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EIT Manufacturing Project:
FactoRIS II - Learning Factories for Digital Transformation of SMEs II

Survey on SMEs Digitalisation Maturity

incl. those in the early stage of their digital transformation path

April - May 2022

1/ State-of-the-art of Industry 4.0
and digitalization technologies adopted

While the majority of companies are already familiar with sensors, automation, and robotics, in big ones the attention for the future is moved toward Artificial Intelligence, Big Data Analytics, real time positioning system, and mobile device for production monitoring and control.
Moreover, 26% of big companies is considering the introduction of predictive maintenance technologies.
The respondents retain the state of the digitalization of their companies in line with competitors; only the half of the companies which have a clear strategy feel ahead of their competitors.

100
Companies as respondents

5
Countries

70%
SMEs

2/ Challenges & Opportunities
for the introduction of digital technologies

The respondents consider as big challenges for the digitalization, the high investments needed, the lack of workers' skills, and a general cultural resistance to change.
Areas where manufacturing companies expect to benefit from the application of Industry 4.0 methods are mainly **design and production execution**, rather than processes such as accounting, human resources management, customer services and sales.
Implementation of digital technologies represents the way to improve the situation of smaller enterprises. Data of production are almost integrated in the 60% of companies involved.
Only the 12% of the companies have adopted a predictive maintenance system while the majority of companies perform condition monitoring physically or with specific tools.
Only in the 34% of interviewed companies, some machines are technologically ready for predictive maintenance showing ample room for the improvement in the uptaking path of manufacturing digitalization technologies.

3/ Workers' training
and education

The companies participating in the survey provide workers with a mix of internal and external training, mainly on specific needs but in some cases also based on a lifelong learning approach. Majority of companies have collaborations with educational institutions, 20% are also actively involved in the educational process of technical universities or secondary schools, while the 15% are involved in joint research projects with universities. General skills on digitalization and practical training of technologies and processes at the workplace are considered the most suitable forms of training.

+ 50% of SMEs have a clear strategy to implement their digital transformation

Identified opportunities for digitalisation:

- Improving the overview of use of production and logistic capacities;
- Improving the information flow among different processes;
- Uptaking of predictive maintenance system;
- Quality inspection and control;
- Practical training and readiness testing for workers.

FactoRIS project has built on existing manufacturing know-how and equipment retrofitting towards adoption of I4.0 concepts, as well as on up-skilling the personnel to boost the uptake of advanced technologies.

The findings of this survey are an important base for the set-up of the **"Learning Factories"** as main tool for hands-on training in various aspects of digital transformation. Based on the identified challenges digital learning content and trainings will be prepared in a later stage of the project to support the companies in their digital transformation.

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