

Scientific Summary

Dissertation Annalena Lorson

Title: Understanding Early Stage Evolution of Digital Innovation Units in Manufacturing Companies

The dynamic landscape of digital transformation entails an impact on industrial-age manufacturing companies that goes beyond product offerings, changing operational paradigms, and requiring an organization-wide metamorphosis. An initiative to address the given challenges is the creation of Digital Innovation Units (DIUs) – departments or distinct legal entities that use new structures and practices to develop digital products, services, and business models and support or drive incumbents' digital transformation. With more than 300 units in German-speaking countries alone and an increasing number of scientific publications, DIUs have become a widespread phenomenon in both research and practice.

This dissertation examines the evolution process of DIUs in the manufacturing industry during their first three years of operation, through an extensive longitudinal single-case study and several cross-case syntheses of seven DIUs. Building on the lenses of organizational change and development, time, and socio-technical systems, this research provides insights into the fundamentals, temporal dynamics, socio-technical interactions, and relational dynamics of a DIU's evolution process. Thus, the dissertation promotes a dynamic understanding of DIUs and adds a two-dimensional perspective to the often one-dimensional view of these units and their interactions with the main organization throughout the start-up and growth phases of a DIU.

Furthermore, the dissertation constructs a phase model that depicts the early stages of DIU evolution based on these findings and by incorporating literature from information systems research. As a result, it illustrates the progressive intensification of collaboration between the DIU and the main organization. After being implemented, the DIU sparks initial collaboration and instigates change within (parts of) the main organization. Over time, it adapts to the corporate environment to some extent, responding to changing circumstances in order to contribute to long-term transformation. Temporally, the DIU drives the early phases of cooperation and adaptation in particular, while the main organization triggers the first major evolutionary step and realignment of the DIU.

Overall, the thesis identifies DIUs as malleable organizational structures that are crucial for digital transformation. Moreover, it provides guidance for practitioners on the process of building a new DIU from scratch or optimizing an existing one.