
Editorial

Digitalization and the Future of Work



Jan Marco Leimeister and Ivo Blohm



The *Swiss Journal of Business Research and Practice* invited submissions related to the question of how the digitalization may shape the future of work. The rapid development of innovative digital technologies and the associated digital transformation have changed the way in which we live, communicate, and work. Digital platforms and the increasing pursuit of becoming more effective and flexible have affected many traditional work structures within and across organizations. Work is potentially becoming more distributed, flexible, and autonomous. At the same time, many approaches of digital work are associated with inferior working conditions, low payment, or even increasing surveillance (Durward *et al.* 2020, Aloisi/Gramano 2019). Phenomena such as artificial intelligence, smart devices, or robotics might further accelerate these developments and could lead to an augmentation and automation of knowledge work – work that requires extensive education and training and that is today performed by humans. Similarly, organizations and management practices may become more digital such that new jobs, roles, and skill profiles as well as innovative modes of management and leadership could emerge. These developments will not only impact individuals and organizations, but also our society in its entirety.

Current Development Trajectories of Digital Work

There is a growing number of articles pointing to the importance of digitalization and its impact of future forms of work (e.g., Brynjolfsson/Mitchell 2017, Durward *et al.* 2020, Aloisi/Gramano 2019). Durward *et al.* (2016) refer to digital work as an effort to create digital goods (e.g., software) and/or the extensive use of digital tools in working processes. Against this backdrop, the five articles of the special issue shed light to a broader conceptualization of the phenomenon and overarching developments that may describe interrelated trajectories for how digitalization may shape the future of work:

- 1) **Digital Tools and Platforms:** Organizations are increasingly using digital tools, technologies, and platforms to improve communication and collaboration as well as the organization and execution of work.

- 2) **Agile and Digital Work Practices:** Organization strive to increase their agility as well as the effectiveness of their resource utilization and overall work processes by introducing agile and digital work practices.
- 3) **Automation of Knowledge Work:** The increasing use of digital technologies allows for the facilitated collection of data to automate the execution of knowledge work and the accompanied business processes.

The COVID-19 pandemic did not bring these developments into being. The tools, platforms, work practices, and technologies fostering the digital transformation of work were already known or used before. However, the COVID-19 pandemic acted as a catalyst for their acceptance in and across companies as well as their widespread adoption. The pandemic intensified the priority of digitalizing work across all hierarchical levels of organizations. Consequently, the five selected articles illustrate how the three outlined digitalization trajectories are enacted in organizations and discuss implications for a post-pandemic future of work.

Papers of the Special Issue

Theresa Eden, Oliver Werth, Davinia Rodríguez Cardona, Christoph Schwarzbach, Michael Breather, and Johann-Matthias Graf von der Schulenburg set the outline for this special issue by investigating two archetypical cases in which new digital technologies support traditional work processes of financial service providers. Building on findings from two in-depth case studies and using the Technology-Organization-Environment-Framework, the authors examine the adoption challenges that arise when new digital tools such as video advisory and a central customer portal are introduced in advisory work. *Eden et al.* identify 13 factors that influence the technological innovation of advisory work and derive implications for financial services providers. The insights are valuable for a better understanding of the opportunities and challenges of successfully implementing technological innovations in corporate knowledge work.

Benedikt Simmert and *Christoph Peters* go beyond the supporting role of new digital tools in the transformation of knowledge work by investigating how digital platforms can enable novel work practices and modes of work organization. They focus on internal crowd work, i.e., the orchestration of large and distributed groups of employees via digital platforms to organize and execute work within the boundaries of an organization. Specifically, they investigate how this novel mode of platform-based work fosters empowerment of participating employees. The study shows that internal crowd work is a structural empowerment factor that promotes psychological empowerment. By promoting psychological empowerment, internal crowd work can lead to increased agility, better work outcomes, and more satisfied employees. The study of *Simmert/Peters* uses a mixed-method approach to collect data on empowerment mechanisms and suggests that moving to a platform-based way of working can increase the satisfaction and engagement of employees.

Annette Metz, Heike Schinnenburg, and Nicole Böhmer explore the changing role of leadership in digital work that is increasingly becoming more distributed, agile, and mediated through digital technologies (for examples see the articles of *Eden et al.* and *Simmert/Peters* in this special issue). Consequently, the COVID-19 pandemic has shed light to the major organizational challenge of digital leadership. As virtual teams are more

and more becoming the norm, *Metz et al.* show that arising uncertainties in digital work may hamper individuals and teams to build robust relationships and mutual trust. The authors investigate enablers for effective digital leadership and trust-building mechanisms in virtual teams, e.g., the importance of a leader's integrity or novel models of work control and quality assurance. In this context, *Metz et al.* argue that managers' attention should increasingly shift from the control of work results to the well-being of employees.

Felix Gauger, Kyra Voll, and Andreas Pfniür investigate again a different – but as the COVID-19 pandemic has shown – highly related facet regarding the future of work: The physical office environment. Given the new potentials of digital tools and technologies for the organization and execution of work in distributed remote settings, *Gauger et al.* investigate the question of how corporate co-working spaces must be designed to increase employee satisfaction. Such corporate co-working spaces have been introduced to promote collaborative, interactive, and agile work practices, so that their design might be of high importance in a post-pandemic future in which employees' physical presence in office may not reach the same level as before. *Gauger et al.* show that corporate co-working spaces realize their potential through supporting activity-based work forms and the different types of spaces associated with them. Corporate co-working spaces thus offer an important complement to digital remote settings and traditional office workspaces because they enable real physical encounters and collaboration.

Christian Engel discusses the implications of cognitive automation – the automated processing of complex knowledge work by means of technologies such as machine learning and artificial intelligence – on the future of work. He presents an integrated conceptualization of cognitive automation as well as the results of an interview study which investigates the state-of-the-art in organizations regarding its adoption. This article investigates current impediments to implement cognitive automation and potential remedies for overcoming these obstacles. This article highlights the implications of cognitive automation for the future of work because tasks and jobs that could not be automated so far gradually move into the scope of automation. The findings are particularly helpful for managers because the successful use of cognitive automation requires novel and/or adapted management practices.

Concluding Thoughts

This special issue features five very different perspectives on how digitalization may shape the future of work. Nonetheless, all five articles show some degree of convergence towards the three outlined digitalization trajectories. Regarding the use of digital tools and platforms, *Eden et al.*, *Simmert/Peters*, as well as *Engel* show how completely different technologies may alter the execution of complex knowledge work. Similarly, *Metz et al.*, *Gauger et al.*, as well as *Simmert/Peters* emphasize on different (psychological) work outcomes that are shaped by digital and agile work practices (enacted by such technologies in the first place). Finally, *Engel* shows how cognitive automation could render the future automation of knowledge work.

We believe that all these facets are of particular importance for the future of digital work in a post-pandemic world. The pandemic has emphasized the opportunities and benefits of innovative technological solutions. Also, it has shown that flexibility and agility will be more important than ever for organizational success and the creation of favorable working conditions. The future of work must embrace these changes regardless

of whether employees are co-located physically or collaborate in digital remote settings. Only well-embedded and aligned digital work can create resources to compete in dynamic market environments.

Other Paper in the Special Issue

Beyond the five articles, the special issue also features two additional contributions:

Hede Helfrich and *Erich Höller* investigate "negligence" from a perspective of business ethics. They define negligence as inappropriate ethical behavior that arises through misconduct, whose ethical questionability is either not at all or only insufficiently represented in the consciousness of the actors. *Helfrich/Höller* offer a process model of ethical decision-making that allows organizations to improve their corporate ethical responsibility.

Finally, *Siegmund Pisarczyk* provides a review of the ninth edition of *Thommen et al.'s* (2020) "Allgemeine Betriebswirtschaftslehre. Umfassende Einführung aus managementorientierter Sicht" – one of the standard textbooks for the education of business administration in Germany, Austria, and Switzerland.

We hope you enjoy reading this issue of the *Swiss Journal of Business Research and Practice!*

St.Gallen, November 2021

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References

Aloisi, A./Gramano, E. (2019): Artificial intelligence is watching you at work: digital surveillance, employee monitoring, and regulatory issues in the EU Context. *Comparative Labor Law and Policy Journal*, Vol. 41, S. 95–122.

Brynjolfsson, E./Mitchell, T. (2017): What can machine learning do? Workforce implications. *Science*, Vol. 358, No. 6370, S. 1530–1534.

Durward, D., et al. (2016). Crowd Work. *Business & Information Systems Engineering*, Vol. 58, No. 4, S. 281–286.

Durward, D., et al. (2020). The Nature of Crowd Work and its Effects on Individuals' Work Perception. *Journal of Management Information Systems*, Vol. 58, No 1, S. 66–95.

Thommen, J.-P., et al. (2020): Allgemeine Betriebswirtschaftslehre: Umfassende Einführung aus managementorientierter Sicht, 9. Auflage, Wiesbaden.

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