WITH PEOPLE, FOR PEOPLE: A METHOD FOR EMPLOYEE-AWARE BUSINESS PROCESS IMPROVEMENT

Completed Research Paper

Tobias Fehrer, University of Bayreuth, Branch Business & Information Systems Engineering of the Fraunhofer FIT, Bayreuth, Germany, tobias.fehrer@fit.fraunhofer.de

Anaís García González, FIM Research Center for Information Management, Technical University of Munich, Munich, Germany, anais.garcia@tum.de

Maximilian Röglinger, University of Bayreuth, Branch Business & Information Systems Engineering of the Fraunhofer FIT, Bayreuth, Germany, maximilian.roeglinger@fim-rc.de

Moe Wynn, Queensland University of Technology, Brisbane, Australia, m.wynn@qut.edu.au

Felix Zetzsche, FIM Research Center for Information Management, Technical University of Munich, Munich, Germany, felix.zetzsche@tum.de

Abstract

In the evolving business landscape, where organisations are coping not only with external pressures and complexities but simultaneously with substantial transformations within their workforces, this paper underscores the necessity to adopt an employee-aware focus within business process management (BPM). By employing situational method engineering, this design science research proposes a method for employee-aware business process improvement (BPI). Design objectives derived from BPM, human resource management, and innovation management guide the development of the method. Expert interviews were conducted to evaluate the method. Method instantiation with an agency for digital transformation in the German public sector was conducted to assess the applicability and usefulness of the method. This research incorporates two main facets. Firstly, it interweaves employee awareness into the organisation's strategic framework, simultaneously providing practical guidance for concrete BPI initiatives. Additionally, it involves the right decision-makers and expertise to facilitate meaningful transformations for employees executing concrete processes.

Keywords: human centricity, human resource management, business process management, employee awareness, situational method engineering.

1 Introduction

Business process management (BPM) facilitates organisations' ability to operate effectively and efficiently by steering business processes through their lifecycle phases (Dumas et al., 2018). A plethora of methods and tools have been developed to support BPM (Kerpedzhiev et al., 2021). However, as the world continuously faces new challenges and opportunities, research and practice must continue adapting to changes in their operations (Beverungen et al., 2021). Challenges are not solely from an external nature; they often stem from within organisations and thus require internal solutions. While the ongoing digital transformation in every aspect of life is crucial to addressing arising challenges, automation and digitalisation will not replace employee's value in organisations through their work in business processes for the foreseeable future. At the same time, the impact of digital technologies on work practices underscores the need for appropriate structures and active employee involvement to achieve successful digital transformation (Denner et al., 2018). Simultaneously, modern (western) societies are undergoing profound changes: Shifts in age demographics are manifesting in a scarcity of available workers as new entrants from the demographic cohorts known as Generation Z and Alpha (i.e., born

after 1995) enter the job market with demands for work-life harmony, physical and mental well-being, ongoing development, and alignment of their job with individual goals and values (Börsch-Supan, 2003; Nguyen Ngoc et al., 2022). The recent emphasis on this subject has intensified with the emergence of *New Work* principles in many organisations. This transition allows individuals to participate in self-directed work, facilitating the pursuit of work aligned with their genuine desires (Berend and Brohm-Badry, 2022). The management of employees falls under the purview of human resource management (HRM), which is managing personnel-related functions within an organisation. It is acknowledged that the administrative nature of human resources departments might fall short in addressing the breadth of challenges accompanying relevant occurring transformations (Peiker, 2023). Translating employee-related topics into day-to-day operations poses a collective challenge for the organisation (de Boer, 2020). Hence, People & Culture (P&C) emerges as an umbrella term in response to the abovementioned challenges and to emphasise the focus on employees (Peiker, 2023). While our referenced research aligns more closely with HRM, it is noteworthy that many organisations are transitioning to the term P&C in practice. Hence, we adopt this language to encompass this evolving landscape while acknowledging the recurring terminology in literature.

While New Work themes gain importance in the structural organisation, BPM has historically placed more focus on the control-flow perspective (i.e., how a process is/should be executed) as opposed to paying particular attention to the needs of employees who are involved in the execution of these processes (van der Aalst et al., 2016). However, the challenge for BPM to account for "the effects of business processes on people's work lives" (Kerpedzhiev et al., 2021, p. 89) has been acknowledged in BPM research, especially stressed by industry experts (Kerpedzhiev et al., 2021; Goel et al., 2023).

To effectively address the challenges mentioned above, organisations must integrate their BPM and P&C endeavours strategically. This integration facilitates the harnessing of synergies between domains, thereby driving towards overarching strategic objectives while leaving a transformative mark on the workforce through the more granular nature of business processes. To comprehensively respond to the challenges mentioned above, organisations should align their BPM and HRM activities to achieve strategic goals, uplifting their workforce (Shafagatova and van Looy, 2021; Ahmad et al., 2023). Moreover, the HRM paradigm of realising *mutual gains*, i.e., implementing employee-oriented initiatives that benefit the organisation and employees concomitantly (i.e., win-win solutions) (Beer et al., 1985), further motivates employee awareness in the BPM domain. To the best of our knowledge, a gap exists in the implementation of the theory of mutual gains in the context of BPM.

As knowledge-centric roles become more common, it has been identified as advantageous to cultivate methods that encourage active engagement of people in the BPM field in concrete (Davenport, 2015). BPM and business process improvement (BPI) must be conducted *by* employees and *for* employees to address relevant arising themes appropriately. In the literature, however, there appears to be a notable gap in employee-aware approaches to BPI in particular (Goel et al., 2023). BPI projects should consider the narrow context of the processes and their corresponding resources and broader context, encompassing the organisational strategy and involved employees (Goel et al., 2023). To address this gap, our research goal is to develop a method that leverages and unifies the distinct and shared traits of BPM and P&C to deliver value-adding benefits to organisations and employees through processes. The following research question arises:

How can organisations systematically improve business processes in an employee-aware manner?

To address this question, we adopt the design science research (DSR) paradigm and develop a method to assist organisations in employee-aware BPI, i.e., process improvements in which employees and their wishes and needs are consciously addressed, primarily related to knowledge work. The study combines two interconnected aspects. It integrates employee awareness into the organisation's strategic framework and offers actionable, adaptable, and context-aware steps to attain employee-aware BPI. Furthermore, it ensures that BPI projects involve the appropriate employees with the necessary knowledge to drive meaningful transformations to employees working on processes. BPI projects should be purposefully executed *by* employees and *for* employees. First, Section 2 reviews related literature fundamental to our research question. Section 3 describes how this research is conducted using situational method

engineering. Section 4 then derives design objectives (DOs). Based on this, our method artefact is introduced, the *Employee-Aware BPI Navigator*, which adds a P&C perspective to BPI. In Section 5, the method is demonstrated and evaluated in a case study before Section 6 discusses and concludes the research.

2 Literature Review

Actively managed business processes iterate in the six steps of the BPM lifecycle. One of these steps is redesign, which aims to identify suitable process changes that address deficiencies and (re)align the process with the organisation's strategic goals (Dumas et al., 2018). To specify the exploitative focus of redesign in this work, we refer to the term BPI, which seeks to address endeavours that aim not for a radical redesign but incremental improvement initiatives (Grisold et al., 2022). The success of BPI depends on the organisation's BPM capabilities, which can be structured along five (six) core elements: strategic alignment, governance, methods (and information technology), people, and culture (de Bruin and Rosemann, 2007; Kerpedzhiev et al., 2021). The theory of ability, motivation, and opportunity encompasses factors that, when balanced right, can generate mutual gains for the organisation and the employees or cause conflicting results if imbalanced (Pagán-Castaño et al., 2020). Following Peccei and van de Voorde (2019), employee well-being and organisational performance enrich each other. For this reason, it is advisable to merge the P&C and BPM perspectives. This research emphasises the BPM core elements *people* and *culture* to compose a suitable method. Because of its outstanding importance in ensuring the alignment of organisational strategy, BPM, and HRM, the additional BPM core element of *strategic alignment* is explicated as a third integral facet of our method. The remainder of the process context and capability elements will be grouped in an encompassing *process landscape* group (Beerepoot et al., 2019). The element *people*, as "the individuals and groups who continually enhance and apply their process-related expertise and knowledge" (Kerpedzhiev et al., 2021, p. 85), contains both the very employees who execute processes and are affected by BPI (*BPI for employees*), and BPM practitioners who design and implement BPI measures. The Delphi study by Kerpedzhiev et al. (2021) further identifies the *culture*-related capability area of *employee centricity* as the organisation's "commitment to involving employees in BPM and process decisions, to account for the effects of these decisions on employees' work lives, to contribute to employees' satisfaction and self-fulfilment, and to grant employees the sovereignty to make self-dependent decisions" (Kerpedzhiev et al., 2021, p. 94). As business and process-related issues should not be neglected by adopting a purely employee-centric approach, we decided to use the term employee awareness rather than employee centricity. Other authors also embrace the importance of regarding employee's voices (*BPI with employees*) (Kramar, 2022; Nowak et al., 2022; Guest, 2017). As knowledge work is becoming predominant, it is feasible and beneficial to develop approaches that foster active participation of people in BPM (Davenport, 2015). That is, BPI must be conducted *by* employees and *for* employees to appropriately address well-being themes. To understand employee well-being, we refer to a categorisation by Inceoglu et al. (2018), who subdivide the high-level concept of *psychological* well-being into *hedonic* (the subjective experience of pleasure, happiness, and the absence of pain or discomfort), *eudaimonic* (living a meaningful and purposeful life, realising one's potential, and achieving personal growth) and *negative* well-being (the aspects of life related to suffering, distress, and dissatisfaction), next to the high-level concept of *physical* well-being (the state of an individual's physical health). An employee-aware BPI method should consider these concepts as factors for assessing and improving well-being.

Current literature provides limited and faceted research on *BPI for employees*: Besides analysing the dimensions of healthy business processes that promote employee well-being (Reif et al., 2022), other authors investigated how processes can be designed to support the collaborative workflow among humans (Shachor et al., 2011). Moreover, starting with a specific goal, BPI patterns can help to design appropriate measures. In addition to BPI patterns that deal with the mechanics of a process (Reijers and Liman Mansar, 2005), some collections specifically deal with the allocation of human resources (in contrast to non-human resources that are subject to several studies) (Goel et al., 2023). Human interaction management employs systems that route knowledge-intensive tasks to humans across departmental

boundaries to foster collaboration (Harrison-Broninski, 2015). Interdisciplinary research in HRM and BPM further finds that process-oriented values, in combination with process-oriented appraisals and rewards, can positively affect performance (Shafagatova and van Looy, 2021; Ahmad et al., 2023). Although general improvement approaches such as Six Sigma (Schroeder et al., 2008) or Kaizen (Imai, 1986) can also be applied to employee-aware BPI, they are presumably ineffective due to the lack of depth in the identified relevant areas.

Further, the literature provides knowledge on conducting *BPI with employees*. The integration of people outside the BPM domain can be supported by designing inclusive methods and tools (Prilla and Nolte, 2012). A method must suit its context to generate innovative solutions and BPI options (vom Brocke et al., 2021). In this respect, methods from innovation management (IM) have proven helpful at the complex intersection of BPM and related fields (Denner et al., 2018; Grisold et al., 2022). A fundamental model to foster innovation is the Double Diamond method. With the help of divergent and convergent thinking, it seeks answers to complex challenges (Design Council, 2021). Over time, this method has been modified and adopted in BPM research. These include the Five Diamond Method (Grisold et al., 2022), which aims to discover new value propositions based on opportunities. Further, the original authors evolved the Double Diamond and developed the *Systemic Design Framework* (SDF), developing overarching activities to contextualise change in a more strategically universal manner (Design Council, 2021). At its core, this redefined method consists of the activities *explore*, *reframe*, *create*, and *catalyse*. It aims to connect different people collaboratively and benefit people and the planet. Based on this framework, we developed our method for combining BPM and P&C. To the best of our knowledge, there is currently no method that comprehensively integrates P&C in BPI for designing *with and for employees*.

3 Research Design

We adopt the DSR paradigm (Peffers et al., 2007) to address our research question on how organisations can systematically improve business processes in an employee-aware manner. Our proposed artefact is a method for BPI that extends the solution space for BPI options with the perspective of P&C themes. In the following, we describe how we have followed the six phases of the DSR methodology reference process (Peffers et al., 2007).

We (1) *identified the research problem* in Section 1 to ensure that the objective of our DSR project aims for a relevant business problem (Hevner et al., 2004). We (2) *define DOs* for a solution in Section 4.1 from the identified problem and related literature in BPM, HRM and IM. The (3) *design and development* phase constitutes a search process within the solution space defined by the DOs. The research project results in an artefact in the form of a method with prototypical instantiation as a by-product. We utilise situational method engineering as the specific research method for this phase, which has been proven helpful in developing methods for BPM (vom Brocke et al., 2021; Denner et al., 2018). Situational method engineering distinguishes two modes: method configuration and method composition (Bucher et al., 2007). Method composition compiles fragments from existing methods and customises them against situational needs to achieve a specific goal. Our goal is to align the perspectives of HRM and BPM for BPI. We assemble existing method fragments from BPM, IM and HRM and opt for the *method composition* mode. In the first step, we define a *method engineering goal* as requirements and specify the situation, i.e., context and project type, in which our method can be used (Bucher et al., 2007). In the second step, we construct the method by assembling the selected method fragments. We successively develop method activities, techniques, tools, and roles and compile the activities into a procedure (Braun et al., 2005). All activities represent method fragments that draw from extant knowledge related to BPM or HRM. We rely primarily on our literature review in Section 2 to synthesise knowledge from existing methods and detail this phase in Section 4.

We engaged with experts from the expert panel throughout the design and development. These interviews served as feedback loops to refine the method and specify the requirements, attributes, and elements of the method. Adhering to the principles of DSR and situational method engineering, we incor-

porated several activities to (4) *demonstrate* and (5) *evaluate* the method, following the EVAL framework by Sonnenberg and vom Brocke (2012). Apart from expert interviews, we instantiated the method in a case study at a German agency. This manuscript is the first means of (6) *communicating* our results in developing the method and instantiation. Further, the method material used to conduct the case study is publicly available.

4 Design Specification

4.1 Specification of method requirements

BPM methods should bear the attributes of *goal-orientation*, *systematic approach*, *principles*, and *repeatability*. Hence, they should detail *activities*, *roles*, *output*, *techniques* and *tools* (vom Brocke et al., 2021). To foster successful development and instantiation of methods, scenarios for their application are essential, characterised by *context* and *project type* (Bucher et al., 2007). We utilise the Context-Aware BPM Method Assessment and Selection classification framework (vom Brocke et al., 2021) to specify the context. Regarding the *lifecycle dimension* category, our method should be used within the redesign step of the BPM lifecycle, with an exploitative focus on BPI (*goal dimension*). While our method is envisioned to be most suitable for support processes, it can be used in core and management processes (*process dimension*) in certain instances. At its core, the method should target a single-process perspective, especially aligning the contextual factors of P&C with the act of BPI. As the method aims to integrate BPM and P&C, both perspectives must be represented and established in the target organisation. This is independent of the type of organisation and industry, as all organisations have processes and a workforce (*organisation dimension*). This requires skills and roles that may, however, rather be found in medium or large organisations. To drive change effectively and contextually, the method users can decide on the number of people to be involved. Further, it can be assessed if a P&C unit exists, or if an artificial unit should be created for the purpose of this project. Another way the method can be adapted is by deciding for a more isolated process improvement or, in contrast, opting for a more gradual approach to enhance a more relevant or larger process. It is important to note and make use of the flexibility of the method, which ensures smooth implementation and tangible results. Finally, ensuring the workforce's well-being and leveraging their uniqueness is relevant to organisations, especially concerning the war for talent and employee retention, which is a form of uncertainty. In terms of the *environment dimension*, the method applies to organisations where the long-term focus on P&C is supported and prioritised by the management, i.e., when suffering from a shortage of skilled personnel or high churn rates. When examining the project environment, we consider both the orientation toward processes and the emphasis on P&C at both strategic, overarching levels and within specific, tangible processes. From our analysis of the literature in Section 2, we derive three DOs that guide the method development:

DO.1: Develop processes that acknowledge and benefit process-executing employees (*BPI for employees*)**.** Putting the theory of mutual gains into practice entails empowering process-executing employees by giving them a voice, thus ensuring the development of processes congruent with their needs and perspectives.

DO.2: Foster collaboration among key decision-makers in employee-aware BPI (*BPI with employees*)**.** Maximise available knowledge, unite diverse expertise and stimulate synergies between relevant stakeholders to drive meaningful transformations.

DO.3: Execute precise, localised changes while maintaining a clear focus on the broader strategic framework. Ensure relevance by delivering tangible results that resonate within concrete processes and align with the organisation's overarching goals.

Starting from these DOs, we design a method within the design process composed of elements from BPM, HRM, and IM, adapted to our specific context. In alignment with these objectives, we incorporate three of the six SDF principles, which serve to direct our actions: *people and planet centricity*, *zooming in and out*, as well as *collaborating and connecting* (Design Council, 2021). At the same time, we utilise findings on how HRM can be successfully implemented (Beer et al., 1985; Guest, 2017). We adopt best

practices from other digital transformation and BPI methods for divergent and convergent thinking with a view to the overall process context (Grisold et al., 2022; Gross et al., 2019). Additionally, to achieve DO.1 and DO.2, we draw on literature that has investigated multidisciplinary collaboration (Prilla and Nolte, 2012; Mendonça de Sá Araújo et al., 2019). To maintain a long-term view, we also consider the BPM core elements when developing the method (Kerpedzhiev et al., 2021). These integrated elements collectively define the solution space for a method to be developed.

4.2   Method overview

In this Section, we introduce our artefact, the *Employee-Aware BPI Navigator*. First, we provide an overview of the method, which is visualised in Figure 1. In the following Sections 4.3–4.5, we detail the three phases of the method, elucidating their specific activities and the underlying rationales.
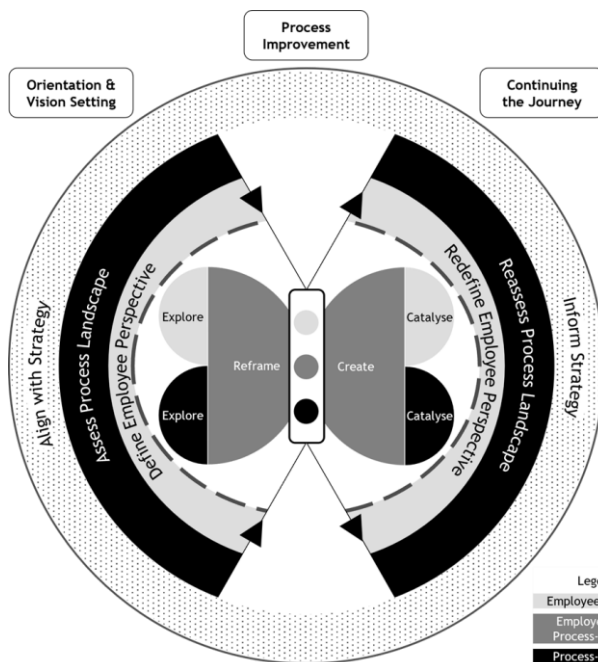

Figure 1.   Overview of the Employee-Aware BPI Navigator (Source: own illustration).

The first phase, *Orientation & Vision Setting*, seeks to zoom out from the process level to understand its broader context, align with the organisational strategy, the process landscape, and P&C themes and create a shared understanding and language for collaboration. The second phase, *Process Improvement*, zooms into the selected process. It concerns the search for improvement options utilising method components from BPM and P&C and fostering collaboration between stakeholders from these diverse backgrounds. The third phase, *Continuing the Journey*, zooms out of the process again to connect with the organisation, transfer learnings, and continue work on high-level organisational topics. We suggest including a method facilitator in the core project team, consisting of BPM and P&C stakeholders, to guide the method and moderate workshops. This person can also take the role of a project lead throughout the complete BPI project. The project team comprises an interdisciplinary group of individuals from both the BPM and the P&C perspectives. The team size can vary based on organisation size and project scope, ranging from one representative per perspective to multiple participants. They bear the responsibility for executing the project. However, the method encourages the involvement of additional perspectives and expertise outside of the project team.

4.3   Phase 1: Orientation & Vision Setting

The first phase involves zooming out from the specific process to understand its broader context (See Table 1). The orientation and vision are assessed from three perspectives, i.e., organisational strategy,

BPM, and P&C. The importance of all perspectives and their interplay should, if possible, be emphasised via senior management signalling and sponsorship.
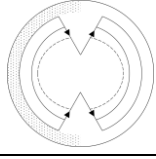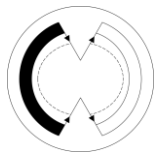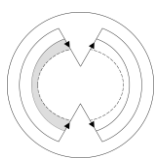
Phase 1: Orientation & Vision Setting				
Activity	**Technique**	**Tool**	**Role**	**Output**
A1) Align with Strategy	Gain situational awareness of the organisation's overall strategy.	Creativity tools (Mind mapping, brainstorming) Guiding questions Interviews The organisation's vision statement and values	Project team Method facilitator Senior management	Shared awareness of the organisation's overall strategy and position within the project team.
B1) Assess Process Landscape	Evaluate BPM constraints, challenges, and opportunities in the organisation's current BPM landscape.	Available BPM data (e.g., process models) BPM evaluation criteria and goals (e.g., Devil's Quadrangle dimensions) Creativity tools (Mind mapping, brainstorming) Guiding questions	Project team Method facilitator BPM experts	Set of current challenges, opportunities, and goals from the BPM perspective.
C1) Define Employee Perspective	Embrace the employee's perspective holistically to pinpoint and identify current issues related to the P&C domain within the organisation.	Available P&C data (e.g., persona profiles, employee satisfaction surveys, direct employee feedback) Creativity tools (Mind mapping, brainstorming) Guiding questions P&C evaluation criteria and goals	Project team Method facilitator P&C experts	Set of current challenges, opportunities, and goals from the P&C perspective.

Table 1.   *Overview of the Orientation & Vision Setting phase with activities, techniques, tools, roles, and defined output (Images: own illustrations).*

A1) *Align with Strategy.* The goal is to gain a comprehensive and shared understanding of the strategic perspectives within and beyond the organisational boundaries. The project team aligns on a shared goal and vision for employee-aware BPI. Senior management is expected to set the stage. If not yet selected, a focus process area or function within the organisation should be selected. Exemplary guiding questions are: *"What is our organisation's vision?"* or *"Why do we want to focus on raising employee awareness in processes?".*

B1) *Assess Process Landscape.* This activity aims to share and guide BPM governance and principles. The landscape of BPM methods, tools, data, and performance measurement should be made transparent to the P&C experts and discussed, considering the assessment of overall BPM maturity. If possible, direct employee feedback should be analysed. The guiding questions *"Which existing BPM methods and tools do we use?"* and *"How do we measure the performance of processes?"* direct the discussion. At the same time, a brainstorming approach is employed to discover BPM constraints, challenges, and opportunities in the current process landscape. The output of this activity is a set of current challenges, opportunities, and goals from the BPM perspective.

C1) *Define Employee Perspective.* In parallel or after B1, this activity delves into the P&C dimension, focusing on employees in their roles in business processes. The objective is to comprehensively understand the employee's perspective, encompassing goals, challenges, and expectations, in the organisa-

tional context. This exploration into P&C identifies areas for improvement or advancement and available methods and tools for improving employee-related concerns. If possible, affected employees should be contacted and included in the assessment. Questions such as *"Hedonic vs. Eudaimonic: In which ways do we estimate employee's well-being?"* or *"Who works for us and what motivates them?"* guide the discussion.

4.4   Phase 2: Process Improvement

This phase is conducted in a joint (multi-)workshop setting within the project team. The team applies their gained understanding and collaborates in the search for employee-aware BPI options. This phase is structured along convergent and divergent elements of the SDF Double Diamond (see Table 2).

1) *Explore.* This step explores the problem from both employee and process perspectives individually. The team delves into their respective areas of expertise, examining the chosen process. Here, it proves invaluable to include relevant employees directly to gain first-hand insights into the process from their view. For the P&C perspective, guiding questions aid in exploring topics related to well-being, categorised into *hedonic*, *eudaimonic*, *negative*, and *physical* dimensions: *"Which problems and opportunities are there from our employee's perspective in this process?"*.

From the BPM perspective, the exploration involves delving into process documentation and process goals. The guiding question, *"Which problems and opportunities are there from the process perspective?"* directs the reasoning. The technique employed explores issues within the specific process from both organisational perspectives, considering global challenges, opportunities, and goals. The tools used include BPM and P&C challenges, opportunities and goals, available BPM and P&C data, guiding questions, and creativity tools like mind mapping and brainstorming. The output is a comprehensive understanding of the process from both perspectives, building on the previously identified considerations in the *Orientation & Vision Setting* steps.

2) *Reframe.* In this activity, both perspectives converge to discuss and analyse the findings of the exploration. The aim is to unveil potentials that may not have been initially apparent from each perspective, both positive and negative and analyse them together with affected employees. The key is to foster dialogue and mutual understanding, exploring the uniqueness of each view. Before proceeding to the second diamond, reframing the problem collectively and assessing it with insights from both sides is crucial. This collaborative effort, piecing together joint information, goals, and tools, helps align the solution space more precisely. The traffic light logic of the method comes into play, allowing users to identify whether the situation calls for a more employee-focused, process-focused, or combined solution. This categorisation aids in focusing ideation efforts and streamlining solution engineering. Ultimately, the goal is to guide the solution ideation in the pertinent direction – either focused on P&C, BPM, or a combined solution. Exemplary guiding questions are: *"What challenges and opportunities can also be addressed from the respective other perspective?"* or *"Are the chosen issues essentially more employee-focused, process-focused or does it encompass both perspectives equally?"*.

Guiding questions facilitate the process, guiding participants to unify problem understanding from both P&C and BPM perspectives. This involves assessing corresponding opportunities and challenges and revealing new chances. The output is developing a shared understanding of the process and its challenges and opportunities from both perspectives to guide solution engineering.

3) *Create.* In this activity, the team collaborates to embark on the path towards solutions. The approach follows a divergent path, encouraging the development of creative solutions. The nature of these solutions, whether more employee- or process-focused, is contingent upon the assessment's outcome from the previous activity and, again, includes the employees directly. The guiding question, *"What measures can we think of to tackle this situation with the available knowledge and information from both areas of expertise?"* directs the ideation process. Tools utilised encompass guiding questions, brainstorming, creativity tools such as mind mapping, and a repository of BPI patterns. The output of this activity is a comprehensive list of possible improvement ideas, drawing from the derived insights, creativity and collaboration of both P&C and BPM perspectives.
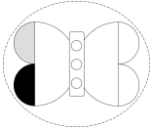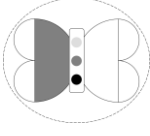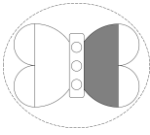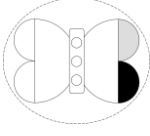
Phase 2: Process Improvement				
Activity	**Technique**	**Tool**	**Role**	**Output**
1) Explore	Explore issues within the specific process in a divergent approach from both organisational perspectives separately (BPM and P&C experts separately), considering the global challenges, opportunities, and goals.	Available BPM and P&C data BPM and P&C challenges, opportunities, and goals Creativity tools (Mind mapping, brainstorming) Direct employee input Guiding questions	Project team Method facilitator Affected employees	Understanding the process from both perspectives separately with consideration of the previously identified considerations.
2) Reframe	Unify problem understanding from P&C and BPM perspectives, encompassing their corresponding opportunities and challenges and unveiling new chances. Evaluate, assess, and decide the current viewpoint to guide the solution ideation in the pertinent direction – either focused on P&C, BPM, or a combined solution.	Discussion Guiding questions Previously produced ideas and content	Project team Method facilitator Affected employees	A shared understanding of the process, challenges, and opportunities from both perspectives. Categorisation of the desired solution space within either BPM, P&C, or a combination of both.
3) Create	Engage in joint solution engineering to explore process improvement ideas, fostering divergent thinking.	BPI pattern repository Brainstorming Creativity tools (Mind mapping, brainstorming) Guiding questions	Project team Method facilitator Affected employees	Set of possible improvement ideas.
4) Catalyse	To ensure feasibility, employ convergent thinking to distil and prioritise developed ideas into actionable tasks and projects for P&C and BPM separately.	BPM evaluation criteria Direct employee input Discussion Guiding questions P&C evaluation criteria Prioritisation lists of chosen improvement ideas	Project team Method facilitator Affected employees	Executable plan for both P&C and BPM departments with concrete to-dos.

Table 2.   Overview of the Process Improvement phase with activities, techniques, tools, roles, and defined output (Images: own illustrations).

4) *Catalyse.* This activity concludes the *Process Improvement* phase, ensuring practicality by explicitly formulating and assessing solutions. This phase embodies convergent thinking, refining, and consolidating ideas into an enactment plan. The goal is to equip the team with takeaways and preparations for implementing insights in their respective departments, which is why P&C and BPM are now separate again. It also involves transforming ideas and visions into actionable plans, manifesting as a to-do list, a series of actionable initiatives, simulations, or A/B testing if sufficient data is available. Other tools include guiding questions, BPM evaluation criteria, P&C evaluation criteria, discussions, and the development of prioritisation lists. For crafting genuinely valuable solutions, this stage should integrate feedback loops with directly affected employees. The questions *"What steps do we need to take from the employee perspective to implement the measure?"* and *"What steps do we need to take from the process*

perspective to implement the measure?" guide the activity. The activity's output is a concrete plan for P&C and BPM departments, outlining specific to-dos for practical and effective implementation.

4.5   Phase 3: Continuing the Journey

This phase feeds learning back into the organisation. Aligning with DO.3, this step contributes to a method capable of producing tangible improvements adaptable to the organisation's reality. It is crucial to maintain this perspective, particularly in the dynamic systems of BPM and P&C, where people and their needs continually evolve. This ongoing assessment allows team members to track changes and evolution in these two dynamic systems and their alignment with the organisation's strategic landscape. Improvements made in the *Process Improvement* are communicated to the organisation. Moreover, the realigned vision is an updated starting point for future process improvement initiatives (See Table 3).
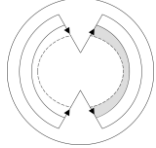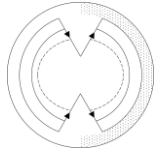
Phase 3: Continuing the Journey				
Activity	**Technique**	**Tool**	**Role**	**Output**
C2) Redefine Employee Perspective	Implement required adjustments in accordance with workshop outcomes by the P&C department. Periodically reassess and evaluate explicitly after implementing process improvements.	Available P&C data (e.g., persona profiles, employee satisfaction surveys) Guiding questions Outcome of the *Process Improvement* workshop P&C evaluation criteria and goals	Project team Method facilitator P&C experts	Shared knowledge and impact assessment on P&C, leveraging the insights gained from the method.
B2) Reassess Process Landscape	Implement required adjustments in accordance with workshop outcomes by the BPM department. Periodically reassess and evaluate explicitly after implementing process improvements.	Available BPM data (e.g., process models) BPM evaluation criteria and goals (e.g., Devil's Quadrangle dimensions) Guiding questions Outcome of the *Process Improvement* workshop	Project team Method facilitator BPM experts	Shared knowledge and impact assessment on BPM, leveraging the insights gained from the method.
A2) Inform Strategy	Ensure the outcome aligns with the organisation's vision and values. Readjust and extrapolate the outcomes for future applications and other contexts if necessary.	Guiding questions The organisation's vision statement and values Outcome of the *Process Improvement* workshop	Project team Method facilitator Senior management	Shared knowledge and impact assessment on other parts of the organisation, leveraging the insights gained from the method.

Table 3.   Overview of the Continuing the Journey phase with activities, techniques, tools, roles, and defined output (Images: own illustrations).

All three sub-activities within the *Continuing the Journey* phase share a common structure and guiding questions. Beginning with **Activity C2**, *Redefine Employee Perspective*, the method allows P&C experts to make necessary adjustments, aligning and bringing the workshop outcomes to life. A central guiding question is: *"What insights have we gained from the employee perspective?"*.

A parallel pattern is observed in **Activity B2**, titled *Reassess Process Landscape*, which focuses on identifying changes in the BPM realm. One guiding question for this activity is: *"Are there steps that we need to initiate beyond the specific process regarding process management?"*.

Concluding the method is **Activity A2**, *Inform Strategy*, which aims to identify more global challenges and considerations. In this final step, key takeaways and best practices for future method deployments can be derived from the method instantiation. Project after project, this process further establishes the connection between processes and employees. One guiding question guiding this activity is: *"In what way have we come closer to our organisation's strategy and vision?"*. This structured approach ensures consistency and coherence throughout the organisation's repositioning step, allowing for a comprehensive and integrated assessment of both P&C and BPM perspectives.

5 Evaluation

Sonnenberg and vom Brocke (2012) suggest several evaluation activities prior to (EVAL-1 and 2) and after (EVAL-3 and 4) artefact design and development. We reviewed the literature before artefact construction to justify our problem definition (EVAL-1, see Section 2). EVAL-1 showed how the research problem has been categorised as relevant in the BPM field and highlighted the potential for multidisciplinary collaboration. We further justified the design specification outlined by the DOs by comparing related artefacts in Section 2, indicating weaknesses (EVAL-2). EVAL-2 showed that there is not yet a method that integrates P&C in BPI for designing with and for employees despite abundant and often complementary research in these separate domains. This underscores the relevance of a unified method that leverages synergies across these fields.

Semi-structured interviews were conducted to evaluate the artefact in an artificial setting (EVAL-3). The interviewee panel, compiled using purposive sampling, consisted of eight researchers in Germany with three years of average experience in the fields of BPM, IM, and P&C in research and practice. The $30-45$-minute interviews were conducted within one week (mid-October 2023) by at least two members of the author team, one leading the interview and the others taking notes. After introducing the research problem, the *Employee-Aware BPI Navigator* was presented as a solution to the problem. Each phase and activity was explained with its constituent components. Respondents answered open questions to obtain qualitative statements. They were further invited to share any feedback and ask questions for clarification. Next, quantitative feedback was sought on a discrete scale of $0-10$ (with 10 being the best value as it is frequently found in people's everyday lives, following Venable (2010)) to assess the criteria *ease of use ('How well is the practitioner supported in the method?')*, *generality ('Can the method be applied well to different contexts?')*, *real-world fidelity ('Is the method also necessary and applicable in practice and not only in theory?')*, and *simplicity ('How clear are the steps of the method?')*. Positive feedback underscores the value of integrating P&C in BPI for designing with and for employees in an agile, symmetrical way. The interviewees reinforced the value of process-oriented thinking rather than in organisational structure (i.e., departments), emphasising that most work follows process structures and process orientation as a side goal fosters end-to-end thinking. In addition, the fact that short-term and long-term changes are considered within the method was positively highlighted. However, it was critically remarked that the initialisation of the method and the sequence of activities were not necessarily intuitive from the original graphic representation. We have incorporated this feedback in a loop of redesigning the method into its current version through a series of workshops within the author team.

The results of the quantitative feedback from the interviewees are shown in Table 4. Although all respondents indicated that their rating would be higher if their feedback on the visual representation was implemented, the provided ratings had a positive tendency overall, especially regarding the method's generality. Nevertheless, the results show that experts with experience in BPM tend to provide higher ratings than other experts, which could be because they are more experienced with BPI methods. Aligning the results with Reichheld (2003), who divided the $0-10$ scale into three clusters within the Net Promoter Score, according to the rounded mean and median, generality is at the promoter level, while all other categories are accordingly at a passively satisfied level. Thus, no criterion is on the detractor level. This shows that already in the original version of the method, no points were found that were excessively negative. At the same time, the results are to be interpreted in the sense that, for example, expert #8 said that a 10 in ease of use for him is to be understood as meaning that the method could execute itself. However, that is not our goal at all, as we deliberately want to bring people together in

an agile way. Accordingly, the expected increase in the rating of each criterion by an average of one point after the method was refined would be considered close to the desirable maximum.

Inter-viewee	Experience area	Experience (years)	Rated ease of use	Rated generality	Rated real-world fidelity	Rated simplicity
Expert #1	BPM, IM, P&C	5	9.0	8.0	9.0	8.0
Expert #2	P&C	2	6.0	9.0	7.0	8.0
Expert #3	BPM	3.5	9.0	10.0	9.0	8.0
Expert #4	IM, P&C	3	6.5	8.5	7.0	10.0
Expert #5	IM, P&C	3	5.0	9.0	8.0	5.0
Expert #6	P&C	3	6.0	7.5	7.0	5.0
Expert #7	IM, P&C	1.5	8.0	9.0	7.0	9.0
Expert #8	P&C	1	7.5	8.5	9.5	8.5
	Mean	**2.75**	**7.13**	**8.69**	**7.94**	**7.69**
	Median	**3**	**7.00**	**8.75**	**7.50**	**8.00**

Table 4.   Results of quantitative evaluation within EVAL-3 conducted with researchers.

We conducted a case study in an ongoing BPI initiative to validate the artefact in a naturalistic setting (EVAL-4). The case was provided by *byte*, a Bavarian (Germany) state-owned agency for digital transformation in the public sector, describing themselves with a human-centric approach to projects (byte - Bayerische Agentur für Digitales GmbH, 2023). This emphasis on employee awareness underscores byte's dedication to fostering positive environments and project outcomes, ultimately contributing to the success of digital transformation in the Bavarian public sector. The case study, and thus the demonstration and instantiation of the *Employee-Aware BPI Navigator*, consisted of two workshops, each attended by three members of the author team and two byte consultants. Both centre their role on customer and employee experience, which in this case equates to a focus on the impact of digitalisation of funding processes on administrative staff. They each acknowledge the duality of their respective roles, encompassing both P&C and BPM aspects.

The authors introduced the method in the first workshop and collected initial ideas for activities A1 to C1 as post-it notes on a Mural board. With the help of the guiding questions, insights were gained about the process architecture and the employees' concerns, among other things. Since the BPI initiative at byte was already ongoing, this phase could be accelerated: Knowledge was already present within the core project team and byte detailed the sources that informed their knowledge in the *Orientation & Vision Setting* phase. The second workshop took place the following day and lasted 2.5 hours. First, there was a recap of the first workshop with the opportunity to add further notes to the ideas collected. The byte team was then guided through the *Process Improvement* phase, with the team of authors acting as method facilitators. Besides the guiding questions, clarifying instructions from the team of authors were provided to support the method. Afterwards, closing the loop to the first workshop and its findings, the *Continuing the Journey* phase was presented so that the participants knew how to transfer the method's outcome to the organisation. However, due to the long-term strategic vision phase, the activities were not conducted extensively.

The concluding feedback was about collecting qualitative statements from the participants about their opinions of the method. This confirmed the development of a "promising method as it combines both perspectives". In connection with activities A1 to C1, it was positively emphasised that it is "good to define the context" and determine how the organisations' capabilities are developed. In the case of byte, the organisation faces the challenge of a more cautious, less change-oriented culture that prevails in public administration and is more reserved when opening to and implementing new innovative ideas. While problems and opportunities were identified in activities 1 and 2, the advantages of the workshop character were recognised as new points could be compiled in direct relation to previously formulated

post-it notes. At the same time, however, it was also mentioned that a possible helpful extension could be to summarise the points collected after conducting activities A1 to C1 in a canvas to avoid jumping back and forth. As these activities normally take place temporally independently of the method's core, a structured form of interim outcomes is necessary. When looking for solutions for involving employees as process experts in activities 3 and 4, the two participants found it helpful to take a more targeted approach with the help of a BPI pattern repository. They also repeatedly remarked that the guiding questions were valuable support for them in finding out what the individual activities were aimed at and how their employee-aware perspective could be of meaningful impact. In the end, various viable solutions for byte were collected, including making BPI more tangible for employees by involving them more closely and thus ideally reducing concerns. Besides new ideas, the method reportedly facilitated the awareness of latent issues and opportunities that were already in the back of their minds but which, through the workshop, gained more attention and priority. It was positively highlighted that specific BPI options have been developed, as it is then "more likely that it will be implemented". At the same time, they believed that a discussion round with participants from diverse backgrounds, as envisaged in the method, "can generate additional valuable input that is mutually dependent". They considered it positive that the circle is closed at the end and that the knowledge gained ex-ante and during the *Process Improvement* can be used as a basis for future BPI projects and their impact on various areas of the organisation. To summarise, they believed "processes can only work in the long-term if people are involved". The materials used in the case study are available online[1].

6   Discussion and Conclusion

Motivated by recent calls in research and practice, this study initiated from the question of how organisations can systematically conduct BPI in an employee-aware manner (Shafagatova and van Looy, 2021; Ahmad et al., 2023; Kerpedzhiev et al., 2021). To the best of our knowledge, the literature has not yet described a method tailored to interdisciplinary BPI with and for employees from a BPM and a P&C (HRM) perspective. The *Employee-Aware BPI Navigator* seeks to address this research gap by providing structural guidance to facilitate employee awareness in BPI. The main assumptions of this interdisciplinary research lie in the theory of mutual gains, the theory of ability, motivation, and opportunity (Pagán-Castaño et al., 2020), and BPM's capability to enact an inclusive conceptual and methodological framework that fosters collaboration across departmental boundaries (vom Brocke et al., 2021; Beer et al., 1985; Davenport, 2015). To this end, we have composed methods and principles from BPM, HRM, and IM. The method targets a single process but also guides a BPI project team in taking a global perspective before working on the process and zooming out to reflect on overall HRM and BPM practices after working on the process. Eight surveyed experts acknowledged the research gap as a significant challenge and provided positive ratings on the method's design. Beyond that, their remarks on the artefact at an early stage were invaluable in iteratively improving the artefact for demonstration and evaluation in a case study in the public sector with byte. Here, the method has proven useful in facilitating practitioners to apply their expertise to BPI while taking novel perspectives and applying methods from BPI previously not known to them.

This research has implications both for academia and practice. For academia, we conduct our research in the fields of HRM, BPM, and IM. In addressing the intersection of HRM and BPM, we uncover knowledge on valuable linkages between the two domains. Each researches the organisation of work but can jointly address the challenges of a changing society. At the intersection of BPM and IM, we broaden the toolset of available method artefacts. The research advances theoretical frameworks within both fields, potentially leading to the development of new conceptual models, encouraging scholars to further investigate the intersections.

For practice, we provide a method that has proven useful in a case study application. The method widens the repository of BPI methods and can serve to connect BPM and HRM. The *Employee-Aware BPI Navigator* can be used with materials that we make available online for download and that support its

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[1] Supplementary material used in the workshop: https://doi.org/10.6084/m9.figshare.24560269.v2

instantiation. For organisations employing the method, the method fosters a deeper understanding of organisational dynamics, exploring the intersection of HRM and BPM, which are often unconnected in practice. This engagement, ownership, and alignment of goals through BPI promises to enhance organisational performance. Furthermore, in some scenarios, it can prove helpful for navigating uncharted transitions.

Challenges such as resistance to change and collaboration within organisations can limit the method's applicability. Overcoming these obstacles requires a minimum level of change and a willingness to collaborate throughout the project team. Additionally, achieving an appropriate level of granularity can pose a challenge. In practical terms, organisations need dedicated departments or individuals to drive BPM/BPI and P&C efforts.

On the other hand, the limitations of this research lie in the design and evaluation of the artefact. First, while this research is motivated by the acknowledged need for employee centricity, one should not forget about the primary goal of organisations of value creation. We deliberately named our approach *employee-aware* instead of employee-centric. Second, our research draws on assumptions for employee well-being and societal development described for Western developed societies. Furthermore, the evaluation was conducted with experts based in Germany and with an organisation from the German public sector. One should, therefore, critically reflect on intercultural differences before transferring the method to other cultural and societal backgrounds and research these implications. Third, the method focuses on creating BPI options. The subsequent long-term measurement of employee well-being and tracking mutual gains is not considered. Fourth, the evaluation of the method is based on interviews and workshops with people who demonstrate process orientation (i.e., doctoral students and researchers in the domain of BPM). Since employees across various organisation sizes and job positions possess varying levels of process orientation, inclusivity is not exhaustively demonstrated. Also, the relatively small sample size of interviewed experts and the artefact application to only one small case study limits the analysis of its generality. Despite these limitations, the overall results appear promising. Further research might, hence, address the mentioned limitations and investigate measurement methods for the mutual gains created in BPI projects from a long-term perspective. To investigate this, a longitudinal case study will be necessary, which is beyond the scope of this paper. Here, the method can be validated in different organisational realities, varying in culture and size, to further investigate the applicability and scalability of the method. Additionally, future research might investigate the impact of wide-reaching technologies such as artificial intelligence or more niche technologies such as process mining within the employee-aware BPI context.

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