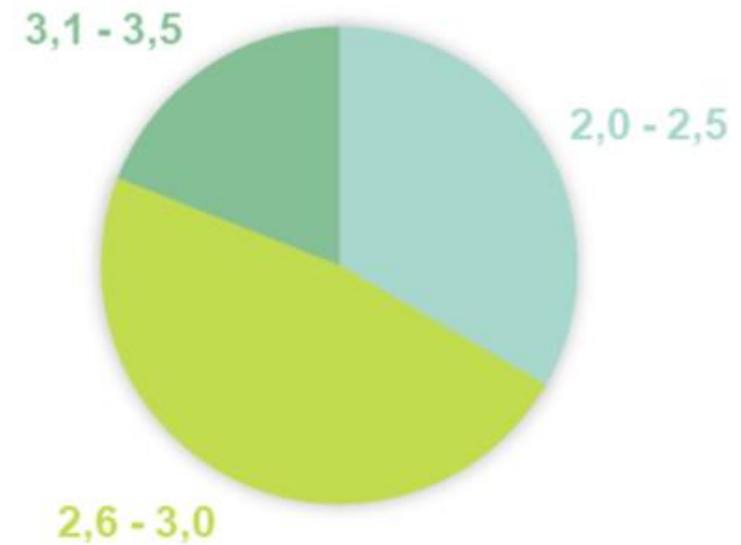
- 7 Transformation Areas
- Short scan (self-assessment) – 22Q
- Long Scan (with support) – 50Q
- 187 SMEs completed the self-assessment (short or long scan) and 69 SMEs prepared a transformation action plan
- <https://www.surveymonkey.de/r/YSYDV9Y>



# 187 SMEs, <150 employees, 2018-2021.



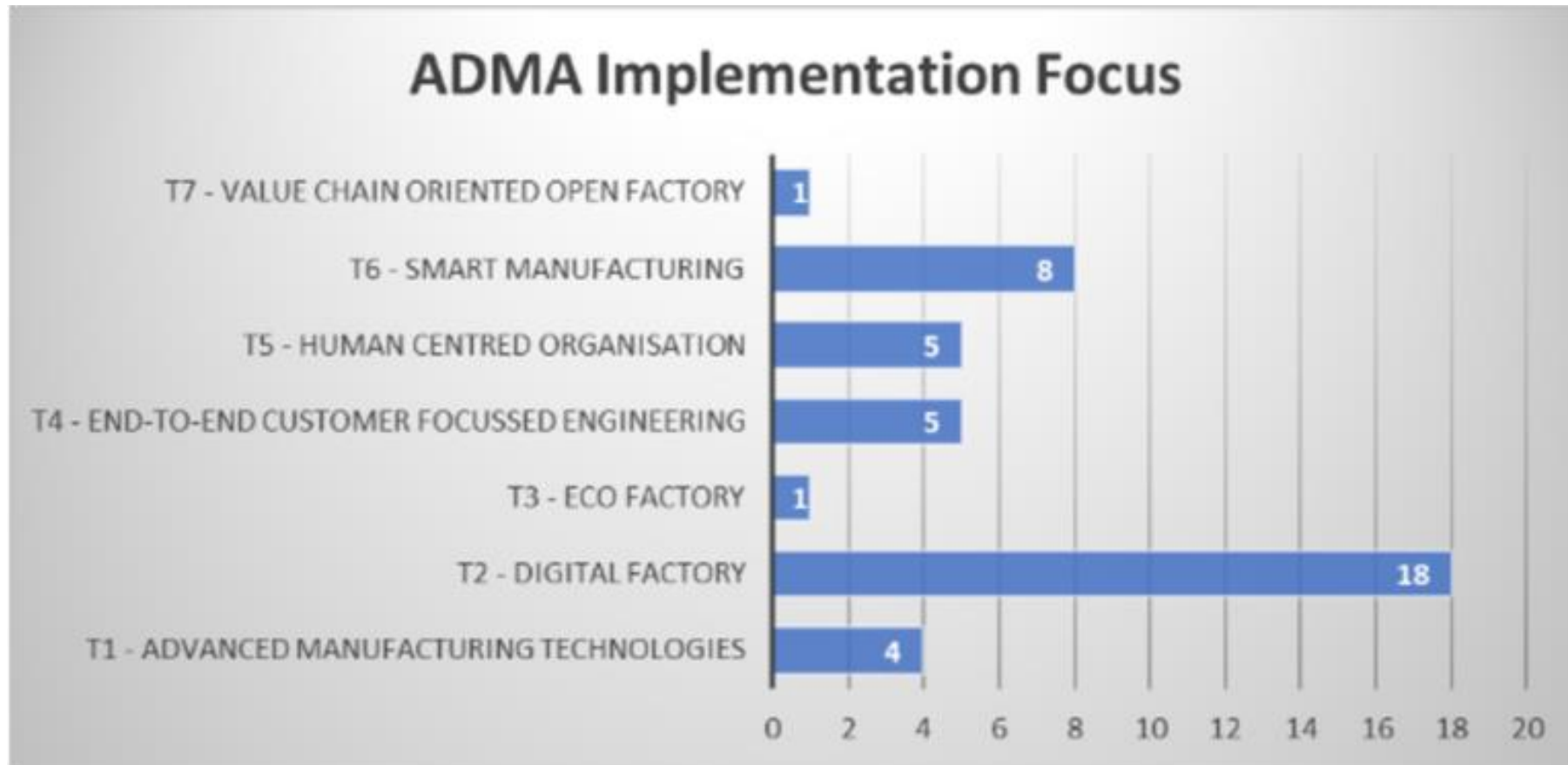
**AVERAGE SCAN MATURITY  
SCORE  
(ON A SCALE FROM 1 TO 5)**



[https://adma.ec/blog/wp-content/uploads/2021/07/ADMA-booklet\\_final.pdf](https://adma.ec/blog/wp-content/uploads/2021/07/ADMA-booklet_final.pdf)

# Implementation Focus

- Out of a total of **356 proposed innovation actions**, 85 action have been selected by the companies.



- Majority of the SME's have chosen [T2 – Digital Factory](#) and T6 – [Smart Manufacturing](#) as key focal areas.
- Another conclusion is that T3 – [ECO Factory](#) and T7 – [Value Chain Oriented Open Factory](#) clearly are not (yet) considered a top priority for the SMEs.

# Key Learning

- #1 Advanced manufacturing technologies should support an SME's ambitions, not the other way around.
- #2 Companies need proper support and guidance to be able to transform their manufacturing processes.
- #3 The scan created the right setting and engagement at a company. The subsequent implementation plan made breakthrough transformations become real.
- #4 The holistic character of the methodology proved to be a key success factor.
- #5 Training was critical.



# ADMA Case-Studies (15)

- The most important measures towards becoming a Factory of the Future are creating a vision, continuous improvement of the business development direction and long-term cooperation with employees and business partners (CEO)
- The scan gave us a clear view of the strengths and weaknesses of our company. From now on, we can focus on what really matters (Innovation Manager)
- We were able to profile ourselves as an innovative partner in a difficult market (CEO)
- The tools allowed us to see things from a different perspective (General Manager)
- Circular economy, sustainability, etc.: a lot of company's are really interested in this. There is a big willingness to change things (R&D Manager)
- The scan helped us realise that we needed to improve our internal and external communication (CEO)
- The hands-on approach of the coaches and advisors was a major benefit (CEO)
- SMEs all over Europe have a great potential to grow, but we need more support in order to innovate our workplaces (CEO)
- We need better qualified people for every job position. The education system must be ahead of technological change and not behind it (CEO)

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