Fit für Industrie 4.0

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Results of an Empirical Study

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Relevance

Digitization and IoT have become the drivers of a far-reaching transformation process in companies worldwide. Companies are now faced with the challenge of shaping this change while considering the people and the organisation, in addition to technology. The aim of this study was therefore to examine the effects of the digitization of company employment and competence requirements, differentiated according to employee groups.

Research Questions:

- What is the current status of digitization in NRW enterprises?
- How will tasks and competence requirements for different groups of employees change as a result of digitization?

Method & Data

Following preliminary literature research and qualitative expert interviews [n=6], a research framework was developed that consists of two interconnected levels: [1] requirements of internal and external digitization as well as [2] qualifications and competencies of different occupation groups.

Based on this, a quantitative online-study was conducted from Oct. 2017 to Jan. 2018. Participants [n=150] were recruited using a personal approach and consisted of company representatives from Germany with expertise in the field of digitization and HR.

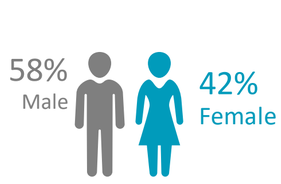
Conclusion

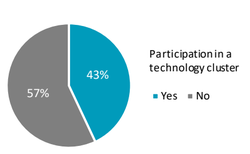
The results show the status quo and untapped potential of these companies. It is clear that, in addition to IT and media skills, companies are faced with other qualification needs and new areas of responsibility within the scope of digital transformation, which differ according to occupation group. Digitization is gaining in importance in companies of all sizes and sectors, especially with a focus on optimizing internal processes.

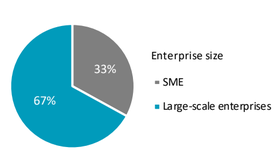
The tasks of all employee groups will change in the course of digitization, which will put new competence requirements on the agenda. Particularly strong changes become apparent for qualified employees, especially for academics. More than for all other employee groups, the study participants assume that this group will increasingly carry out data analysis and work on innovations in the future. According to the study participants, the most important prerequisites for digitization for all occupation groups is openness for change, this applies especially for managers.

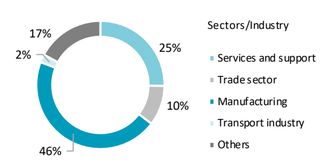
Results

Demografic data

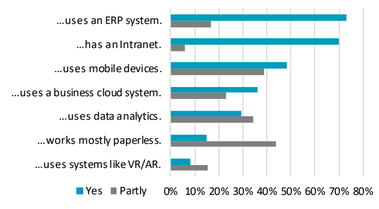


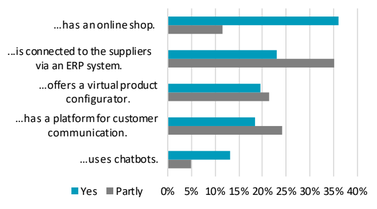


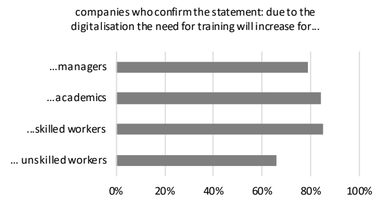


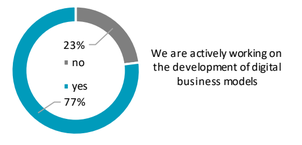


Internal and external factors: The company...

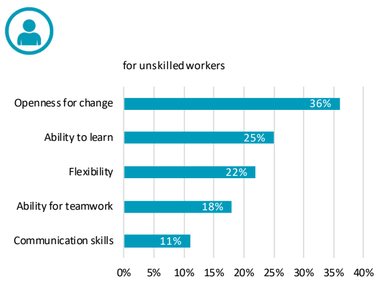


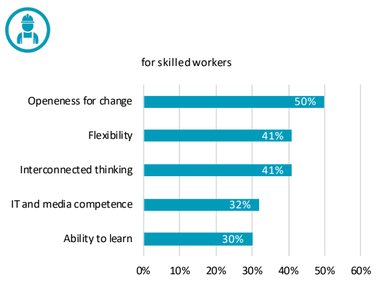


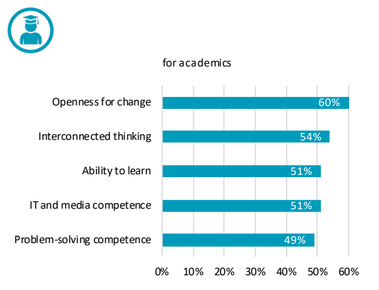


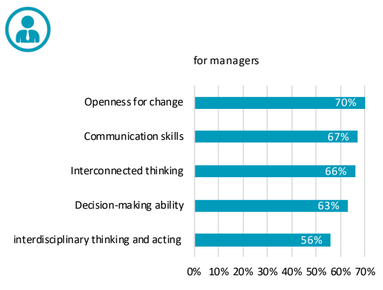


Top 5 competencies prognosed to become very important within the next 5 years

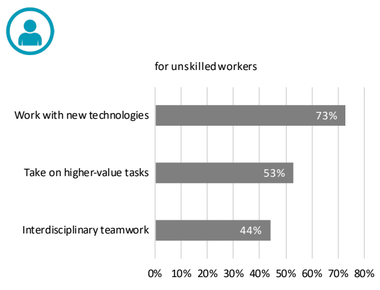


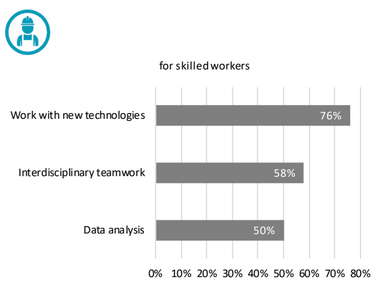


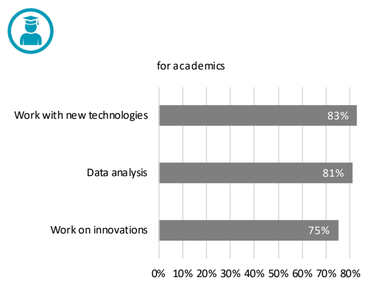


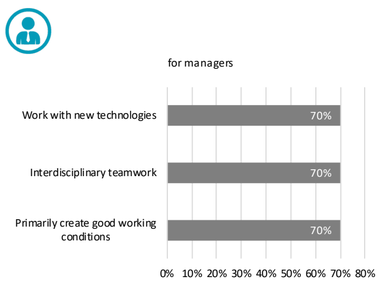


Top 3 tasks in digitization









References

acatech (ed.) (2016): *Kompetenzentwicklungsstudie Industrie 4.0 – Erste Ergebnisse und Schlussfolgerungen.* München.

Franken, S.; Prädikow, L. & Vandieken, M. (2019): *Fit für Industrie 4.0? Ergebnisse einer empirischen Untersuchung im Rahmen des Forschungsprojektes „Fit für Industrie 4.0“.* FGW Studie (in preparation).

Franken, S.; Mauritz, N.; Prädikow, L.; Wattenberg, M. & Zurmühlen, M. (2017): *Internet of Things – Corporate Requirements and Framework of Competencies*, in: Stützer, C. et al. (Hrsg.): 19th General Online Research Conference, Proceedings, Berlin, p. 52.

Franken, S.; Prädikow, L. & Zurmühlen, M. (2018): *Digitalisierungsstrategien und neue Kompetenzanforderungen in ausgewählten OWL-Unternehmen - Ergebnisse einer qualitativen Untersuchung im Rahmen des Forschungsprojektes „Fit für Industrie 4.0“*, Whitepaper, Bielefeld.

Ingenics AG, (Hrsg.) & Fraunhofer IAO (2016): *Industrie 4.0 – Wo steht die Revolution der Arbeitsgestaltung?* Ulm.

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