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CALL FOR PAPERS

Call for Papers, Issue 5/2024

Managing the Dynamics of Business Processes

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1 Special Issue

Business process management (BPM) is a holistic management discipline (Rosemann and vom Brocke 2015) with an established toolbox and lifecycle of management activities (Dumas et al. 2018). It is a source of constant innovation and can provide companies with competitive advantage. While the execution of business processes with so-called BPM systems is well-understood (Weske 2019), there is a constant influx of novel technologies and management ideas that challenge and possibly re-shape the core of BPM.

In response, recent claims emphasize that the traditional assumptions of BPM are increasingly challenged in the digital age (Baiyere et al. 2020; Kerpedzhiev et al. 2021; Mendling et al. 2020). As new digital technologies emerge, new data streams become available and new customer needs take shape, organizations need to grapple with ever increasing dynamics in their business environments. The challenge for BPM is thus tied to a tension between stability and change. On the one hand, organizations need to ensure that their business processes are stable and reliable to some extent, and on the other hand, they need to consider and react to these dynamics to remain competitive.

There is emerging interest around the question of how organizations can manage their business processes as they embrace such dynamics (Grisold et al. 2022). We are, however, only beginning to understand what this means for BPM in more general terms. Hence, the aim of this special issue is to provide space to various aspects related to managing the dynamics from a BPM point of view. To this end, we are interested in a variety of perspectives that cover technical as well as organizational and managerial aspects.

On the technical side, for instance artificial intelligence (AI) rooted in machine learning algorithms (Janiesch et al. 2021) has impacted BPM dynamics like any other field. AI has been widely recognized as a driver for more granular decision making and delegation within decision processes (Baird and Maruping 2021) as well as possibly more machine autonomy in human-machine processes (Janiesch et al. 2019). In addition, process mining based on such self-learning approaches has started to outperform traditional process mining approaches (van der Aalst 2016; van der Aalst and Carmona 2022) and opens the door, for example, to a more dynamic management of future events (Heinrich et al. 2021) or concept drift (Sato et al. 2022).

As another example, consider how robotic process automation (RPA) has changed the tide for many BPM endeavors. Whenever traditional BPM systems are considered too heavyweight, lightweight software robots – so called bots – mimicking human workers now provide a dynamic alternative for automation (van der Aalst et al. 2018) coining the term hyperautomation for rapid,

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business-driven process automation anywhere. The torrential introduction of RPA into business practice has revealed many challenges not yet sufficiently understood (Syed et al. 2020), including the economics, governance, and life cycle of RPA. Further technological avenues to explore include but are not limited to cloud computing and blockchain technology, the Internet of Things (IoT), and augmented or virtual reality.

From an organizational point of view, we are interested in dynamics that result from inside or outside the organization and affect how business processes are performed. Research in the organization sciences, for example, shows how dynamics emerge when process participants evaluate situations and take their own decisions (Dittrich et al. 2016; Pentland et al. 2021), thus providing potential explanations to process mining-related findings why predefined models are not necessarily followed (Baiyere et al. 2020; Mendling et al. 2021). Furthermore, the growing interest in self-managed forms of organizing, such as agile or holacracy or bimodal approaches, pose new challenges and opportunities for the design and management of dynamic business processes (Badakhshan et al. 2019; Kremser and Xiao 2021).

From a managerial point of view, this also implies that managers need to attend and respond to evolving dynamics in business processes (Grisold et al. 2022). To this end, emerging digital technologies as pointed out above enable insights into process dynamics with increasing flexibility and detail (Leonardi and Treem 2020). However, we lack a systematic understanding and consensus of when, how, and why managerial practices should be informed on the grounds of such technologies to be able to interpret and explain unexpected dynamics (Pentland et al. 2021).

2 Invited Contributions

The ambition behind this special issue is to provide a space for original contributions that investigate how the dynamics of business processes can be represented, explained, and managed. Considering the strong role that emerging digital technologies play in BPM, we explicitly encourage submissions with a socio-technical focus, merging organizational, managerial, and technology-related perspectives (Sarker et al. 2019). We welcome empirical contributions that pursue descriptive, explanatory, or prescriptive research; we also welcome conceptual work, design-oriented research, as well as reviews and surveys if they provide a unique own contribution to the discussion.

Submissions should consider – but are not limited to – the following questions:

Organizational and managerial aspects:

- How can we manage business processes in dynamic, self-organizing environments, e.g., agile or holacracy?
- What are the skills and capabilities of modern BPM managers who successfully leverage digital technologies?
- What is the impact of lightweight automation on the managerial practices of BPM?
- What kind of novel managerial tools do we need to harness hyperautomation?
- What are challenges and opportunities of managing business processes when the behavior of process participants is made visible through digital traces?
- To what extent can theories and methods from the organizational and managerial sciences help to explain and manage the dynamics of business processes?

Technical aspects:

- How can BPM technologies integrate seamlessly with emerging technologies (e.g., AI, RPA, Blockchain, IoT)?
- How can AI technology enable more dynamic decision making in business processes?
- How does the concept of AI change the interaction and delegation between human and machine in business processes?
- How do heavyweight systems (i.e., BPM) and lightweight systems (e.g., RPA) integrate harmoniously?
- How can RPA be made more flexible and smarter to cope with dynamics of business processes?
- How can data-driven process management be facilitated by the next generation of BPM systems?

3 Submission Guidelines

Please submit papers by 1 Nov 2023 at the latest via the journal's online submission system (http://www.editorialmanager.com/buis/). Please observe the instructions regarding the format and size of contributions to Business & Information Systems Engineering (BISE). Papers should adhere to the submission general BISE author guidelines (https://www.bise-journal.com/author_guidelines).

All papers will be reviewed anonymously (double-blind process) by at least two referees regarding relevance, originality, and research quality. In addition to the editors of the journal, including those of this special focus, distinguished international scholars will be involved in the review process.

4 Schedule

Submission Deadline: 01 November 2023
Author Notification 1: 23 December 2023
Completion Revision 1: 01 March 2024
Author Notification 2: 15 April 2024
Completion of Revision 2: 22 May 2024

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