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## **CHALLENGES FOR SME USING BUSINESS INFORMATION SYSTEMS IN THE CONTEXT OF INDUSTRY 4.0**

### **Abstract:**

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Ever since in 2011 the term Industry 4.0 was introduced in Germany, to describe the widespread integration of information and communication technology in industrial manufacturing, companies try to define, understand how to use it and understand what it mainly means for their business (cf. Schuh et al., 2017, p.7).

It is unclear how it will continue because it triggers all business areas and develop on a very high speed. In the last years a lot of companies defined their Industry 4.0 and/or digitalisation impact. The implementation of Business Information Systems (BIS) at Small- and Medium-Sized Entities (SME) at the beginning of the century changed now to the implementation of new requirements in combination with Industry 4.0 features. The factors for immediate BIS implementation has majorly been driven by urgent IT support, mergers and the need for any IT system (cf. Vorst, 2018).

Especially SME's have been challenged while they are focussing on their core business. BIS mixed with aspects of Industry 4.0 features can change businesses especially when C-Levels are innovative, flexible and have a good imagination of the use of new tools. For example, tracking is a major point in production, logistics and maintenance but nowadays even insurances take advantages of tacking in e.g. fleet management. Or Augmented/ Virtual Reality (AR/VR) which has been professionally developed in the gaming industry is nowadays successfully been used in prototyping or design, ergonomics or in the sport industry.

The question remains; do Business Information System need to cover all new requirements or will new features or standards been developed? What is the answer and can be learned from bigger companies which might have a full Information System support or are the requirements of SME different and can they be faster with new technology? The paper will not be able to provide one clear answer but will provide a good start of research and give examples for a defined scope of the combination of BIS and Industry 4.0 technologies at SME.

### **Keywords:**

Business Information Systems, ERP, SME, Industry 4.0, Digital Change, Digitalisation, Production Companies

**JEL Classification:** D29, D81, M15