Digitalization: Information technology, knowledge and sustainability

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Rapid advancements in information and communication technologies (ICTs), digitalization, expanding hyper connectivity, ever-changing firm dynamics and the rising need for energy sustainability in a global context have become important features of knowledge economies in the 21st century. In this dynamic context, access to new ICT creates possibilities and problems, for individuals, organizations and societies. With 'Enterprise systems' (increased integration), 'Business intelligence' (increased transparency), 'knowledge transfer and creation (increased collaborative working and innovation)', 'Social media" (increased social interaction) and 'Internet of things' (increased materiality), modern organizations are confronted with elevated complexities and existential challenges in this advent era of 'Cloud (and Ubiquitous) computing' and "Big Data".

Despite the significant relevance and role of ICT in businesses, there is often less research about the management of ICT and its influence on the expansion and effective use of knowledge in organizations. In the rare cases when the subject is actually studied it is often based on classical definition where information technology (and its application yielding explicit knowledge) can be viewed as a static and deterministic artifact with a one-sided and traditional cause-effect contingency approach. However, with a more informative theoretical standpoint—e.g. structuration theory, ANT, practice perspective, distributed cognition—the view of ICT and knowledge differs in different settings. With such perspectives, ICT and organizational knowledge can be viewed as dynamic and interactive concepts that can drive and often support organizational change. This ICT perspective is also highly relevant in the more recent work done on the concepts of routines and materiality.

Moving to a managerial perspective, it is possible to measure performance with high granularity in multiple dimensions and in real time in organizations. Nevertheless, a consequence is the production of vast data and knowledge (both explicit and tacit) that, in tum, creates problems such as the lack of or timely managerial attention and intervention. The full potency of the various internet-based solutions can only be reached if the technology
is supported by organizational change through quick and proper adaptation to its changing environment. For example, creation of know-what such as new organizational rules, routines, and roles (i.e. for knowledge workers of today and tomorrow) are paramount to harvest the full benefits of the technology.

From a Nordic Energies perspective, this track is specifically interesting since we are at the forefront of ICT development that needs to be sustainable and can also copiously facilitate effective organizational knowledge use to tackle the changing complexities faced by present day organizations. To the track "information technology, knowledge and sustainability" we invite conceptual and empirical work, with different theoretical point of departures, and related to the many topics and sub-topics in the field of "management studies".

Welcome!

Examples of specific themes:

- Organizational consequences of digitalization
- Digitalization and sustainability
- ICT and new organizational practices, rules, routines, and roles
- Behavioral change in the process of implementing sustainable technologies
- Use of ICT based organizational solutions for a greener and sustainable energy in the Nordic region
- Role of 'big data' and 'cloud technologies' in the creation and use of knowledge in the Nordic energy sector context
- Role of ICT to enable collaborative working (i.e. knowledge transfer) and innovation
- Influence of ICT in the use of organizational knowledge
- Knowledge transfer in strategic change and firm sustainability
- Transparency and accountability, with accounting and enterprise systems (ES)
- Use of social media for marketing and internal/external communication
- Virtualisation: Computers’ as services (“The Cloud)
- Knowledge creation in new routines, practices supported by new IT
- Visualisation of structured data