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## An innovation framework for big data

**Knut Hinkelmann, Prajakta Diwanji** and **Hans Friedrich Witschel**
FHNW University of Applied Sciences and Arts Northwestern, Switzerland

Big data has challenged existing business models and provided new business opportunities. Companies capture large volume and variety of transactional data, which contains information about their customers, suppliers and operations. Advanced data analysis techniques can help to gain knowledge about patterns, trends and user behaviors from such large datasets. This knowledge empowers businesses to innovate new products, services and business models. Scientific literature discusses use cases of value creation, data analysis techniques and technologies supporting big data. According to recent studies, the main challenge faced by companies is the proper utilization of the knowledge extracted via data analysis to create meaningful innovations. The current innovation frameworks like Google's Design Sprint guide organizations to create innovative IT applications in an agile manner. Design thinking oriented innovation frameworks like the one from Beckman and Barry (2007) place a strong emphasis on observations, e.g. to understand customer behavior and to identify their (implicit) needs. In today's digitalized world, however, the observation of such behavior requires analyzing digital traces of on-line transactions and combining it with data from different sources. We therefore propose to develop an innovation framework for big data that helps companies to exploit the knowledge generated from such data present within or outside the organization. This framework will provide the best practices, data analysis tools and technologies that can guide the companies to innovate from big data. In order to give meaning to the identified patterns, the data analysis is combined with background knowledge represented in ontology.

## Biography

Knut Hinkelmann is Professor for Information Systems and Head of the Master of Science in Business Information Systems at the FHNW University of Applied Sciences and Arts Northwestern Switzerland. He is a Research Associate at the University of Pretoria (South Africa) and Adjunct Professor at the University of Camerino (Italy). Prior to that he has worked at the German Research Center for Artificial Intelligence (DFKI) and as Product Manager Innovation for Insiders Information Management

knut.hinkelmann@fhnw.ch

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Page 63