What's going to happen to Business Process Management?

Current Status and Future of a Discipline

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ABSTRACT

In recent years, business process management (BPM) has developed many concepts and methods for IT-supported cross-functional optimization within enterprises. The megatrend of digitization, however, raises the question of what significance the discipline currently and in the future still has. This article analyzes the general importance of BPM in science and research. From this, four theses on the future of the discipline are derived (including decreasing relevance of classical terms and commoditization of concepts), which can be used as an orientation for further BPM initiatives.

CCS Concepts

Applied computing → Enterprise computing → Business process management.

Keywords

Business Process Management, Digitization, Research community.

1 Motivation

The conference series of the S-BPM ONE exists since 10 years. Conceptually, it can be understood as a further development or supplement to the original and traditional BPM approaches. In the S-BPM community as well as on many other process management platforms (e.g., panels, workshops) discussions about the current and future significance of BPM take place.

Thanks to new technologies, smarter IT systems, the digitization of many processes, fully automated business models and many other trends, the BPM discipline, which has formerly been described, becomes more diverse. Many opportunities can arise from this, because process orientation is a main paradigm in many digitization initiatives. The built-up BPM knowledge base can make many contributions – this might only be the modeling, execution, optimization or monitoring. At the same time, a sense of loss of identity can be observed – for example, when ideas from other disciplines cannot be easily combined with the classical teachings of BPM, when new digitization experts are appearing on the field or when the term "process management" is no longer used.

This contribution serves as a reflection paper to encourage discussion at the conference on the future of BPM, and probably of S-BPM in particular.

First, selected developments of BPM in science and practice are outlined. They do not claim to be complete in their entirety, but provide insights into the developments that can be observed in BPM research and entrepreneurial practice. Since this text is about general observations, hypotheses, and interpretations, it explicitly does not use any sources as evidences. The article concludes with four theses, which are to be understood as an assessment of the author. They should serve as an introduction to an open discussion at the conference.

2 Collection of ongoing developments

First, some observations from business practice and science are collected.

BPM in companies

Despite all the talk about the exact meaning, GoogleTrends can certainly be used to derive the general interest in topics. Figure 1 shows that global interest in BPM (search requests) has been falling slightly since 2009 and has remained at a constant level for several years.

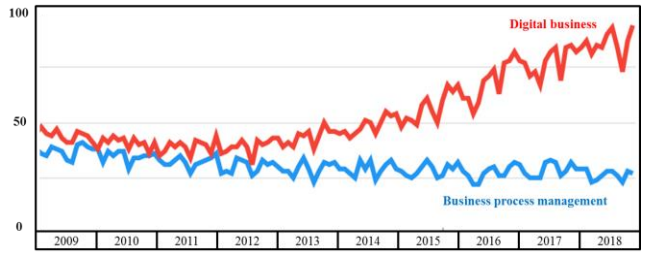

Figure 1: Relative Google searches for BPM and digital business

Digitization is usually addressed at two levels in companies. First, it is about transferring analog data or manual steps into digital information or automated workflows. At this stage, classical BPM has its beginnings, because processes integrate data, functions and tasks in a company. Nonetheless, these topics are nowadays subsumed or specifically referred to as digital business. For example data analytics, predictive maintenance, data mining, industry 4.0, design thinking, big data integration, AI for agents, smart production or dynamic orchestration are typical keywords for currently trendy concepts. However, the BPM and S-BPM community is providing contributions in these fields for years, but under classic terms such as workflow, ERP, activity-based analysis, formal languages, business IT alignment, BPM software, automated execution, process semantics and process training. In summary, the classic BPM topics are still under discussion and application - but under different, modern or specific terminology.

On a second level, digitization means a holistic transformation of companies (e.g., with their business models, transactions and resources) and also of the entire society (e.g., work 4.0, generation Y). Many of the ideas are build on digital processes (and the underlying available data, tools, and competencies organized in process models). In line with new technology, more (especially structured) business processes have been optimized (e.g., automated). This is still happening today at the first level of digitization. The focus of companies shifts towards the second level with the available data and IT services in flexible and strategic topics. IT is used to (i) implement digital leadership, (ii) digital products and services (innovations), (iii) digital partnerships, and (iv) digital business models. Often, however, a classic BPM basis is needed for (i) roles, (ii) process data, (iii) collaboration workflows, and (iv) reliable transactions (= business processes).

BPM in science

This trend can also be seen in science and research, where there are still contributions, findings and new results on classic BPM topics. Figure 2 shows 8.914 BPM-related publications of three databases over the last years (see Figure 2).

Although some methodological approaches have been used in the sample and analysis, they are not described here – this article focuses on reflection rather than the exact measurement methodology.

Figure 2: BPM publications in (i) EbscoHOST, (ii) IEEE Xplore and (iii) SpringerLink (top-down)

At first glance, the number of general textbooks and general publications (here SpringerLink) has increased slightly since 2009. On the one hand, in more management-oriented databases (here EbscoHOST), a strong increase in peer-reviewed journal contributions can be observed. Technical contributions to BPM (here IEEE) decline on the other hand.

However, looking at the relative proportions of these samples (see Table 1), it becomes clear that BPM publications only grow significantly in the management world. Perhaps this can be explained by the fact that IT, data and technology related issues have always been relevant to engineers, but have now arrived in management as well (e.g. functions such as online marketing, digital HR, automated finance, automated administration, transactions such as e-procurement and e-commerce). In the mainstream (SpringerLink), however, other keywords seem to become more relevant, even if BPM publications continue to have equal shares.

Table 1: Growth rates and relation (n=8914)

Database \ Rates	Avg. annual growth rate of BPM publications	Avg. annual growth rate of all publications in database
EbscoHOST	15%	7%
IEEE Xplore	-1%	3%
SpringerLink	7%	7%

If one looks at classical conferences in the field of information systems (see Table 2), BPM is now completely seen as interdisciplinary field between business and IT. Shown are the track names in which researchers were/are invited to submit BPM-related papers. The track names from previous years and the ones form the current year are shown in the rows.

It is noticeable that in the past either BPM-relevant topics were explicitly mentioned in the track name or BPM was discussed in the context of organizational questions. At current conferences, only one track has actually BPM in the title. As with business practice, BPM topics are mentioned in many different tracks (under new categories) in Call for Papers but not in the title anymore (no longer an own category).

Table 1: Relevant tracks for BPM-related contributions

Conference	Former track	Current track
WI (2014 vs. 2019)	Business process and service management	Enterprise Modeling & Information Systems Design Digital Transformation and Services
MKWI (2014 vs. 2018)	Business process management and flexibility in workflow management systems	The Customer in the Digital Transformation - Creating Customer Values Social Computing, Human-centric Information Systems Design and Development Cyber-physical systems and digital value networks
ICIS (2014 vs. 2019)	IS Strategy, Structure, and Organizational Impacts	Business Models and Digital Transformation
ECIS (2010 vs. 2019)	IT and new organisational forms and innovations	Modelling and Managig the Digital Enterprise and its Business Processes
AMCIS (only 2019)	n.a.	AI and Smenatic Technologies for Intelligent Information Systems Data Science and Analytcis for Decision Support Organizational Transformation & Information Systems

This allows three initial conclusions: (i) Process management concepts are the content of various cross-cutting issues and topics of the future (such as, digital transformation, artificial intelligence). (ii) The special or modern names are more popular than BPM. (iii) Knowledge from the BPM discipline is welcome in many tracks (e.g., modeling, IT alignment), but more as a useful foundation and not as key driver (e.g. digital transformation).

3 Theses for discussion

Based on the – not scientifically complete objective – findings on the state of BPM in business practice and research, this paper presents four theses on the development of process management, which should be used in the (S-)BPM community as a conference discussion.

Thesis 1: The importance of BPM as a concept is decreasing.

The (sometimes only felt) status of homelessness of classical BPM scientists is certainly there because of a shift in the naming of classical process and information systems terms. Instead of known terms (e.g., IT, process), (i) other generic concepts (e.g., digital transformation that often includes BPM), (ii) concrete techniques (e.g., cyber-physical systems) or (iii) trendy terms (e.g., predictive maintenance) are in vogue. In practice and science, the value of data (e.g., Business Intelligence, Data Science, Data Analytics) is heavily highlighted, but its use in processes/workflows is called different (e.g. Process Mining).

This opens up the opportunity for BPM to transfer existing knowledge into many other domains, functions, and divisions – even though the term process may not be needed in the end.

The big risk is that new fields (e.g., business functions, scientific tracks) cannot build on the abundant knowledge. Many digital panels discuss conceptual topics that have been worked on (or even solved!) in the BPM community for years.

By the way, a similar development is to be observed in the classical knowledge management

discipline. This community had already on the WI2019 an open panel about their loss of identity (freely interpreted under the thesis "Is the classical knowledge management still alive?").

Thesis 2: The importance of process management as a discipline decreases.

Today, many self-appointed experts are discussing IT topics under the umbrella of digitization. "Data Scientist" or "Digital Transformation Consultant" are currently popular titles on business cards (or at the end of an e-mail).

Classical BPM knowledge, is needed on a lower level - one could say that processes take a development as described by Carr ("IT [Processes?] doesn't matter"). Traditional questions of the community (process strategy, modeling, execution, controlling) are standard today. However, BPM experts should not share the same fate as the quality experts in the 90s: Although they developed an immense body of knowledge, they are often no longer welcome as experts in many companies, because their ideas seem to be old, formal and not trendy.

If we want to continue to be modern and in demand as a BPM community, we need to open ourselves with bridges to new technologies (e.g., blockchain, virtual leadership). This is necessary in the discussion of contents and consequently also in the naming. Actually, BPM is ready, because the concepts have been around for a long time. Now we are in the lucky position to have the data and IT systems we often asked for to tackle great ideas like integration, media breaks and data-based optimization. Or do we just have concepts and as soon as we should become operational, we let others take precedence? BPM knowledge must not be lost, but live as a cross-sectional function in other fields.

Thesis 3: BPM is becoming more management-oriented and less technical.

Along with thesis 2, BPM topics are often discussed even more by managers (e.g. Chief Digital Officers) today. IT and technology in general has arrived in almost all processes (first stage of digitization, see above). Thus, in the executive floors, the (perceived) competence to participate in IT-supported processes grows. Efficient processes are required to talk about business models and digital strategies. The figures from the analysis show that digital business topics become a top priority. Industry 4.0 is, for example, actually a topic of data- and IT-supported process optimization, but is heavily discussed by managers under the business term of value networks. Engineers focus on technical terms such as smart devices.

This would have to be a great opportunity for BPM, because formal (or "nerdy") BPM ideas are actually hip and modern in the top management. However, benefits of this liberal and visionary trend are other communities that are frolicking around under the large umbrella of digitization or are building up data and business models. A pity for BPM, but true!

Thesis 4: Subject orientation is a paradigm of many trends, but is called different.

Subject orientation is understood by people outside of the community as a human-centered (business experts) or agent-based (engineering experts) idea of BPM. As we know in the community, S-BPM is very powerful and can cover many fields. Individualization is a big driver in digitization – if we just think of ways to use personalized information efficiently and effectively (e.g., Google, Facebook, Netflix). The concept of the subject might not, like BPM as a whole, fit the hip and trendy themes of the time. Design thinking, user-generated content, social media, intelligent agents, autonomous cars, smart devices, machine learning, artificial intelligence, language assistants do not talk about subjects.

Nevertheless, all of the topics described above can certainly be modeled/supported using S-BPM. It is probably similar to thesis 2 and 3.
In the first digital wave, especially B2C transaction processes (in the broader sense marketing processes) were discussed. Here are U.S. company pioneer. In a next wave, B2B and internal manufacturing processes are to be digitally transformed. This is an opportunity for S-BPM, as engineers and IT experts will appreciate the formal and accurate scientific contributions of S-BPM. However, this can only happen if S-BPM profiles itself with real topics in manufacturing processes and inter-organizational optimization.

4 Summary

Like other traditional disciplines from information systems, BPM is changing. This is due to digitization, which holistically covers many areas.
This reflection paper has no final result or solution on how the BPM community should react to these developments. Convert? Support? Rename? Keep it up? The thoughts of the paper should serve the discussion at the conference.
The author concludes that a significant contribution from S-BPM must be in the production of relevant results. Scientifically founded findings with a practical relevance are essential even if the three theses are taken into account. Where other information systems conferences today increasingly show meta-studies, gather only existing literature (systematic literature review) and merely reproduce known opinions, S-BPM should develop pragmatic approaches. Descriptive examinations may be simpler to “investigate” digitization. However, design science and case study research may be the commandment of the hour in order to strengthen a BPM community.