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Implementation-specific Barriers And Measures For Chatbots In B2B Customer Service

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Abstract

The use of chatbots has hardly been established in B2B companies to date and involves various challenges. The goal of this paper is to identify the biggest barriers to the successful implementation of chatbots in B2B customer service and to develop measures to overcome them. The barriers are identified by conducting expert interviews within the framework of Eisenhardt's case study research. These are examined through a socio-technical analysis focusing on people, technology, and organization. By means of systematic literature research and in-depth interviews with German chatbot providers and customers of chatbots, measures for overcoming the barriers are identified. Using interviews with experts from German chatbot providers, the responsible stakeholders of each measure according to the RASCI Responsibility Matrix are determined. A total of 46 implementation barriers and 100 measures to overcome these barriers are identified. The study shows that there are major barriers in the areas of people, technology, and organization of a socio-technical system that can cause the implementation of a chatbot to fail. A holistic view is therefore essential. The results provide firms with a guideline on how to overcome potential barriers during chatbot implementation in B2B customer service.

Keywords

Chatbots; socio-technical analysis; B2B customer service; implementation success factors; implementation barriers

1. Introduction

A 24-hour service with a simultaneous cost saving are by no means contradictory requirements. The continuous development of technologies enables companies to digitize and automate processes such as customer service [1]. One of the most promising technologies of recent years is the so called chatbot, which establishes a 24/7 service for employees and customers, thus increasing their satisfaction and reducing costs. Chatbots are computer-based systems that simulate a natural text-based dialogue. In the B2C sector, chatbots are already in use as innovative and digital service assistants for customer service.[2] In customer communication, chatbots can be used at various touchpoints. Touchpoints represent customer contact points where customers come into touch with products or a company.[3] Chatbots can either be provided as a separate app, integrated into existing systems, such as a company's own website, or in messaging platforms [4]. In order for chatbots to perform its activities, it must be connected either to a database or knowledge base or via interfaces to internal company systems [5].

The implementation of chatbots opens up numerous potential benefits for companies. These will in the following be summarised in the four categories of data, money, quality, and time. Potential benefits in the data category deal with the improvement of customer behaviour, data, and the user experience. The main

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aim here is to use the collected data to make statements about customer needs and the further development of products and services. The money category includes potential benefits for increasing the source of revenue and staff savings. Accordingly, the use of chatbots can support lead generation and increase sales through cross-selling effects. Based on collected data, customers can, for example, be provided with personalised information on further articles. Since chatbots can already solve many of the customers' concerns, the employees are disburdened so that they can focus on their actual value-adding activities. The quality category contains potential benefits that relate to the positive impact of chatbot implementation on everyday service quality. A higher quality of service can be made possible, for example, by the immediate accessibility and fast response time of customer enquiries. In addition to accessibility, chatbot implementation also favours the development and expansion of international service business through multilingual, fast, and targeted interaction. The last category, time, describes potential benefits that deal with the use of chatbots and the associated time savings.

Despite these evident potentials, chatbot implementation in B2B customer service has so far hardly been widespread compared to B2C customer service. The landscape of mechanical and plant engineering is characterised by a large number of small and medium-sized enterprises (SMEs). SMEs in particular are holding back on chatbot implementation because the implementation concepts are not yet fully developed and the high complexity and costs of the systems exceed existing budget and resource constraints.[6] However, SMEs in particular could benefit from the previously mentioned advantages of chatbots, for example in supporting internationalisation.

One major challenge in chatbot implementation, especially for SMEs from the mechanical and plant engineering sector, is the lack of mature implementation concepts that take into account the requirements of B2B service. In addition to the selection of a suitable deployment scenario, it is particularly important to consider implementation barriers that can arise during the introduction of chatbots. The implementation barriers as well as the knowledge how to overcome these barriers are crucial for the success or failure of chatbot implementations. By taking barriers into account at an early stage as part of forward planning, negative effects of implementation barriers can be reduced or eliminated through proactive measures [7]. In accordance with the challenges presented, the research question "How can chatbot implementations be successful?" will be investigated in the following.

To overcome the implementation barriers, a catalogue of measures is to be developed that provides a comprehensive overview of potential barriers that can occur on a technical, organisational, and human level during the introduction of a chatbot with contains measures to eliminate them. Companies with the goal of a chatbot implementation should be able to use the catalogue of measures directly at the beginning of an implementation project to identify potential barriers at an early stage, as well as during the project to help resolve problems that have already occurred. In order to reduce or prevent the negative effects of barriers, measures should be listed for each barrier, which serve as early countermeasures for the user. In addition, to ensure that companies can implement the measures in a targeted manner, responsibilities for each measure should be assigned to different roles. After the presentation of the potential benefits and challenges of chatbot implementation, the next step is to look at related scientific work that deals with a similar problem. This is followed by a description of the methodology used to create the solution, the development of the catalogue of measures. Finally, the results and the benefits of the catalogue of measures are explained based on an example.

2. Related Work

The occurrence of potential barriers does not only play a role in the implementation of chatbots in the company, but also in the implementation of other technologies or digitalisation projects. In the following, some publications are discussed regarding to this topic area.

In their study, [8] deal with challenges that industrial companies encounter when introducing Industry 4.0 applications, in contrast to the barriers listed in the literature. With the aim of filling this knowledge gap, the study surveyed 253 industrial companies regarding this issue. According to [9], the large number of failed projects for the introduction of robot-assisted process automation (RPA) is due to a lack of understanding of the technological possibilities. They therefore discuss challenges and measures to overcome them when implementing RPA. [10] address the issue of user integration in AI-based services and the associated barriers. [11] and [12] focus on the design of human-like interaction of AI-based chatbots and its impact on customer experience and acceptance. [13] and [14] examine factors that complicate or facilitate customer acceptance of chatbot implementation.

Although the previously mentioned publications deal with the challenges of introducing technology and, in the case of chatbots, with the barriers of customer acceptance, they do not take a holistic view of potential implementation barriers and the possibilities of successfully overcoming them. In the process of change through chatbot implementation, it is important to ensure that employees and customers accompany the technology implementation and that both technical and organisational challenges are included. Careful consideration needs to be given to which tasks are automated by chatbots and how certain task areas are handed over to employees. [15]

3. Methods

The research process underlying the catalogue of measures is based on a systematic literature research and a validation by means of expert interviews. The catalogue of measures was constructed in three steps using different methods. In the first step, implementation barriers of a chatbot introduction were identified together with relevant stakeholders. In the second step, corresponding measures were allocated to these barriers using a systematic literature research. In the last step, expert interviews were used to validate and supplement the individual measures and a RASCI classification was created to clearly assign roles for the successful implementation of the measures. The individual steps and methods used are explained in more detail below.

3.1 Fields of action and implementation barriers of a chatbot implementation

In the investigation of the implementation barriers of chatbot introductions, a new field of research is entered. A direct exchange between experts enables a comprehensive view of implementation barriers from different perspectives and generates new knowledge. The identification of implementation barriers was therefore workshop-based with German companies consisting of chatbot users and chatbot providers. Following Osborn, workshops are used for creative problem solving of area-specific problems and questions [16]. The use of workshops as a research methodology aims at obtaining practice-relevant and objective data about the field in question. The approach is characterised by interaction and the consideration of different perspectives, which is why it is particularly suitable for researching new, unknown issues.[17] Consequently, by conducting workshops with experts in a particular field, the aim can be to capture expert judgements to synthesise, integrate or build consensus between experts [18]. The focus on providing knowledge and facts in the workshop ensured that all relevant content regarding potential implementation barriers was recorded by the experts and constructively questioned in stimulating discussions. The introduction of chatbots requires cooperation at the organisational, technical, and human levels in a company. For this purpose, an application example from industry for the use of chatbots was examined incrementally in the workshop with the experts in small groups and subjected to a socio-technical examination with the help of the People-Technology-Organisation (PTO) analysis. The PTO analysis is a socio-technical system approach in which every interaction between the fields of action of people, technology, and organisation is analysed. The three fields of action have a reciprocal relationship, therefore companies should consider technical and organisational as well as expectations and experiences of people while implementing chatbots.[19] The socio-technical systematisation of the implementation barriers was based on the classification of the barriers into these three

fields of action. The experts were asked to analyse and collectively discuss the application example based on their knowledge and experience regarding potential implementation barriers. Through the direct exchange between the experts, who were composed of both chatbot providers and chatbot users, implementation barriers could be identified from different perspectives and systematised using the PTO analysis.

3.2 Overcoming measures in the catalogue of measures

Since interdisciplinary areas such as psychology, sociology, technology, and computer science must be taken into account when overcoming the barriers to the introduction of chatbots [20], a systematic approach is of great importance. The identification of effective measures for overcoming the previously identified implementation barriers was carried out through a systematic literature research according to [21] and [22]. For this purpose, mainly search terms were used which are thematically related to overcoming implementation barriers. A systematic literature research is a central component of scientific work and is indispensable in order to gain an understanding of a specific topic. Consequently, the search for overcoming measures requires different search terms, which can be narrowed down by a targeted search strategy. Therefore, not only publications were considered that addressed specifically the introduction of chatbots. Publications dealing with overcoming the barriers of numerous Industry 4.0 applications from different sectors were also included. Subsequently, a collection of the measures listed in the literature was conducted. These were simultaneously assigned to the implementation barriers systematised according to the fields of action. In addition, overcoming measures were recorded by means of expert interviews. The experts validated and adapted measures that had already been recorded or added an alternative measure.

3.3 Definition of responsibilities through RASCI matrix

For a successful implementation of the coping measures, a clear overview of all stakeholders and their functions is crucial. The implementation of chatbots in a company requires the involvement of different cross-functional departments. Accordingly, the implementation of the measures involves interdisciplinary teams with people from different departments of the company who cover different areas of responsibility due to their specific roles. [20] To ensure the successful implementation of the various measures, they were specified using the RASCI matrix. RASCI is an acronym for the functions Responsible, Accountable, Supported, Consulted, Informed and is a further development of the well-known RACI model [23]. The aim of the RASCI matrix is to define a clear overview of a comprehensible distribution of roles for the fulfilment of intended tasks for all those involved in a process or project [24], [25]. In the following the five functions are described: Responsible (R): The person in charge is responsible for the implementation of the task and is also involved in the operational implementation. Accountable (A): This role is accountable for the task. Support (S): This role assists the person responsible for implementation in the execution of the task. Consulted (C): The consulted role performs an advisory function and is involved in the processing of the task. Informed (I): The person holding the informed role should be informed about the progress and outcome of the task. The RASCI matrix is a very effective tool for openly documenting the division of tasks and defining clear roles and responsibilities regarding the successful implementation of a specific task [25].

Since the area of function allocation is about practice-oriented application knowledge, a qualitative method, the expert interviews, was chosen to capture this. Expert interviews are particularly suitable for generating a better understanding of the research area and recording the know-how of the interviewees. The use of a semi-structured guide ensures that all relevant aspects are addressed in the interview. The allocation of the functions to the different roles according to the RASCI matrix was performed by using in-depth interviews with chatbot experts on the provider and user side. A total of twelve interviews were conducted over a period of six months and lasted an average of 60-90 minutes per interview partner. Following the purpose of the research, explorative questions were asked during the interviews in order not to guide the respondents in a certain direction by asking questions. As a result, each measure in the catalogue was analysed in terms of its implementation by identifying functions according to the RASCI matrix for roles within and outside the

company. Therefore, a table with all measures was used as a guide in the interviews and at the same time to document the important interview statements.

4. Results

The implementation barriers are presented as a table together with the identified overcoming measures with assignment of functions to roles according to the RASCI matrix. The implementation barriers systematised according to the PTO analysis as well as the corresponding measures are listed in the rows. In addition, all functions involved are listed in the columns, which in turn are divided according to buyer and supplier. The functions are also subdivided according to the categories IT, project team, service customer and specialist departments. The listed functions assume, due to their role, certain tasks in the implementation of the overcoming measures.

The catalogue of measures contains 46 implementation barriers and 100 measures to overcome them, whereby some barriers have been assigned several measures. These are shown in Table 1. The RASCI assignment can be accessed freely available on the internet.

Table 1: List of Implementation barriers and overcoming measures

No	Category	Implementation barrier	Measure
1	People (customer)	Service customers perceive companies as dismissive/disinterested	Establish clear communication strategy between chatbot and customer (process definition, exit strategy)
			Analyse the service customer's communication to design user-friendly dialogues and designs
			Make sure service provider informs service customer about chatbot launch project through website, social media etc.
2	People (service provider)	Rejection attitude and reservations of employees towards the new technology (e.g., AI)	Ensure cultural acceptance of automation at management level and communicating the reasons behind it
			Conduct design and feedback workshops to demonstrate capabilities and limitations of the chatbot
			Create recognition and reward systems to encourage proactive engagement
3	People (service provider)	Choice of chatbot platform (app, browser, on-site, etc.)	Reviewing system requirements for standalone and server operations
			Create internal inventory of the IT infrastructure (predefined by the provider)
4	People (service provider)	Choice of interaction device	Examine the system requirements for the single workstation and server operation
			Analyse the end devices used when using the website
5	People (service provider)	Lack of human contact	Define exact process and conduct a controlled test run with customer
			Design chatbot not as a replacement but as a complement to human service channels (augmentation; user-friendly dialogs and designs)
6	People (service provider)	Employees initiate independent solutions, leading to shadow IT	Prevent shadow IT and proliferation of "islands of automation"
			Ensure a required IT infrastructure for chatbot project combined with clear guidelines
7	People (service provider)	non-existence / ignorance of personal benefits	Communicate the company's rationale for chatbot deployment
			Establish communication platforms (e.g., forum) to enable intra-organizational exchange of experiences
			Communicate the benefits of chatbot implementation to employees early in the process (e.g., less repetitive tasks)
			Transparently explain the changes in the employee's job description
8	People (service provider)	Process reliability of employees	Provide supporting materials, such as process documentation, instructions for action and consultative support
9	People (service provider)	Excessive employee expectations of the chatbot	Define and continuous communicate of a purpose
			Involve employees at an early stage of the chatbot design phase
			Implement internal event formats for initial information (e.g., board or department conferences, market booths, internal company trade shows, etc.)
10	People (service provider)	Uncertainty of digitally inexperienced users in dealing with the chatbot	Design a chatbot that can be operated by digitally inexperienced users
11	People (service provider)	Further development of the chatbot's dialogs	Involve a conversation designer in the chatbot implementation as a permanent role
12	People (service provider)	Untrained employees to maintain the chatbot	Provide developer resources for continuous support of the chatbot (guideline value 1 FTE á 20 automation implementations)
			Provide training programmes, training opportunities and certification
			Purchase external service
			Redesign talent development: train digitization specialists instead of generalists
			Create contingency plans ("error handling") and fallback solutions for employees ("exception handling")
			Establish a responsible project team to survey chatbot implementation (content and technical maintenance)

No	Category	Implementation barrier	Measure
13	People (service provider)	Fear of loss of status, decision-making authority, and-or activity	Communicate the benefits of chatbot implementation to employees early in the process (e.g., less repetitive tasks)
			Establish active change management to identify and eliminate employee resistance at an early stage
			Involve all stakeholders early to ensure internal customer support (e.g., management, works council, IT, line)
			Ensure cultural acceptance of chatbot introduction at management level
			Explain the changes in the employee's area of responsibility transparent
14	People (service provider)	Excessive feature set at launch leads to employees being overwhelmed	Prototype continuously as the chatbot expands to new business contexts
			Explain the changes in the employee's area of task transparent
15	People (service provider)	Collaboration between chatbot buyer and provider does not work	Conduct a workshop to develop a joint concept and determine what is possible and what is not
			Agree on clear distribution of roles and tasks, forms of cooperation, forms, and rhythms of communication
			Establish escalation levels contractually (special termination rights in case of problematic cooperation)
			Establish an open-minded culture with open exchange of advice and information, instead of silo thinking
16	Organisation (service provider)	Lack of target definition of the chatbot introduction	Communicate and define the company's rationale for chatbot implementation
			Focus on long-term value, not quick wins
			Ensure strategic alignment of chatbot implementation with business goals
17	Organisation (customer)	Chatbot deployment for wrong reasons	Ensure strategic alignment of the chatbot implementation with the business objectives
18	Organisation (service provider)	Choice of chatbot technology	Conduct potential workshop - what is possible, which use cases?
19	Organisation (service provider)	Time and financial restrictions	Provide the necessary financial and human resources
			Transparent communication between customer and provider
20	Organisation (service provider)	Missing/incorrect further development of the chatbot	Assign a project manager to monitor, manage and control the set-up, implementation, and further development of the chatbots
21	Organisation (service provider)	Qualified personnel for chatbot maintenance	Hire service analysts to provide first line support
			Hire solution architects to support IT infrastructure required for technology deployment
			Provide developer resources to continuously support the chatbot
			Conclude a support contract with provider
22	Organisation (service provider)	Follow-up costs for operation and maintenance	Demand transparent pricing policy from the provider
23	Organisation (service provider)	Excessive expectations of the benefits of chatbot deployment	Establish understanding that the chatbot implementation not only raises quantitative but also qualitative potentials
24	Organisation (service provider)	Excessive feature set at launch leads to non-assessability of benefit	Continuous prototyping when extending the chatbot to new business contexts
			Build understanding that automation not only raises quantitative but also qualitative potentials
25	Organisation (service provider)	Non-involvement of affected roles and organizational units	Conduct regular department head roundtables and information provision via internal newsletters
26	Organisation (service provider)	Unclearly defined processes of the organization	Hire process controllers to manage, coordinate and control the processes adopted by the chatbot
			Hire of process developers for design, development, test, and support of chatbot solutions
			Define and document the process to describe the process scopes (not) to be automated
27	Organisation (service provider)	Unclear division of tasks between employee and chatbot	Communicate intended impact on jobs at an early stage of the process
			Define process with clear division of tasks and responsibilities between employee and chatbot
28	Organisation (service provider)	New complex processes spanning organizational units	Establish process or business analysts to perform feasibility assessments and create process definitions
29	Organisation (service provider)	Lack of or unclear responsibility for the chatbot	Define a target operating model with clear roles and responsibilities for the chatbot
30	Organisation (service provider)	Responsibility for maintenance work	Provide developer resources for continuous support of the chatbot
			Create contingency concepts ("error handling") and fallback solutions for employees ("exception handling")
31	Organisation (customer)	Customer query not resolvable by chatbot	Hire of service analysts for first-line support
			Define escalation mechanisms (clear communication strategies, exit strategy)
			Adapt processes to suit chatbots to avoid too frequent intervention by employee
			Test a minimum viable product to eliminate exceptional situations
32	Organisation (service provider)	Legal restrictions on data processing	Ensure compliance with data protection guidelines, IT security
33	Organisation (service provider)	Poor IT security	Ensure compliance with IT security
34	Organisation (service provider)	Access rights management to data	Ensure compliance with authorization concepts
			Ensure compliance with IT security
35	Organisation (service provider)	Lack of data generation of chatbot interaction and unstructured data	Hire test analysts to perform business process-oriented tests and audits
			Set up an overview board between interfaces (e.g., chatbot and CRM)
			Define interfaces, ensure correct entity extraction and slot filling in conversation design and technical development

No	Category	Implementation barrier	Measure
36	Organisation (service provider)	Maintenance of databases accessed by the chatbot	Hire process controllers to manage, coordinate and control the processes taken over by the chatbot
			Create requirements catalogue to be provided to the customer in advance
			Maintain central knowledge database with all data accessed by the chatbot
37	Organisation (service provider)	Incorrect data entry by service customers	Ensure willingness to cooperate through transparent data collection (why is the data needed)
38	Technology	Requirement of customers to the chatbot as to the employee	Use the chatbot according to requirements, strength, and functions
39	Technology	Customer has the same requirement for employees as for the chatbot	Develop clear communication strategy between chatbot and customer
40	Technology	Limited capabilities of the chatbot lead to frustration	Use the chatbot according to requirements, strength, and functions
			Clear communication of the capability on the part of the provider
41	Technology	Chatbot language is not well received	Integrate a conversation designer as a fixed role
			Analyse users' communication (Wizard of OZ method)
42	Technology	Lack of optimization and customization options	Conduct a support contract to the customer with constant analysis
43	Technology	Unstructured data analysis of chatbot data collection.	Ensuring log files (log files) in which all activities of a software robot are written down (important in the context of a later audit)
44	Technology	Incompatible/closed interfaces	Involve IT early to ensure a robust IT infrastructure
			Test integration capability for interaction with in-house applications
45	Technology	Redundant IT systems in one company	Involve IT early to ensure a robust IT infrastructure
			Test the software solution in a controlled experiment
46	Technology	Completeness and interpretability of information	Test of the software solution in a controlled experiment

The assignment of the RASCI letters to the roles provides information about which roles are involved with which function in the implementation of the listed measures. The presentation and application of the catalogue of measures for the elimination of barriers in the context of a chatbot introduction will be illustrated with an example (see Figure 1).

Implementation barrier	Measure	Chatbot-Buyer							Chatbot-Provider			
		Service Customer	Project Team						Departments			
		Key User	...	Product Owner	Process Owner	Project Manager	...	Management	...	Project Manager	Developer	Customer Support	...
Rejection attitude and reservations of employees towards the new technology (e.g., AI)	Ensure cultural acceptance of automation at management level and communicate the reasons behind it	I			A	R		C		S		S	
	Conduct design and feedback workshops to demonstrate capabilities and limitations of the chatbot	S				R		A		S	S		
...	...												

R : Responsible   A : Accountable   S : Support   C : Consulted   I : Informed

Figure 1: Example of the catalogue of measures

The introduction of chatbots requires the integration of the chatbot functions into the existing workflow in the company. For this reason, it must be ensured that all employees involved are included in the change process and accept it. A potential cultural barrier to this is the rejection attitude and reservation of employees towards the new technology. One measure to eliminate or reduce the barrier under consideration is to ensure cultural acceptance of automation at management level and communicate the reasons behind it. A shared awareness of the problem and understanding of the goal thus achieved will contribute to employees also developing a desire for change and realising and understanding the benefits of the technology introduction for their company as well as for themselves personally. [7] The responsible implementation of the measure is primarily carried out by the project manager (R) on the side of the chatbot-buyer, as they act as a role model and can represent and shape the commitment for the whole company. The project manager must support the project both through their position as well as their behaviour [25]. The project manager (S) and the customer support (S) on the side of the chatbot-provider should also support the implementation of the measure. Through their experience and expert knowledge, they can assess whether the buyers' motivations and intended benefits are a good basis for a successful chatbot implementation. For this measure the

management (C) needs to be consulted to jointly work on the communication strategy. The key users (I) will be informed through this measure.

Another measure listed in the catalogue to overcome the described barrier is to conduct design and feedback workshops to demonstrate capabilities and limitations of the chatbot. These workshops are designed to demonstrate the benefits and limitations of the new technology, to receive feedback from employees and to promote a constructive attitude. In this way, all participants are informed from the beginning about the capabilities and limitations of the chatbot solution for the company and the employees concerned. The implementation of workshops is approved by the management (A) of the chatbot-buyer. The project manager (R) of chatbot-buyer is responsible for the implementation of the measure, based on their knowledge of the strategic objective of the chatbot implementation, the intended use and benefit as well as the resources available to the company. The project manager of the chatbot-provider (S) fulfils a supporting function here, as they have the corresponding expertise and can take the feedback from the workshops as a suggestion for improvements. In addition, the chatbot-provider's developer (S) plays a supporting role in the implementation of the measure, as they are the contact person for technical questions regarding functionality and technical requirements for the chatbot implementation.

The early realisation of these measures can ensure that the employees accept the new technology and integrate it into their process routines, which prevents a relapse into old behavioural patterns [14].

5. Discussion

The developed catalogue of measures provides a comprehensive overview for dealing with implementation barriers. The overview enables project participants to prepare for potential problems at the beginning of a chatbot implementation project and to take countermeasures at an early stage. At the same time, the user is enabled to identify potential barriers already in the planning phase. This helps to ensure that the cost and deadline targets of a chatbot implementation are not exceeded by facilitating project entry and avoiding unexpected project delays. Furthermore, through proactive measures, employees and customers can be convinced of the new technology and taken along during an implementation, which creates the necessary acceptance within and outside the company and enables a sustainable deployment of the new technology. Negative effects of potential implementation barriers can thus be effectively prevented [7].

In summary, the catalogue of measures should not be understood as a rigid template for dealing with implementation barriers. Companies with the intention of a chatbot implementation should rather use it as a guideline for orientation during the implementation process.

Further research is required for large companies, on barriers caused, for example, by slow processes and organizational inertia. For SMEs from the mechanical and plant engineering sector, more extensive research is required for a complete guide to the introduction of chatbots that goes beyond addressing possible barriers to introduction with corresponding overcoming measures. An adequate implementation concept must accompany the company from project initiation to implementation and the incremental further development of the chatbot deployment. For this reason, the research project "Chatbot in Service" investigates further aspects of chatbot implementation such as the identification and prioritisation of potential implementation scenarios, a provider and technology screening for chatbot implementation, the quantification of potential benefits as well as the collection of factors influencing acceptance and measures for overcoming them.

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