

Conceptualisation, Evaluation and Integration of Digital Opportunity Recognition

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Abstract

The increasing scale, scope, and speed of technology adoption in businesses has led to an environment in which competitive advantages are increasingly gained and eroded by the application of technologies. To operate in such environments, organizations are challenged to continuously recognize opportunities emerging on all organizational and innovation levels often evolving from technological affordances. Overcoming this challenge requires a holistic approach integrating all perspectives on digital value creation and going beyond a view on single technologies and their associated opportunities. Current research provides promising avenues for such holistic approaches, however, there are many open issues and research avenues to be investigated.

Keywords: Holistic approach to digitalization, digital transformation, opportunity recognition, sustainability, affordances.

1. Introduction

The application of digital technologies in businesses and its impact on organizations has already been researched extensively (Mithas & Krishnan, 2009). Since new technologies evolve rapidly, structured and holistic approaches are necessary to enable organizations to recognize digital opportunities (Muehlburger et al., 2020). Recognizing opportunities poses a multilevel phenomenon (Vial, 2019), requiring holistic approaches in research and practice. Such approaches need to take into account the conceptual breadth of the technological and organizational aspects of digital opportunities as well as their possible impacts. In particular impacts on the environment due to resource and energy use (Murugesan, 2008; Watson et al., 2010) and social impacts (Bélanger & Crossler, 2011; Vial, 2019). Furthermore, understanding and fostering the organizational capability of digital opportunity recognition entails the integration of individual and organizational aspects which influence this capability.

Holistic approaches for structuring the organizational, economic, environmental, and technological contexts of digital opportunities are challenged by their complexity. Holistic approaches still have a scope, but aim at adopting a multi-level perspective (Burton-Jones & Gallivan, 2007; Straub et al., 2021). Levels of analysis (e.g., individual, community, organization, industry, economy) are differentiated to allow different views such as technical, organizational and business (Muehlburger et al., 2020) or aspects such as resources, processes and values (Straub et al., 2021).

Regarding the integration of individual and organizational levels, investigating the interplay between an organization's dynamic capabilities and its employees' knowledge and attitude toward digitalization reflects a promising research avenue (Blanka et al., 2022; Muehlburger et al., 2022; Vial, 2019). Notably, investigating technology affordances, especially affordance perception, stands out as a promising avenue (Pozzi et al., 2014). In particular, exploring how individuals perceive and interact with the affordances of digital technologies is pivotal for understanding the foundations that underlie the recognition of digital opportunities by organizations (Bernhard et al., 2013). Knowledge gained in this area contributes to a more granular understanding of the individual cognitive and perceptual processes that shape the identification and interpretation of digital opportunities within organizational contexts.

To sum it up: Conceptualisation, evaluation and integration of digital opportunity recognition asks for holistic approaches integrating different aspects and considering impacts while at the same time allowing for further investigation of these aspects in a specific context. The development of holistic artifacts that might be implemented for specific contexts seems to be a possible avenue to tackle the challenges.

2. References

- Bélanger, F., & Crossler, R. E. (2011). Privacy in the Digital Age: A Review of Information Privacy Research in Information Systems. *MIS Quarterly*, 35(4), 1017–1041. JSTOR. <https://doi.org/10.2307/41409971>
- Bernhard, E., Recker, J., & Burton-Jones, A. (2013). Understanding the actualization of affordances: A study in the process modeling context. Proceedings of the 34th International Conference on Information Systems (ICIS 2013), 1–11. <https://eprints.qut.edu.au/63052/>
- Blanka, C., Krumay, B., & Rueckel, D. (2022). The interplay of digital transformation and employee competency: A design science approach. *Technological Forecasting and Social Change*, 178, 121575.
- Burton-Jones, A., & Gallivan, M. J. (2007). Toward a deeper understanding of system usage in organizations: A multilevel perspective. *MIS Quarterly*, 657–679.
- Mithas, S., & Krishnan, M. S. (2009). From Association to Causation via a Potential Outcomes Approach. *Information Systems Research*, 20(2), 295–313. <https://doi.org/10.1287/isre.1080.0184>
- Muehlburger, M., Kannengiesser, U., Krumay, B., & Sary, C. (2020). A Framework for Recognizing Digital Transformation Opportunities. ECIS 2020 Proceedings. European Conference on Information Systems, A Virtual Conference.
- Muehlburger, M., Krumay, B., Koch, S., & Currie, S. (2022). Individual Digital Transformation Readiness: Conceptualisation and Scale Development. *International Journal of Innovation Management*, 26(03), 2240013. <https://doi.org/10.1142/S1363919622400138>
- Murugesan, S. (2008). Harnessing Green IT: Principles and Practices. *IT Professional*, 10(1), 24–33. <https://doi.org/10.1109/MITP.2008.10>
- Pozzi, G., Pigni, F., & Vitari, C. (2014). Affordance theory in the IS discipline: A review and synthesis of the literature. AMCIS 2014 Proceedings. <https://shs.hal.science/halshs-01923663/document>
- Straub, F., Weking, J., Kowalkiewicz, M., & Krmar, H. (2021). Understanding Digital Transformation from a Holistic Perspective. *PACIS*, 23. https://www.researchgate.net/profile/Felix_Straub/publication/353731594_Understanding_Digital_Transformation_from_a_Holistic_Perspective/links/610ce95c0c2bfa282a27e558/Understanding-Digital-Transformation-from-a-Holistic-Perspective.pdf
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Watson, R. T., Boudreau, M.-C., & Chen, A. J. (2010). Information systems and environmentally sustainable development: Energy informatics and new directions for the IS community. *MIS Quarterly*, 23–38.