Value Propositions of Personal Digital Assistants for Process Knowledge Transfer

Research Paper

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Abstract. Process knowledge is essential yet often elusive, buried within masses of data. This paper investigates the value propositions of Personal Digital Assistants (PDAs) as AI tools that understand language and perform tasks to address this challenge. Positioning these value propositions within process phases according to the BPM Lifecycle underlines how valuable PDAs are for increasing efficiency in process knowledge transfer. Through qualitative interviews across diverse sectors, we identify nine value propositions of PDAs in BPM, to (1a) offer automation, (1b) foster faster information access, (2a) facilitate user education, (2b) onboard new employees, (2c) analyze context-aware, (3a) get process advice, (3b) aid in process optimization, (3c) streamline processes through standardization, and (3d) aid in decision-making and documentation. We structure them into three dimensions: accessibility, understandability, and guidance. Despite limitations, PDAs hold promise in advancing process knowledge transfer by integrating with systems and supporting real-time process guidance along different process lifecycle phases.

Keywords: Personal Digital Assistant, Value Proposition, Process Knowledge, Business Process Management, Guidance

1 Introduction

In the ever-evolving landscape of modern business operations, effective management of organizational processes is imperative for ensuring efficiency, consistency, and adaptability. Business Process Management (BPM) is established as a comprehensive approach to oversee how work is performed within an organization, aiming to achieve consistent outcomes and capitalize on improvement opportunities (Hammer 2015; Dumas et al. 2018a). Central to the success of BPM is the understanding and effective transfer of process knowledge throughout the organization (Amaravadi and Lee 2005; Davenport 2015). Process knowledge is a key factor in operating and understanding an organization. However, process knowledge is not efficiently brought to users (Morana

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et al. 2019; Beheshti et al. 2023). Organizations often face significant challenges in efficiently disseminating process knowledge to their employees. Traditional methods of documentation and dissemination fall short in providing timely, relevant, and contextualized information to users, leading to inefficiencies, errors, and missed opportunities for improvement (Franzoi et al. 2025; van der Aa et al. 2018; Rosemann et al. 2024). The sheer volume of structured and unstructured information, coupled with the dynamic nature of business environments, makes accessing and understanding process knowledge a time intense and daunting task. There is often no simple way of finding the right information efficiently, so that their interpretation is prone to mistakes.

Modern technologies can play a significant role in solving this issue and simplify the process of accessing and understanding process knowledge. Personal digital assistant (PDA) systems can help organizations use process knowledge more efficiently (Maedche et al. 2019; Gnewuch et al. 2023; Johannsen et al. 2021). A PDA is an application that uses artificial intelligence (AI) to understand natural language input, either spoken or written, to perform tasks, answer questions, and automate user workflows (Maedche et al. 2019; Feuerriegel et al. 2023; Wellsandt et al. 2021). Despite growing interest and investment in PDA technologies, especially in chatbots and conversational agents, there remains a need for empirical research to understand their value propositions in the context of BPM, particularly regarding process knowledge transfer (Vidgof et al. 2023; Estrada-Torres et al. 2024; Beheshti et al. 2023; Sweeney 2021; Kampik et al. 2024). In our research context, process knowledge transfer refers to sharing business process knowledge among individuals or units to ensure continuity, efficiency, and improvement in BPM (Davenport 2015; Dalkir 2017). Furthermore, a value proposition is characterized by a positive resulting value if the benefit of a product exceeds the price (Lanning and Phillips 1991; Morris et al. 2005; Osterwalder et al. 2015). Our research is therefore motivated by the need for more efficiency in process knowledge transfer and the affordances that PDA systems offer. As they provide easier and tailored access to process knowledge, susceptibility to errors and inefficiencies is reduced. Hence, this research paper seeks to address this gap by exploring the following research question: **What value propositions do PDAs provide to process knowledge transfer in the context of BPM?**

Johannsen et al. (2021) research value propositions of chatbots but focus on innovation management processes. We introduce a systematic approach to adopting these systems in business processes by applying the BPM lifecycle by Dumas et al. (2018b) and mapping their value propositions towards suitable process phases. In what follows, we delineate relevant research background highlighting prior work in BPM with focus on process knowledge and PDAs. Thereafter, we describe how this study researches the value propositions of PDAs regarding process knowledge transfer by conducting twelve qualitative interviews with professionals across diverse sectors. Through examination of real-world experiences and perspectives from practitioners, three value proposition categories of PDAs for process knowledge transfer result: accessibility, understandability, and guidance. Finally, we discuss potential opportunities and limitations of PDA technologies in enhancing process knowledge transfer across different process phases, ultimately advancing BPM theory and practice.

2 Research Background

2.1 Business Process Management and Process Knowledge

Dumas et al. (2018a, 1) define BPM as "the art and science of overseeing how work is performed in an organization to ensure consistent outcomes and to take advantage of improvement opportunities." Therefore, BPM is an integrated management approach for organizations (Hammer 2015). Certain techniques and methods exist, like the BPM lifecycle by Dumas et al. (2018b). The BPM lifecycle, as described by Dumas et al. (2018a) is a structured, iterative approach to managing business processes, with the goal of driving continuous process improvement and alignment with organizational objectives. It consists of six key phases that organizations follow to model, analyze, implement, monitor, and optimize their processes. These are process identification, discovery, analysis, redesign, implementation, as well as monitoring and controlling (Dumas et al. 2018b).

Process knowledge in an organization refers to the comprehensive understanding of the workflows, activities, and procedures that define how processes and their implying tasks are executed within business (Davenport 2015; Rosemann and vom Brocke 2015). Therefore, process knowledge transfer is crucial for employees to effectively perform organizational tasks (Lombardi 2019; Nonaka and Takeuchi 1995). Process knowledge transfer is the systematic sharing and dissemination of process knowledge among individuals or organizational units to ensure continuity, efficiency, and continuous improvement in BPM (Atkočiūnienė et al. 2023; Berniak-Woźny and Szelągowski 2024; Nakash and Bolisani 2024). This encompasses the specifics of how processes are designed, implemented, monitored, and optimized. Process knowledge can be documented in several ways using different methods and tools (Polyvyanyy et al. 2015). Process models, a widely established form of documenting process knowledge, have been extensively discussed in literature (Davenport 1993; Dumas et al. 2018b; Malone et al. 2003; Polyvyanyy et al. 2015). Numerous notations, such as Business Process Model and Notation (BPMN), exist for this purpose. In general, effective management and utilization of process knowledge are essential for organizational success, enabling continuous improvement, risk mitigation, and the efficient execution of business operations (Rosemann and vom Brocke 2015; Lombardi 2019; Ichijo and Nonaka 2006). Amaravadi and Lee (2005) explain that knowledge, regardless of being explicit or implicit, is always contextual and involves some type of experience that is interpreted in specific ways.

2.2 Personal Digital Assistant

Wellsandt et al. (2021, 324) define PDAs as "socio-technical systems and an application class." In our research context, a PDA is defined as an AI-based application capable of interpreting user input in natural language, whether spoken or written, to execute various tasks, provide information, and automate workflows within an integrated IT environment (Feuerriegel et al. 2023; Maedche et al. 2019; Wellsandt et al. 2023; Jackson and Panteli 2024). These systems employ technologies such as natural language

processing (NLP), machine learning, large language models (LLM), and, in some cases, computer vision to enable intuitive and efficient human-computer interaction. Due to their diverse use cases, Knote et al. (2019) classify five different assistant categories: chatbot assistants, adaptive voice assistants, natural conversation assistants, embodied virtual assistants and passive pervasive assistants.

Chatbot assistants are a subcategory of PDAs designed to facilitate human-computer interactions mostly through generative AI and NLP (Wellsandt et al. 2023). These assistants leverage advanced algorithms and machine learning to understand, interpret, and respond to user inputs in a conversational manner, typically via text interfaces (Di Vaio et al. 2021; Kumar 2024). Chatbots integrate data and perform analytics to formulate a response (Johannsen et al. 2021; Wache et al. 2022). Additionally, their LLM can evolve and improve its intelligence based on user feedback (Azmi et al. 2023; Chaves and Gerosa 2021; Feuerriegel et al. 2023). Chatbots are being used more and more in organizations, starting in the area of customer service (Choudhary and Chauhan 2023) and increasingly in internal areas of organizations. Through their benefits in efficiency and scalability and their data processing abilities of large volumes of they are often used for workflow improvements (Azmi et al. 2023; Frommert et al. 2018; Johannsen et al. 2021; Estrada-Torres et al. 2024).

Adaptive voice assistants are majorly known through examples like Siri, Alexa, Google's Gemini, and Microsoft Cortana. As classified by Knote et al. (2019), adaptive voice assistants differ in NLP to chatbots as they have the capability to in- and output voice commands. The capability of adaption to their user's voice, preferences and a certain level of context awareness makes them to today commonly used tools for a wide group of consumers (Goyal and Jyoti 2023).

Natural conversation assistants also process voice commands and are therefore similar to adaptive voice assistants. They are designed to facilitate human-computer interactions through natural language, focusing primarily on the ability to engage in seamless and coherent dialogues (Balakrishnan and Dwivedi 2024; Knote et al. 2019).

Embodied virtual assistants in comparison to the previously described PDA categories additionally have visual aspects like an avatar or a human like appearance on screen that simulates to engage directly with its user through voice expressions, gestures and movements (Benlian et al. 2020). They are used for example in educational tutorial platforms or virtual health coaching (Pfeuffer et al. 2019). In contrast, *passive pervasive assistants* do not react to user commands but rather operate unobtrusively in the background. They continuously monitor through sensors the user's environment and activities to provide timely and relevant assistance without requiring active input from the user (Knote et al. 2019).

2.3 Value Propositions of Personal Digital Assistants

A value proposition is defined as a clear statement that articulates the unique benefits and value a company, product or service offers to its customers, distinguishing it from competitors (Osterwalder et al. 2015; Morris et al. 2005; Johannsen et al. 2021). The concept has evolved over time, with different views on its scope and dimensions. Osterwalder et al. (2015) introduce how value propositions characterize services that align

with customers' needs and desires. Research has yet to be conducted on value propositions of PDAs (Jackson and Panteli 2024; Johannsen et al. 2021). Without such research, it is unclear how PDAs can be implemented most efficiently in an organizational context. Research around PDAs has focused mostly on chatbots and on the opportunities that open up with chatbots in the context of communication with users or customers instead of focusing on internal processes (Johannsen et al. 2021). Additionally, research has been conducted on opportunities of LLMs in BPM (Vidgof et al. 2023; Kampik et al. 2024; Grohs et al; Estrada-Torres et al. 2024) and on leveraging GPT models to revolutionize BPM by automating the generation of process flows (Beheshti et al. 2023). Vidgof et al. (2023) show different opportunities for applying LLMs throughout the BPM lifecycle. Value propositions of chatbots have been discussed with practitioners without a focus on process knowledge (Johannsen et al. 2021). Research has either focused on LLMs without interacting with practitioners or on chatbots, both without specifically focusing on process knowledge transfer (Estrada-Torres et al. 2024; Vidgof et al. 2023; Johannsen et al. 2021; Hüsson and Holland 2019). Their study paves the way for further research on PDAs and their affordances, meaning the possibilities for action that a PDA provides to a user in organizational contexts (Norman 1990).

3 Method

Following the research problem and the academic research background a qualitative research method was used (Myers 1997). Qualitative semi-structured interviews enable us to capture practitioners' perceptions of working with PDAs, providing a robust data collection method for exploring our research question (Myers and Newman 2007; Schultze and Avital 2011). Therefore, after a preliminary literature review for better problem understanding and interview question derivation, we conducted twelve qualitative interviews with practitioners. Applying the analytical procedures of Grounded Theory as outlined by Strauss and Corbin (1990; 2008) led to the inductive development of value propositions of PDAs for process knowledge transfer.

After introducing the concept of PDAs and defining their categories, the interviewees were asked to share their previous experiences with PDA systems. They provided insights into the value of PDAs in corporate settings, with focus on process knowledge. Additionally, they were asked to differentiate between user groups of PDAs and to identify the challenges organizations may face by introducing these technologies.

To obtain an integrated view of the outcomes, the interview partners were purposefully selected from a variety of organizational sizes and economic sectors (Flick 2022). Only persons with relevant knowledge and imaginative power of PDA technologies were selected. This was ensured by analyzing their job titles, their average of 14 years of professional experience, and existing personal relationships. Each interviewee has relevant experience with PDAs in a corporate context as well as tech-affinity. To ensure that they were able to envision the benefits of PDAs, each interview partner was in a managerial role with responsibility for forward-looking action in relation to IT and business management. In table 1 the twelve profiles of the interviewees are presented,

including their job position and the economic sector in which the individuals are employed in. Twelve interviews, averaging 19 minutes, were conducted in German (4) or English (8) based on personal preference of the interview partners.

Table 1. Interviewee Profiles

Interviewee	Position	Economic Sector
A	Chief Executive Officer	Financial Sector
B	IT Product Owner Supply Chain	Industry
C	Management Consultant & Partner	Consulting
D	Audit Data Analyst	Financial Sector
E	Relationship Manager	Financial Sector & Consulting
F	Business Process Analyst	IT & Software
G	Head of Group Governance	Financial Sector
H	Information Security Officer	Financial Sector
I	Business Process Analyst	Industry
J	Public Transport Manager	Mobility
K	Digital Process Manager	Industry
L	Managing Partner	Consulting

Many interviewees were chosen consciously from the financial and industrial sectors as regulations or production standards are remarkably high in these specific sectors. This increases the need for process knowledge documentation and therefore the need for process knowledge transfer.

Following Corbin and Strauss (2008), the interviews were transcribed and open coding, using MAXQDA, was chosen as data analysis technique. Through an iterative analysis of each transcript, the open coding technique together with a preliminary literature review resulted in the identification of 217 in-vivo codes. To this end, we analyzed each interview transcript and marked revealing statements. By forming categories of these in-vivo codes, nine axial codes were derived which consist of the value propositions stated in our results. For example, the in-vivo codes “Things are pointed out that the user may not have considered initially” and “So maybe it educates the user to conduct a process conforming” were categorized to the axial code “user education”. In a second iteration, the axial codes were evaluated by the author team and grouped into three selected core categories, based on their similarity in content to provide an overview of the stated values (Corbin and Strauss 2008).

4 Results

Derived by a preliminary literature review and the conducted expert interviews, we identify value propositions of PDAs for process knowledge transfer. Table 2 visualizes the value propositions of PDAs for process knowledge transfer informed by literature

and mentioned by the interviewees. The value propositions were later grouped through iterative coding into three dimensions, i.e. core categories: accessibility, understandability, and guidance.

Table 2. Value Propositions of PDAs Mapped to BPM Lifecycle Phases

Value Proposition Dimension	Value Proposition	BPM Lifecycle Phases					
		Process Identification	Process Discovery	Process Analysis	Process Redesign	Process Implementation	Process Monitoring & Controlling
Accessibility	Automation		✓	✓		✓	✓
	Finding Knowledge and Documentation Faster		✓	✓		✓	(✓)
Understandability	User Education					✓	
	Onboarding Of New Employees					✓	
	Context-Aware Analysis			✓		✓	✓
Guidance	Process Advice					✓	
	Process Optimization				✓		
	Process Standardization				✓		
	Decision-Making and Their Documentation				✓		✓

Legend: ✓ = Value proposition applies to process phase (✓) = Value proposition indirectly applies to process phase

To fully understand the impact of PDAs for process knowledge transfer in organizational context, we evaluate their value propositions in relation to BPM phases. This also reveals areas where further improvements are needed and where integration of PDAs offers the greatest added value (Dumas et al. 2018b; vom Brocke and Rosemann 2015). We did not assign value propositions to the process identification phase, as it relies on qualitative judgment and strategic insight that PDAs are currently unable to provide. All twelve interview partners focused in their answers on mostly one PDA category due to their previous experience: chatbots. Regarding the question about user groups of PDAs, the interviewees outlined that due to the simple handling and wide use cases of PDAs, they can be used by every employee that needs process knowledge.

4.1 Process Knowledge Accessibility Through Personal Digital Assistants

Accessibility is the first step towards working with process knowledge through gathering information quickly and efficiently (Franzoi et al. 2025; Amaravadi and Lee 2005). Therefore, one central implication of chatbots is the fact that users can access and find

the desired information quicker than with manually searching (Frommert et al. 2018; Johannsen et al. 2021). Interviewee K stated "I think it could serve as a single source of truth, where you have all the process knowledge feeding into the repository of what your PDA is based on. So, it is a place where you have all the information and can access it easily by prompting." The mentioned value propositions in this area are automation and finding knowledge and documentation faster.

PDAs, particularly in the form of chatbots, support process *automation*, a central concern in BPM (Di Francescomarino et al. 2023; Estrada-Torres et al. 2024) . In BPM, process automation refers to the execution of tasks and workflows through technology to reduce human effort (Dumas et al. 2023; Franzoi et al. 2025). This value proposition was mentioned by four of our twelve interview partners (C, I, J, L). For example, interviewee C stated that PDAs could automate the process of modeling BPMN diagrams by getting the process dictated. Hence, automation through PDAs can be used in the process discovery phase to capture existing processes more quickly, reducing manual efforts and ensuring consistent documentation. PDAs can aid in automation during the process analysis phase by facilitating tasks such as data analysis and providing real-time insights. Interviewee G noted that analyzing prompt statistics with PDAs identifies areas where knowledge documentation needs improvement and highlight processes where users frequently encounter problems. Formulating e-mail answers or meeting invites were further mentioned as process automation capabilities of PDAs. Interviewee J stated that by automating routine tasks and customer interactions, PDAs can help streamline processes, reduce human error, and improve overall efficiency in the process implementation phase (Maedche et al. 2019). This aligns with industry's growing emphasis on automation for operational excellence and cost savings. Automation capabilities of PDAs can help detect deviations from the desired process and document them in the monitoring and controlling phase, enabling proactive process control and management. They can also generate reports, suggest corrective actions, and assist in enforcing compliance with predefined standards as already described by interviewee G with the chatbot prompt statistics.

The fact that through chatbots documents and relevant process *knowledge and documentation can be found faster* is one value proposition PDAs provide to process knowledge transfer (Franzoi et al. 2025; Estrada-Torres et al. 2024; Alwin and Naived George 2024; Kumar 2024; Chaves and Gerosa 2021). This value proposition was discussed by nine interview partners. By simple question-answering, chatbots free up employees' capacity by providing them with the required information quicker than through manual search. Interviewee F mentioned that "if you can save some time and get the answers faster […] that is a huge effort that can be saved." This value proposition is particularly important during the process discovery phase as it facilitates the collection and understanding of process-related information (Johannsen et al. 2021). Therefore, it can ensure to provide a single source of truth with the most current information or document versions as stated by interviewee G and K.

Finding knowledge and documentation faster during process implementation reduces downtime and prevents errors by guiding users on how to correctly proceed (Chaves and Gerosa 2021; Estrada-Torres et al. 2024). Interviewee C stated the experience that connecting a chatbot to the entire knowledge management system led to

significant reliefs in accessing documents. This shift not only improves employee productivity but also allows organizations to better utilize their human resources for innovation and strategic initiatives as pointed out by interviewee L. In the process analysis as well as monitoring and controlling phase, faster information retrieval is also relevant to make timely decisions based on collected data and to track process deviations effectively (Azmi et al. 2023). However, this value proposition only indirectly pertains to the process monitoring and controlling phase. Although prompt reports can be analyzed, such analysis does not occur directly through the PDA.

4.2 Process Knowledge Understandability Through Personal Digital Assistants

The next value proposition dimension is understandability. Understandability means that PDAs can help users better comprehend specific knowledge and information. Additionally, understandability means that the PDA can provide context relevant information. The identified value propositions are user education, onboarding of new employees and context-aware analysis.

PDA systems contribute to *user education* in organizational process knowledge transfer by providing an interactive and personalized learning platform (Oqaidi et al. 2024; Giannakos et al. 2024). This value proposition was mentioned by five interview partners (D, E, G, I, J). Interviewee D mentioned the customer onboarding as a very sensitive process so the PDA can educate the user to conduct a process conforming. This value proposition supports the processes implementation phase by helping employees understand new process flows through real-time tutorials, and contextual help (Maedche et al. 2019). PDAs can also assist with troubleshooting, thus improving user understanding during process adoption. This makes them an invaluable tool for modern organizations aiming to enhance employee knowledge and process efficiency, specifically mentioned by interviewees D, I and J.

Through such educational implications, even the *onboarding of new employees* can be designed innovatively towards higher automation standards as stated by interviewee B and F. PDAs can help new employees in the onboarding process through answering any open questions throughout process implementation about the processes in the company or work-related tasks that would usually need other employees' insight (interviewee B). By integrating PDAs into their knowledge transfer strategies, organizations can therefore ensure that their employees are well-informed, capable, and continuously learning (Yan et al. 2024).

Context-aware analysis of different data and knowledge sources by integrating with other systems was another value adding characteristic of PDAs named by seven interview partners (A, C, D, E, F, I, L). Chatbots can seamlessly integrate with various enterprise systems such as Customer Relationship Management or Enterprise Resource Planning systems depending on their technical implementation (Bors et al. 2020). This integration allows for smooth data flow across different business processes, enhancing process coherence and efficiency as mentioned by interviewee I ("You can make process knowledge applicable to their [employees] situation"). Context-aware analysis through PDAs during the process analysis phase helps in understanding the relationships and interactions between process steps by collecting and processing contextual

data such as user behavior, system conditions, and environmental factors (Hüsson and Holland 2019; vom Brocke et al. 2021). Interviewee E outlined that PDAs also add value by showing important and understandable knowledge that the employee was not even aware of. Interviewee I highlighted in this context that explaining processes which are documented in different databases and streamlining their information is another central advantage of chatbots. In the process monitoring and controlling phase, this value proposition helps understand process deviations in the context of the overall process and derive appropriate actions.

Additionally, PDAs are, as the name suggests, personal and can therefore provide personalized feedback depending on the working context of users. During process implementation and execution, personalization is crucial to achieving user acceptance (Azmi et al. 2023; Voss et al. 2022). Having in mind user-specific data like locations, roles, previous user preferences and responsibilities, an AI-based PDA has the capability to provide personalized answers as pointed out by interviewee H.

4.3 Process Guidance Through Personal Digital Assistants

Guidance takes the value propositions of PDAs one step further as they can guide users through entire processes using process knowledge. It provides decision or option proposals based on the provided understandability for process knowledge. *Process advice* involves providing real-time, step-by-step guidance to employees as they perform tasks during process implementation (Frommert et al. 2018; Johannsen et al. 2021; Maedche et al. 2019). Six interview partners (B, C, D, F, G, I) mentioned this value proposition. Interviewee D explained: “In customer onboarding, a PDA could help to tell them how to proceed, which check should be done now or later, which people to talk to, which documents to get.” They can recommend how tasks are performed correctly and in the right sequence, help users follow process models accurately, and provide immediate feedback as commented by interviewee F. Additionally, interviewee I mentioned that a guidance would be “really relevant, as understanding one step is good but being supported through the entire process step by step would be the next level.”

Process optimization is one guiding value proposition of PDAs as stated by four interview partners (F, I, J, L). Interviewee L explained that, in some explicit cases, they let PDAs outline how a process should ideally work, drawing on the existing process knowledge and the competencies of the PDA (Lebovitz et al. 2021). During the process redesign phase, process managers shall create improved versions of processes to resolve issues found during analysis and therefore model a to be state of the improved process (Dumas et al. 2018a). Comparing the process’s as-is-state with the ideal process by the PDA led to data-driven recommendations for optimizing workflows. Interviewee F commented in this context: “Saving time with faster processes can have a huge impact - 10,000 employees saving 10 minutes daily adds up quickly. Management highly values these improvements.”

Process Standardization becomes relevant during the implementation of new processes to ensure that all employees follow the same process guidelines (Butt et al. 2023). This was stated by six interview partners (B, D, I, J, K, L). PDAs can provide a “single source of truth” as mentioned by interviewee K, ensuring that all employees

receive the same information. This eliminates variations in process execution caused by different interpretations of guidelines (interviewee B). PDAs can assist in process standardization during the process redesign phase by analyzing current practices, identifying inconsistencies, and recommending standardized workflows. Interviewee I underlined: "From a BPM perspective, it would be valuable to receive feedback on where our processes could meet higher standards. We are constantly working to align our processes with industry standards (…). Understanding where deviations are is important to me." Interviewee L mentioned that he let a chatbot describe how simple processes should look to standardize them by comparing the as-is situation to the suggested way.

Some steering through behavioral influences take place through chatbots. Their provided information guide users towards data-driven *decision-making and their documentation* (B, C, I). Decisions on process changes and their documentation are critical to making process redesign considerations transparent and traceable (Dumas et al. 2018b). PDAs can assist in decision-making during this phase by providing relevant data, presenting insights, and suggesting data-driven recommendations (Hüsson and Holland 2019; Kampik et al. 2024). They can be employed in monitoring and controlling phase to monitor business process performers' actions in real-time, providing instant feedback and alerts if any issues arise. PDAs can document decisions by automatically recording them, ensuring that all decisions are traceable, which enhances transparency. Interviewee C commented: "I might reach a point in the process where I need to decide based on certain facts. These could be complex decisions involving various information, where the PDA can assist in gathering and analyzing the data for decision-making." This real-time capability supports proactive process management and swift resolution of any disruptions, ensuring smoother operations.

5 Discussion

Our interviewees and analysis underline the relevance of PDA implications for process knowledge transfer due to the stated value propositions. PDA systems, especially chatbots, are becoming essential to process knowledge transfer. Recent studies have shown that process knowledge transfer is relevant across all phases of the BPM lifecycle, as effective BPM relies on the exchange of expertise and contextual insights (Atkočiūnienė et al. 2023; Berniak-Woźny and Szelągowski 2024). It is especially critical during discovery, analysis, and redesign, where deep understanding of existing processes is essential for improvement. In implementation and monitoring, it ensures consistent execution and supports continuous learning. While much of BPM literature emphasizes process modeling and automation from a system-centric perspective, few studies explore how emerging AI-driven tools like PDAs can support process knowledge transfer in BPM. PDAs enable personalized interactions, integrate with existing systems, and enhance scalability and efficiency. As industry trends continue to evolve towards greater digital integration, the role of PDA systems in process knowledge transfer is likely to grow even more significant (Jackson and Panteli 2024; Frommert et al. 2018). We novelly connect two research fields: PDAs and BPM with process knowledge transfer. Our paper identifies nine value propositions of PDAs and links

them to the phases of the BPM lifecycle to demonstrate their role in process knowledge transfer. In doing so, we address a theoretical and practical gap by showing how PDAs enhance the accessibility, understandability, and guidance of process knowledge.

By mapping PDA value propositions to the BPM lifecycle, this study deepens theoretical understanding and offers practical guidance for BPM integration. PDAs enhance process execution and monitoring by centralizing knowledge, reducing errors, and enabling continuous learning through feedback and best practice sharing. The mapping also guides practitioners on where PDAs offer the most value, while noting their limited applicability in process identification due to its strategic complexity. Our study concentrates on the value propositions of PDAs for process knowledge transfer and therefore differentiates from more generalized studies, e.g. Vidgof et al. (2023) or Estrada-Torres et al. (2024). Some authors state that depending on the design principles of the chatbot it can also monitor and document its users' behaviors (Morana et al. 2019; Skuridin & Wynn 2024; Voss et al. 2022).

One limitation in our research process is the fact that even though the interviewees were asked about PDAs in general, their focus was on chatbots. Further research could explore other types of PDAs in more detail. Another limitation in our research process is the number and selection of interview partners. However, the authors of this paper decided to stop inviting further interviewees when a point of no new information was reached (Flick 2022). Therefore, the validity of our twelve interview results is significant to the results of our research paper, in general. Another limitation of the study is its focus on interviewees from the financial and industrial sectors, potentially biasing the value propositions toward these contexts. Further research could concentrate on the different kinds of process guidance that can be provided through PDA systems. Furthermore, it should be assessed which PDA types are most suitable to provide such process guidance.

6 Conclusion

In summary, PDAs, particularly chatbots, are highly relevant in corporate contexts due to their significant contributions to BPM and process knowledge transfer. Chatbots were most often referred to in interviews by the practitioners. These capabilities make chatbots a valuable asset in modern corporate environments, aligning with the goals of both BPM and knowledge management strategies. By conducting twelve in-depth interviews with professionals from various sectors, the research identifies key value propositions of PDAs for process knowledge transfer: accessibility, understandability, and guidance. These factors collectively enhance process knowledge accessibility, improve understanding, and enable data-driven guidance, ultimately leading to more efficient and effective process knowledge transfer. The research emphasizes the necessity for ongoing evaluation and adaptation of PDA technologies to address their challenges and maximize their benefits along the different BPM lifecycle phases. Future studies could delve deeper into the specific types of process guidance provided by PDAs and explore their applicability in various process phases or economic sectors.

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