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TOWARD CONTINUOUS DIGITAL SERVICE INNOVATION IN ORGANIZATIONS: BENEFITS AND CHALLENGES FROM PEOPLE PERSPECTIVE

Short Paper

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Abstract

In today's rapidly evolving technological landscape, organizations are increasingly engaged in continuous digital service innovation, fundamentally changing how they organize work in these sociotechnical environments. In this research-in-progress, we seek to understand the people perspective on this phenomenon, which has received limited attention to date. We present preliminary findings from semi-structured interviews with 35 informants from four organizations, shedding light on how the continuous nature of digital service innovation in today's organizations impacts employees across various organizational roles. Understanding this impact is critical not only to fostering instrumental outcomes, such as productive and engaging work environments but also to supporting important humanistic outcomes, such as employee well-being and satisfaction in these dynamic and ever-evolving contexts. By illuminating the people-centric implications of continuous digital service innovation, we contribute to the important discourse on the future of work in the digital age.

Keywords: continuous digital service innovation, future of work, people perspective, instrumental outcomes, humanistic outcomes, research-in-progress.

1 Introduction

In today's rapidly evolving digital world, the widespread influence of digital technologies (Nambisan et al., 2017; Yoo et al., 2010) has fundamentally changed how organizations develop and innovate their services. Digital infrastructures that enable the speed and efficiency of resource integration (Yoo et al., 2010) have accelerated the pace of change and innovation, driving organizations to adopt new ways of working to achieve a continuous flow in their digital service innovation processes (Fitzgerald and Stol, 2017). Service development and innovation processes have evolved from heavyweight, phase-based models that assume stable requirements (e.g., waterfall) to more agile and flexible processes that prioritize speed, continuous service and process evolution, and actor collaboration (Rodríguez et al., 2017). This shift toward continuous digital service innovation (Elo et al., 2023) has introduced profound changes in the work environment, including increased automation and employee autonomy, the rapid pace of development, cross-functional collaboration, and continuous change and uncertainty, profoundly impacting how people engage with their day-to-day work. Understanding how these changes affect employees and shape their current and future work environments is critical and motivates the need for our study in this emerging field.

Conboy et al. (2011) delved into the important people-centric aspects and key challenges of agile development in their article "People over Process". Since then, the landscape of digital service

innovation has rapidly evolved, increasingly embracing continuous methods (e.g., DevOps, continuous delivery) and scaling agile practices across organizations (e.g., SAFe). This has emphasized the importance of engaging diverse actors in the service innovation process. Recent literature in this context has examined multifaceted perspectives spanning organizational, technological, process, and team dynamics in software-intensive environments (see, e.g., Hemon-Hildgen et al., 2020; Itkonen et al., 2016; Leppanen et al., 2015; Lwakatare et al., 2019), and explored the people perspective as part of a broader whole (e.g., Elo et al., 2023). However, there remains a gap in our understanding of how the new forms of organizing (Puranam et al., 2014) for continuous digital service innovation affect the people operating in these work environments. Such an understanding is paramount given the fundamental role of people in any organizational framework, where their individual and collective experiences and perceptions significantly shape organizational outcomes.

To this end, this research-in-progress seeks to understand the people-centric benefits, challenges, and outcomes of continuous digital service innovation, shedding light on the employee side of these processes in organizations. Our study is guided by the following research question: "What are the focal benefits and challenges of continuous digital service innovation from the employee perspective?"

With our preliminary findings from 35 semi-structured interviews with informants across four organizations, we begin to unravel the perceived benefits (e.g., efficiency and ease of work, bringing people together, and a sense of activity and advancement), challenges (e.g., continuous change, a sense of rush and incompleteness, and workload), and multifaceted outcomes of continuous digital service innovation from the people perspective.

We contribute to the Information Systems (IS) literature by providing a novel understanding of the individual-level implications of continuous digital service innovation and by establishing a people-centric research agenda on this emerging phenomenon. For practitioners, our study provides insights to support a people-centric approach to continuous digital service innovation. We provide a foundation for strategies that not only streamline technological processes and focus on measurable outcomes but also promote employee well-being and satisfaction in these dynamic and ever-evolving contexts.

The remainder of our paper is organized as follows. First, we provide an outline of the research background, followed by a description of our methodology. We then present our preliminary findings and conclude by outlining the expected contributions upon completion of the study.

2   Toward Continuous Digital Service Innovation in Organizations

The unique properties of digital technologies, such as their malleability and generativity, enable new types of innovation processes characterized by speed and unpredictability (Nambisan et al., 2017; Yoo et al., 2010). Digital infrastructures accelerate the ideation, enactment, modification, and re-enactment of service concepts through iterative cycles of experimentation and implementation. This dynamic process blurs the boundaries of innovation, making it increasingly difficult to determine when a particular phase begins or ends (Nambisan et al., 2017). Similarly, digital infrastructures facilitate the rapid scaling up or down of service, fostering agility and driving the continuous evolution of digital offerings. These dynamics introduce a new level of fluidity into service innovation processes, allowing them to unfold non-linearly across time and space (Lusch and Nambisan, 2015; Nambisan et al., 2017).

This paradigm shift in service innovation, driven by the unique demands of our digital world (Sarker et al., 2019), has fundamentally changed the context of service innovation, presenting organizations with challenges such as rapidly changing market demands, evolving customer needs, and pressure to propose relevant value faster (Osmundsen and Bygstad, 2022). In response, organizations are increasingly moving toward continuous and agile operating models, which represent a significant departure from traditional, phase-based development approaches, such as the waterfall model (Fitzgerald and Stol, 2017). Agile methodologies emphasize iterative development, continuous integration, and rapid feedback loops, enabling organizations "to rapidly or inherently create change, proactively or reactively embrace change, and learn from change while contributing to perceived customer value (economy,

quality, and simplicity), through its collective components and relationships with its environment" (Conboy, 2009, p. 340). These innovative practices, which originated in software and internet companies, have now spread to organizations in various industries. Importantly, they transcend the boundaries of IT functions within organizations and have an impact on the entire organizational structure (Alt et al., 2020; Osmundsen and Bygstad, 2022). For example, the enterprise agile concept and scaled agile framework (SAFe) have emerged as a recognition that the benefits of agile software development will be suboptimal if not complemented by an agile approach in related organizational functions (Fitzgerald and Stol, 2017).

Development and operations (DevOps) (Debois, 2011) extends agile by addressing the need for closer collaboration between development and operations functions (Fitzgerald and Stol, 2017; Osmundsen and Bygstad, 2022), a challenge that has not been well addressed in traditional agile methods, often leading to bottlenecks and preventing a continuous flow of operations across the organization (Hemon et al., 2020). Despite its name, DevOps is not limited to the collaboration between these two teams within an organization; rather, it encompasses the entire organization (Debois, 2011). DevOps recognizes the need for integration beyond development and operations, and advocates continuity between software and the strategic processes of the organization (Fitzgerald and Stol, 2017).

The concept of continuous development has recently emerged in the IS and software engineering domains as an umbrella term (Fitzgerald and Stol, 2017; Rodríguez et al., 2017; Bussgang and Clemens, 2018; Osmundsen and Bygstad, 2022) that encompasses various continuous practices within organizations. Continuous development focuses on proposing value to customers through continuous learning and development in short cycles (Rodríguez et al., 2017; Osmundsen and Bygstad, 2022). Bussgang and Clemens (2018) argue that continuous development is the "new agile" and can potentially revolutionize organizations even more profoundly and in a broader organizational context than agile previously did. Implementing continuous development across organizations enables experimentation and innovation, allowing organizations to respond quickly to changing customer needs and demands (Bussgang and Clemens, 2018; Rodríguez et al., 2017). Despite its transformative potential, research exploring the underpinnings of continuous development in IS is still in its infancy (Osmundsen and Bygstad, 2022).

In a similar vein, the concept of continuous digital service innovation has been introduced at the intersection of IS (digital innovation), service research (service innovation) and software engineering (continuous development) domains (Elo et al., 2023), aiming to bring these different fields together to build a unified lens for studying and understanding digital service innovation as a continuous process of "rebundling of diverse resources that create novel resources" (Lusch and Nambisan, 2015, p. 161). This unified lens encompasses a range of agile and continuous approaches and practices (see, e.g., Elo et al., 2022; Fitzgerald and Stol, 2017) and facilitates a variety of incremental and innovative outcomes (e.g., new and/or improved service offerings, processes, and business models) (Lusch and Nambisan, 2015). It incorporates the notions of continuous development presented earlier but promotes the understanding, exploration, and communication of continuous digital service innovation beyond traditional software development and IT environments. Thus, the unified lens addresses the need for a holistic and integrated approach to communicating the activities that characterize service innovation in today's digital age. This conceptual understanding serves as our sensitizing lens as we design the empirical phase of our study to gain an understanding of the benefits and challenges of continuous digital service innovation from the people perspective.

3 Methodology

We employed a qualitative approach (Myers, 2020) to study continuous digital service innovation across four Finnish organizations. The organizations and informants were selected using purposive sampling (Patton, 2002), which allowed us to focus on organizations and individuals who were most likely to provide rich, relevant, and diverse insights into the phenomenon of interest. Despite different operational contexts, all organizations implemented agile and continuous approaches and practices (see, Elo et al., 2022) to address rapid technological and market developments. These approaches were characterized

by, for example, increased automation, employee autonomy, fast-paced development cycles, cross-functional collaboration, and continuous change and uncertainty. With the help of our contacts in the organizations, we identified and selected employees to interview. The selection of informants was based on their suitability, with the common criterion of having experience and knowledge of the operational aspects of continuous digital service innovation within the organization. The informants represented various roles to capture diverse perspectives (see Table 1).

Industry	Size	*	Informant roles
A. Telecommunications, ICT, and online services	5,000+ employees	5	Data Scientist (1), Development Manager (1), Lead Architect (1), Automation Manager (1), Business Manager (1)
B. Digital HR service solutions	300+ employees	9	Development Manager (3), Industry Director (1), HR Manager (2), Product Development Manager (1), Senior IT Consultant (1), Application Programmer (1)
C. Digitally enabled textile rental service	4000+ employees (global; 24 countries)	13	Head of Delivery Services (1), Service Owner (2), Director (3), Head of Customer Experience and Customer Service (1), Head of Fast Track (1), SVP - Strategy (1), VP - Marketing, Sales and Customer Engagement (1), Solution Architect (1), Service Concepts Designer (1), Industry Head (1)
D. Language services and language management solutions for digital environments	150+ employees plus 2000+ freelancers	8	Head of Continuous Services (1), Service Manager (1), Solution Architect (2), Customer Relations Manager (1), Software Developer (1), Chief Solutions Business Officer (1), Project Manager (1)

*Number of informants

Table 1.   Companies and informants.

Between March and June 2022, we conducted 35 semi-structured interviews (17 males, 17 females, 1 did not want to disclose; aged 23 to 59 years; average working experience in the company/the current role of eight years). Semi-structured interviews were chosen for their flexibility, which allowed for open-ended discussions that could be adapted based on the flow of the conversation, thus providing rich, detailed insights into the real-life context of the informants. We prepared an interview guide (Patton, 2002) that included open-ended questions to elicit informants' perspectives on various aspects of continuous digital service innovation—its nature, underlying principles, practices, methods and perceived implications in the work environment. The questions specifically included perspectives on the perceived benefits and challenges of continuous digital service innovation within the informants' work environment. While the interviews captured multiple viewpoints, including organizational, customer, technological, and broader external environmental considerations, this study focuses on analyzing insights from the employee perspective. The interviews ranged from 40 to 90 minutes (average of 65 minutes) and were conducted via an online video conferencing tool. The interviews were recorded and then transcribed for analysis.

We conducted our preliminary analysis following the thematic analysis guidelines from Braun and Clarke (2006). The first author was primarily responsible for coding and analysis; however, the progress of the analysis and interpretations was discussed with the other authors in project meetings. The preliminary analysis involved an examination of the 35 transcripts, focusing specifically on sections in which informants shared their experiences related to the benefits and challenges of continuous digital service innovation. Using the qualitative data analysis tool Atlas.ti, an open coding process was employed, resulting in 311 quotations and 224 codes in the first stage. Through an inductive process, the codes were refined, combined, and organized under two interrelated dimensions: (1) the perceived benefits and challenges of continuous digital service innovation from the employee perspective and (2) identified (as well as anticipated) outcomes. To further classify our inductive insights into the latter, we adopted the categorization by Sarker et al. (2019), distinguishing between instrumental and humanistic outcomes.

4 Preliminary Findings

Table 2 summarizes our preliminary findings on the benefits and challenges of continuous digital service innovation in organizations from the people perspective.

Benefits and challenges of work		Outcomes
Benefits	**Challenges**	**Instrumental outcomes**

• Efficiency of work
• Easiness of work
• Staying up to date with operations
• Bringing different people together
• Focus on people's work
• A sense of advancement
• A sense of activity
• Perceived effort from employer
• Peace while working
	• Continuous change
	  • Difficulty in keeping up with changes
	  • Trouble caused by change
	  • Perceived lack of stability
	• A sense of rush
	• A sense of incompleteness
	• Perceived lack of achievement
	• Perceived lack of efficiency
	• Workload
		• Job performance
		• Employee engagement
		• Employee retention
		Humanistic outcomes
		• Job satisfaction
		  + Meaningfulness of work
		  + Enjoyment
		  + Satisfaction
		  + Self-efficacy
		  + Saves nerves
		  - Frustration
		  - Uncertainty
		• Employee well-being
		  - Stress
		  - Discomfort
		  - Anxiety

Table 2.   Benefits and challenges of continuous digital service innovation from the people perspective.

Efficiency of work is one of the commonly identified benefits of continuous digital service innovation and is also highlighted from the people perspective in our preliminary findings. Efficiency, which results from breaking work down into smaller and manageable tasks, adaptability, and streamlining of processes, has an impact on instrumental outcomes, such as job performance:

> *"Not having to do the same thing again or from the beginning, making similar mistakes multiple times...saving effort, so that one can then put that effort into thinking and developing something new."*

Another benefit from continuous digital service innovation identified in our preliminary analysis relates to the easiness of work:

> *"Our tools are evolving through it, our systems, and we are constantly making the work of our employees easier...at times, when you stop to think... you notice that things are continuously evolving, and that's significant."*

However, continuous digital service innovation does not only bring benefits. For example, ongoing changes in the resulting work environments can pose challenges that require adaptability from employees:

> *"Adjustments are made all the time...the priority order can change quite frequently." // "It presents a certain kind of challenge because things are constantly changing."*

Our preliminary findings also point to the positive experiences of witnessing development, which were linked to humanistic outcomes, such as enjoyment, satisfaction, and the meaningfulness of work:

> *"It's rewarding, in my opinion, to see that things are evolving…At some level, it's complete, but then there are new needs, and one notices that development is*

> *continuous.” // “And, of course, for people, people are happier when they can participate and also constantly see the results of that progress.”*

Another positive experience connects to employees' perceptions regarding employers' effort in continuously advancing their service and serving employees, which was also linked to the meaningfulness of work and job retention:

> *“But yes, [continuity] is extremely meaningful...It instils a belief in the workplace about something better and the fact that they [employees] are being served.”*

Among negative experience findings, a sense of rush was connected to issues such as resource allocation in dynamic work environments. Additionally, the continuous emergence of new priorities challenges established plans, resulting in a lack of stability:

> *“Being too rushed, we might be spread thin in many departments...I feel that resource allocation is the most challenging part.” // “There's also the fact that needs arise unexpectedly and rapidly. And then, it leads to the necessity to suddenly shift from what was planned...It brings a certain hecticness.”*

Lastly, our preliminary findings highlight the effects of continuous digital service innovation on various instrumental and humanistic outcomes (Sarker et al., 2019). As observed, adopting continuous practices can introduce efficiency to work, which positively contributes to job performance (an instrumental outcome). Other findings, at this stage, emphasize humanistic outcomes such as job satisfaction and well-being, both in positive and negative contexts. These humanistic outcomes, in turn, are sure to affect instrumental outcomes, such as employee engagement and retention, making the consideration of both perspectives (instrumental and humanistic) important. While discussions about continuous processes often emphasize efficiency and measurable outcomes, the significance of job satisfaction and well-being to these outcomes cannot be overstated. In this regard, our preliminary findings highlight the positive aspects related to the meaningfulness and significance of work:

> *“After all, the meaningfulness of work is one thing where [continuity] can make a difference...and in turn, [it] affects people's job satisfaction.”*

However, the continuous ways of working may also bring about negative emotions, such as frustration or stress:

> *“Yes, it might sometimes cause frustration for some people...You have this feeling that nothing is finished completely, that you are not able to close a certain topic...” // “When there's constantly something new, constantly something changes, constantly something new has to be learned, new systems and changes, I totally understand that sometimes there's frustration.” // “Some get stressed from this continuous change...but then we need to respond by trying to develop people's capabilities to understand that this is continuously changing, this current world, that we can't remain still.”*

5 Expected Contributions and Conclusion

Our preliminary findings underscore the significance of the people perspective and encourage further exploration of this viewpoint in the context of continuous digital service innovation. At this stage, the emerging categories support the view that further research from the people perspective is needed to harness the potential of continuous digital service innovation and mitigate its challenges in organizations. In the next phase of our ongoing research, we will move to open coding and analyzing the interviews on an aggregated level to uncover a deeper view of the emerging findings and explanatory connections among the categories. This will involve considering contextual factors that may affect how the benefits and challenges of continuous digital service innovation manifest as diverse outcomes in a resulting work environment.

A deeper exploration of the interconnections between the dimensions—benefits, challenges, and outcomes of continuous digital service innovation and affecting conditions—will enable us to achieve an in-depth understanding of the dynamic future work environments from the employee perspective. The main outcome of our study will be a conceptual framework that establishes the key benefits and challenges of continuous digital service innovation from the people perspective and explains their role in driving different positive and negative outcomes in the resulting work environments. Figure 1 summarizes the framework outlined in this phase of the study, each part of which we will refine in the following phases of our analysis.
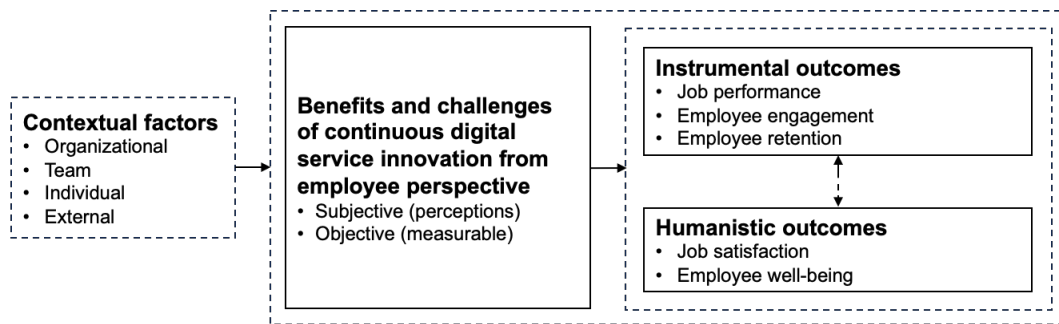

Figure 1.   *Preliminary conceptual framework.*

In accordance with the "People over Process" approach (Conboy et al., 2011), we contribute to the IS literature by providing a valuable understanding of continuous digital service innovation and its impact on people working in the resulting rapidly evolving sociotechnical environments. As our work continues, we expect to identify future trajectories within this emerging field (e.g., Hemon-Hildgen et al., 2020; Osmundsen and Bygstad, 2022; Elo et al., 2023), laying the groundwork for a people-centric research agenda for continuous digital service innovation. The findings from our completed study will serve as a foundation to direct specific topics for in-depth investigation. Through our preliminary analysis, several such topics have already emerged, encompassing the influence of contextual factors on employees' experiences and performance, ensuring employee satisfaction and well-being amid continuously changing environments, and the synergies of instrumental and humanistic outcomes (Sarker et al., 2019) in shaping the success of continuous digital service innovation processes and organizational outcomes.

For practitioners, our study emphasizes the importance of people in continuous digital service innovation. People are at the heart of any organization, and their experiences and perceptions essentially influence organizational outcomes. By furthering the understanding of how employees perceive the continuous nature of today's digital service innovation processes, our findings can help organizations support a positive and productive work environment for their employees, both in the present and the future. This, in turn, should support important organizational outcomes, such as employee retention and performance. Our study provides managers with actionable suggestions for harnessing the benefits of continuous digital service innovation while mitigating its challenges and undesirable outcomes. This will help organizations to enable future work environments that not only support positive instrumental outcomes but also emphasize humanistic considerations in continuous digital service innovation.

References

Alt, R., Leimeister, J. M., Priemuth, T., Sachse, S., Urbach, N. and Wunderlich, N. (2020). "Software-Defined Business: Implications for IT Management," *Business and Information Systems Engineering* 62 (6), 609-621.

Braun, V. and Clarke, V. (2006). "Using thematic analysis in psychology," *Qualitative Research in Psychology* 3 (2), 77-101.

Bussgang, J. and Clemens, S. (2018). "Continuous development will change organizations as much as agile did," *Harvard Business Review*.

Conboy, K. (2009). "Agility from first principles: Reconstructing the concept of agility in information systems development," *Information Systems Research* 20 (3), 329-354.

Conboy, K., Coyle, S., Wang, X. and Pikkarainen, M. (2011). "People over process: Key challenges in agile development," *IEEE Software* 28 (4), 48-57.

Debois, P. (2011). "DevOps: A Software Revolution in the Making?," *Cutter IT Journal* 24 (8), 3-5.

Ebert, C., Gallardo, G., Hernantes, J. and Serrano, N. (2016). "DevOps," *IEEE Software,* 94-100.

Elo, J., Pekkala, K. and Tuunanen, T. (2023). "Managing Continuous Digital Service Innovation for Value Co-Creation," in: Bui, T.X. (ed.) *Hawaii International Conference on System Sciences*, Hawaii, Manoa.

Elo, J., Pekkala, K., Tuunanen, T., Lumivalo, J., and Salo, M. (2022). "Exploring the "Why", "How", and "What" of Continuous Digital Service Innovation," in: Taibi, D., Kuhrmann, M., Mikkonen, T., Klünder, J., and Abrahamsson, P. (eds.) *PROFES 2022: 23rd International Conference on Product-Focused Software Process Improvement, Proceedings* (pp. 366-381). Springer International Publishing.

Fitzgerald, B. and Stol, K. J. (2017). "Continuous software engineering: A roadmap and agenda," *Journal of Systems and Software* 123, 176-189.

Hemon, A., Lyonnet, B., Rowe, F. and Fitzgerald, B. (2020). "From Agile to DevOps: Smart Skills and Collaborations," *Information Systems Frontiers* 22 (4), 927-945.

Hemon-Hildgen, A., Rowe, F. and Monnier-Senicourt, L. (2020). "Orchestrating automation and sharing in DevOps teams: A revelatory case of job satisfaction factors, risk and work conditions," *European Journal of Information Systems* 29 (5), 474-499.

Itkonen, J., Udd, R., Lassenius, C. and Lehtonen, T. (2016). "Perceived Benefits of Adopting Continuous Delivery Practices," in: *Proceedings of the 10th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement*.

Leppanen, M., Makinen, S., Pagels, M., Eloranta, V.-P., Itkonen, J., Mantyla, M. V and Mannisto, T. (2015). "The highways and country roads to continuous deployment," *IEEE Software* 32 (2), 64-72.

Lusch, R. F. and Nambisan, S. (2015). "Service innovation: A service-dominant logic perspective," *MIS Quarterly* 39 (1), 155-175.

Lwakatare, L. E., Kilamo, T., Karvonen, T., Sauvola, T., Heikkilä, V., Itkonen, J., Kuvaja, P., Mikkonen, T., Oivo, M. and Lassenius, C. (2019). "DevOps in practice: A multiple case study of five companies," *Information and Software Technology* 114, 217-230.

Myers M. D. (2020). *Qualitative Research in Business & Management*, 3rd Edition. London: Sage Publications.

Nambisan, S., Lyytinen, K., Majchrzak, A. and Song, M. (2017). "Digital innovation management: Reinventing innovation management research in a digital world," *MIS Quarterly* 41 (1), 223-238.

Nylén, D. and Holmström, J. (2015). "Digital innovation strategy: A framework for diagnosing and improving digital product and service innovation," *Business Horizons* 58 (1), 57-67.

Osmundsen, K. and Bygstad, B. (2022). "Making sense of continuous development of digital infrastructures," *Journal of Information Technology* 37 (2), 144-164.

Patton, M. Q. (2002). *Qualitative Research and Evaluation Methods*, 3rd Edition, Sage.

Puranam, P., Alexy, O. and Reitzig, M. (2014). "What's 'new' about new forms of organizing?," *Academy of Management Review* 39 (2), 162-180.

Rodríguez, P., Haghighatkhah, A., Lwakatare, L. E., Teppola, S., Suomalainen, T., Eskeli, J., Karvonen, T., Kuvaja, P., Verner, J. M. and Oivo, M. (2017). "Continuous deployment of software intensive products and services: A systematic mapping study," *The Journal of Systems and Software* 123, 263-291.

Sarker, S., Chatterjee, S., Xiao, X. and Elbanna, A. (2019). "The Sociotechnical Axis of Cohesion for the IS Discipline: Its Historical Legacy and its Continued Relevance," *MIS Quarterly* 43 (3), 695-719.

Yoo, Y., Henfridsson, O. and Lyytinen, K. (2010). "The new organizing logic of digital innovation: An agenda for information systems research," *Information Systems Research* 21 (4), 724-735.