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Interreg Europe



European Union
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Definition of an Industry 4.0. maturity evaluation matrix for projects

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Digital maturity models

1. Digital maturity assessment mode: ApuaDigiin (Help to digitalisation), Access: www.apuadigiin.fi

2. Model presented also in publication: Jukka Kääriäinen & Leilla Saari, VTT; Marko Juntunen, Timo Koivumäki, Sari Perätalo, University of Oulu; Maarit Tihinen, Lapland University of Applied Sciences (2019). ApuaDigiin - digimuutos suomalaisissa pk-yrityksissä (Help-to-Digitalisation; digital change / transformation in Finnish SMEs); VTT TECHNOLOGY 358, 2019.

3. Model created through project co-funded by ERDF, Northern Ostrobothnia Regional Council (Regional Council of Oulu Region).

4. ApuaDigiin is a public initiative

5. It is addressed to SMEs, especially manufacturing SMEs

6. Business activities analysed in the model

—> the ApuaDigiin is more than a digital maturity assessment tool, it is a

digital transformation tool.

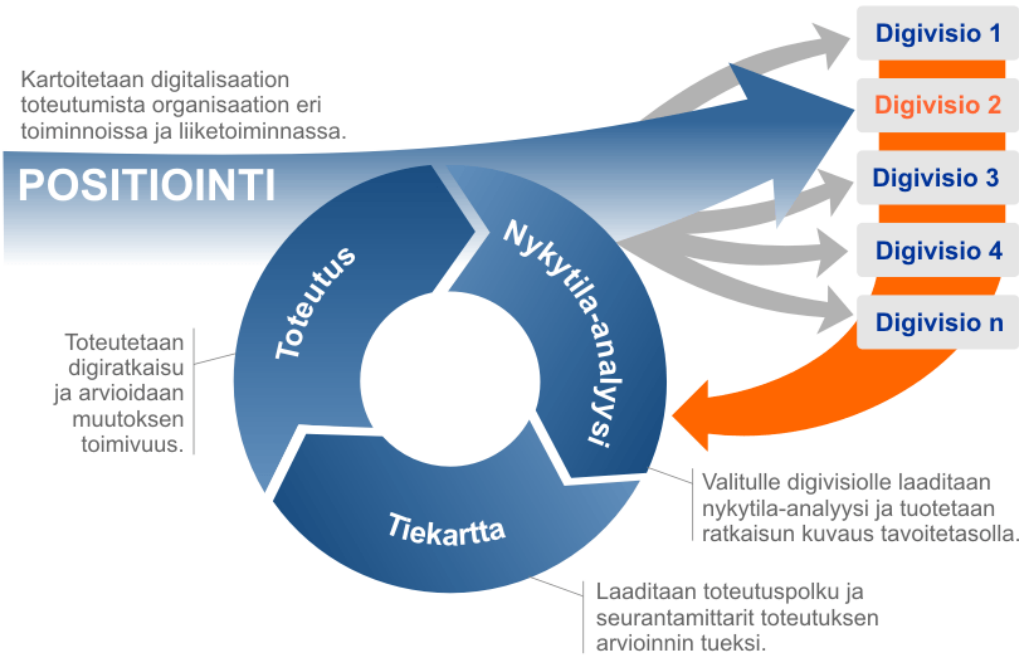
—> It accelerates firms' 'digital leap'.

—> Four steps have been identified in the digital leap process.

MATURITY ASSESSMENT, POSITIONING, ROADMAP, IMPLEMENTATION.

—> NEXT SLIDE

Overview of the ApuaDigiin maturity assessment model



Step 1, MATURITY ASSESSMENT: Mapping the digitalisation's success in the organisation's various operations and businesses.

Step 2, POSITIONING: Describing the firm's position in the digitalisation "ladder"; state of play analysis is prepared for the selected digitalisation priority and a solution is suggested with clear implementation target level.

Step 4, IMPLEMENTATION: Implementation of the digital transformation solution and evaluating its functionality.

Step 3, TRANSFORMATION ROADMAP: Development / formulation of an implementation roadmap, including follow-up indicators to support (transformation) performance evaluation.

Overview of the ApuaDigiin maturity assessment model

7. Examples of projects addressing Industry 4.0

7.1 Development of Industry 4.0 relevant technologies (I4.0 in traditional industries)

accelerator

Data analytics accelerator, 1.5.2018-30.4.2020, Total budget 346 000 €, ERDF + state funding 240 000 €): Data analytics, big data and artificial intelligence are the major tools for modern companies to achieve large-scale competitive advantages. **The target of this project is to speed-up the up-take of data analytics methods in regional companies and in the Kainuu region as whole. The project creates a straightforward process for companies and institutions to quickly try out the possibilities of data analytics and to launch new data driven solutions.**

- The project consists of data analytics pilot projects with approximately 3 companies, workshops with 10-15 companies and outreach activities for even a larger number of companies. This improves the know-how and practical experience of data analytics in the regional businesses significantly.
- Industries
- Depth of data analytics:
 - Awareness raising
 - Data collection
 - Data codification and principles
 - Introduction of data re-use
- The data-analytics accelerator provides the necessary first push for adapting new methods, which otherwise would require major investments and competence from the participant companies. The project results in improved usage of data analytics through three channels. The deepest effect comes from pilot projects, where the data analytics capability of the participating companies can be developed on a longer term. Wider reach comes from workshops, where the work focuses on real-world questions posed by the companies and translating the concepts of data analytics into the everyday life of the participants.

7. Examples of projects that apply the ApuaDigiin

7.2 Kainuun DIGITIE project, 2019 – 2021 (557 870 euros, ESF)

DIGITIE project is applying the ApuaDigiin tool to some 15 businesses in Kainuu.

- The fact that it is utilising ApuaDigiin, is important because it paves the way for the transformative actions when the maturity has been fully processed. The transformative actions would be in a follow up project.
- The project is based on the national development goals of digitalisation, goals listed in the Kainuu's regional programme as well, and on the needs of the local businesses.
- The project also takes into consideration the fact that digitalisation is challenging especially the older personnel in the businesses.

8. How many enterprises have been tested with the model so far (if data are available)?

—> ACCELERATOR : 15 + (15) from DIGITIE

9. Summary

- The ApuaDigiin tool is a very good tool that combines digital uptake with the business model transformation.
- Parallel tools, investing in data analytics are necessary for comprehensive solutions.
- Especially, businesses need to build capacity to address all three questions when it comes to data re-use: WHAT to collect, WHY to collect and HOW to re-use. However, it is crucial that the WHAT and WHY come first, since, to a large extent they also path out the HOW.
- SMEs that can most benefit from advanced Industry 4.0 tools, so that they go beyond the maturity assessment need to be identified, studied and supported.
- The maturity assessment approach is ok, but not sufficient. It is important that qualified expertise contributes to the project planning, not only the implementation.
- In the long run, tools / projects / policies supporting targeted projects to SMEs should be adopted (Kainuu is considering them for the action plan).

Feedback on digital maturity models

10. How well are digital maturity models adapted to the needs of small enterprises?

GENERAL COMMENT

- In principle the ApuaDigiin tool is planned for SMEs in mind, taking also into account the incremental approach to their digital transformation.

DIGITIE project (inputs by the project manager 4-3-2020)

- Maturity assessment model helps SMEs to compare their capabilities to other companies in the same cluster.
- For micro companies the model is some times too complicated. Maturity assessment model has helped other projects (like DIGITIE in Kainuu) to develop their own tools for state of play analysis of SMEs digitalisation level.
- DIGITIE project has guided, to date (4.3.2020) few companies to use maturity assessment model.
- DIGITIE project has found out that maturity assessment model fits very well to larger than micro companies in traditional industries and ApuaDigiin (Help to digitalisation) web pages are useful as well

11. Should digital maturity models be linked to other advisory activities?

- Yes, they should. We see at least four groups of necessary services:
- In depth awareness raising and preparation of businesses towards advanced digitalisation and associated business organisation and processes transformation
- Digital maturity assessment qualified models and services (JRC 'yellow pages')
- Business organisation & processes maturity assessment qualified models and services (JRC 'yellow pages')
- Business transformation planning qualified services

12. Can digital maturity models be used in projects supporting innovation from EU funds?

- Obviously, they can be used if the project theme is relevant.
- One example we have is the IE project SKILLS+.
- In principle, in any Interreg project (cross border, transnational, interregional) such tools would be “natural” to use in view of establishing interregional platforms and / or joint services.
 - In the renewed Baltic Sea Region Interreg programme, such tools are very useful for establishing transnational clusters and value chains
 - In the forthcoming generation of Horizon Europe, III pillar on open innovation such applications will be most probably relevant.

13. Questions welcome



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Thank you!

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