

# How to Empower Users for Co-Creation – Conceptualizing an Engagement Platform for Benefits Realization

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**Abstract.** Organizations invest huge portions of their budget in IT with the goal to realize benefits as improving work practice and establishing new processes. To achieve this goal, users are engaged throughout projects by various methods and approaches. Nevertheless, after the completion of a project, users lack power and opportunities to further realize benefits and thus assuring the overall success of a project. To close this gap, we present the concept of an engagement platform that empowers users collectively to induce change initiatives that enhances the realization of benefits in the post-project phase. By doing so, benefits management practices undergo a paradigm shift from recent top-down management towards bottom-up realization of benefits. This change in perspective also incorporates a service systems perspective as it focusses on the dynamic configuration of actors and resources to enable value creation in a complex context.

**Keywords:** service system engineering, software introduction, technochange, user-generated services, benefits management

## 1 Introduction

Organizations invest huge portions of their budget in IT with the goal to realize benefits as improving work practice and establishing new processes [1, 2]. To achieve these objectives, IT investments must be well embedded in the organizational context resulting in complex project constellations. Additionally, anticipated benefits of the software can only be created in distinct contexts by various users utilizing the software. Thus, projects contribute to a service system, as a sociotechnical artifact in a distinct organizational environment is instantiated [3]. Following, benefits realization is done by using this sociotechnical artifact in a specific context while integrating various resources and actors [3]. Engaging users is therefore state of practice during projects by various methods and approaches [4, 5]. This engagement is done by selecting some users with a top-down approach within the project. This top-down approach is advantageous to get projects approved and delivered. Whereas a much broader or even general participation is complex, expensive and hard to keep target-oriented during a

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project. Especially, considering major changes in software as introductions of new software or significant upgrades only representing users can be engaged efficiently throughout the project. Thus, most users cannot actively participate in the adaptation of software and organizational changes. Even more due to the context of use that is defined by the actors involved and the organizational boundaries this limited engagement leads to limited ability to realize benefits entirely. This limitation even increases after the completion of a project, users lack opportunities and power to further realize benefits and thus assuring the overall success of a project [6]. Recent literature reviews on benefits management from a project perspective [31, 32] show that, in post-project phase, there is no established method or concept to support emerging benefits as well as intended but unrealized benefits which is also reflected in a qualitative study [6]. This lack of engaging users is also mirrored as a third of installed software in organizations is estimated to be not used at all [7].

By utilizing a service systems perspective with the users as facilitators of value in context, a bottom-up approach seems more beneficial to enhance capturing of benefits to overcome these limitations in the post-project phase. Especially, regarding varying time lags and emergent benefits that have not been anticipated [4, 11-13]. Based on this perspective, a shift towards a bottom-up approach for enforcing co-creation within the community of users to further realize benefits and thus improving the solution and its value delivered collectively [8, 9]. A promising approach to instantiate such a bottom-up engagement platform is internal crowdsourcing as it aims for collaborative value facilitation within an organization by potentially engaging all users [33]. This active engagement also copes with the need for organizational change that complements new or changed IT to realize benefits [11]. This is also recognized in literature on IT-enabled transformation that emphasizes that capturing benefits is a critical post-project activity [10]. Following this argumentation, the paper answers the following research question: *How can a concept to empower users for co-creation of change initiatives be designed to enhance the possibilities to realize benefits?*

We do so by presenting the concept of an engagement platform that empowers users to collaboratively induce change initiatives that enhances the realization of benefits in the post-project phase. The resulting platform seeks to catalyze the potential of value co-creation as it decidedly addresses the context of users' engagement with the delivered software during the introduction. To enable value creation between actors of the service system, users should be empowered to implement change initiatives and thus, foster timely realization of benefits. This novel approach exceeds common crowd initiatives established for example within innovation management as change initiatives are not only identified and ranked, but explicitly realized within a specific organizational context.

Thus, benefits management practices undergo a paradigm shift from recent top-down management towards bottom-up realization of benefits. This shift has the potential to increase the ability to change organizations and their work practice drastically [14].

As service research [3] as well as design research [15, 16] calls for evidence-based cumulative research, we propose the concept to an engagement platform as the result of the design phase of our design science project. The remainder of the paper is therefore structured as follows: the second section builds up a foundation of the

research by defining and summarizing related research. In the third chapter, we describe the methodology used to develop the engagement platform. All components of the concept are derived and comprehensively described in chapter four. The paper closes with a conclusion and outlines future research.

## **2 Conceptual Foundations**

### **2.1 Service Systems Engineering**

Service systems describe a configuration of actors and resources and their interaction [1] in order to enable co-creation of value by sharing resources among actors [2]. This is in line with the definition given by Böhmman et al. who conceptualize a service system as “complex socio-technical systems that enable value co-creation” [3]. Research has recognized the emergent importance of service systems and the need for establishing further research within this field such as service science [1, 4]. This research is supposed to address the interaction between actors regarding human agents with knowledge and skills as well as resources as technology, information, physical artifacts which interact in co-creation [1]. Service systems engineering elaborates therefore on the importance of systematic design and development of such service systems and calls for research on evidence-based design knowledge [3]. Service systems research consequently applies the principles of service-dominant logic which constitutes value creation through collaboration and contextualization [5]. Accordingly, contextualization emphasizes that producer and consumer create value collaboratively by configuring actors and resources specifically in a context [6, 7]. Hence, service systems enable value co-creation through configuration of actors and resources guided by its value proposition [5]. Understanding service systems as configuration of actors and resources with the aim of searching for principles and approaches that can help to improve value co-creation [8] we focus on the integration of these resources in order to foster the end-user co-creation of value within software implementation projects to realize benefits jointly.

### **2.2 Internal Crowdsourcing**

Crowdsourcing is an IT-enabled phenomenon which is based on social IT like wikis, blogs or social networks [9]. Crowdsourcing can be defined as using information technology to connect various potential user groups to accomplished tasks by voluntary crowd workers often motivated by mutual benefits [10]. One main characteristic of crowdsourcing is the location of the crowd, which can be distinguished between external (e.g. communities of interest, customers) and internal (employees). External crowdsourcing has been applied in different industrial contexts as exemplified by the cases of LEGO [11] and SAP [12]. Yet, little is known about building and engaging a crowd within organizations [9]. As shown by Zuchowski et al., internal crowdsourcing has characteristics which distinguish it from external crowdsourcing. For example, the crowd is comprised of employees and is thus long-term oriented rather than

independent ad-hoc and short-term-oriented external crowds [9]. An extensive literature review stated conflicting definitions and conceptualizations of internal crowdsourcing in literature [9]. The authors define internal crowdsourcing as “an (a) IT-enabled (b) group activity based on an (c) open call for participation (d) in an enterprise” [9]. This definition is in line with an engagement platform from a service systems perspective and therefore bears the potential to support benefits realization. Another characteristic is the need for organizational culture management skills, because the approach requires an open organization where employees can collaborate and debate with each other without having cultural boundaries [13]. A characteristic of external crowdsourced solutions, on the other hand, is that the design has the potential to reveal ‘outside the box’ information, while an internal crowd may also be suitable to solve contextualized, enterprise-centered problems [11]. In addition to location, the task is an important factor for distinguishing crowdsourcing approaches [14]. Crowds can be engaged to gain access to a diverse knowledge base as tasks vary between low levels of complexity, as considered in research on microtasking or microworking [15], to tasks with increasing complexity such as ranking, sharing knowledge, ideation to design and development of new solutions. While tasks with low complexity can be crowdsourced externally to increase productivity by reducing time and costs, knowledge-intensive tasks with a high complexity will often preferably be allocated to internal crowds as only an internal crowd is fully aware of a given context.

### **3 Research Design**

The research project follows a design-oriented research strategy [16] and is conducted by utilizing the Design Science Research Methodology [17] to systematically and iteratively design, develop as well as demonstrate and evaluate a sociotechnical artifact in a suitable context.

Therefore, the first phase Problem Identification and Motivation aims for defining the research problem and adjusting the target of the solution. This deep understanding of the problem space defines the vision of the to be designed artifact. This research project follows the problem-centered initiation as the practical relevance is shown in the introductory section as well in following chapter. Although a lack of benefits realization targeted by software implementation projects is identified current research does not address this issue. This research therefore aims at developing a concept to empower users for co-creation of improvements to enhance benefits realization after software introductions.

In the following phase objectives of a to be designed solution are derived grounded on a previous study on post-project management in large organizations and research on service systems. The next phase Design and Development utilizes these results as the foundation of the implementation. As scholars call for cumulative research in service research [3] as well as design research [18, 19] we propose a concept as a result of the design and development phase as focus of this research. Nevertheless, as design, development, and demonstration are highly iterative phases, we include insights of the demonstration of early mock-ups and a first prototype that build the foundation of a

future evaluation. This evaluation is planned to be guided by the Framework for Evaluation in Design Science (FEDS) [20]. Therefore, in the planned Evaluation phase the artifact is applied in the context of a Microsoft SharePoint introduction within the case organization. Thus, a suitable context to validate its applicability and utility by solving real problems is given [17]. The results gathered throughout this evaluation likely lead to further improvements on the initial concept.

## **4 Designing Benefit Realization Supporting Components**

In the following section the course of the design science research project is described that leads to the design of the benefit-supporting components. The focus hereby lies on the conceptualization in the design and development phase. Accordingly, the first two phases are only shortly described as this project seeks for a cumulative communication of the results as called for by researchers [3, 18, 21].

### **4.1 Problem Identification and Motivation**

Service systems have evolved into key concepts for research in information systems [1, 22]. Many industries such as IT manufacturing and healthcare seek to design effective technology enabled service systems that efficiently allow the configuration of the service system to meet individual needs and to create value in each context [3, 23]. As various studies show, a major problem of software introductions is that the resulting solutions is insufficiently used in organizations and thus, value is not created [24-27]. This lack of use varies from denial of use at all, users establishing workarounds to using a software but not efficiently or even effectively [25, 28, 29].

Despite this general problem description, this project is done in close cooperation with a client organization. The research takes place in a public law institution with 1.800 FTE. During an initiating workshop, the described problem was mirrored in this organization. Thus, a software introduction project was identified that fit to the described problem and has the potential to implement the to be designed concept of an engagement platform. Consequentially, the artifact aims at realizing benefits targeted by the project with a concept to empower users to co-create value within an engagement platform that integrates operand and operand resources within this service system. This is done by identifying possible improvements, discussing these, and applying the improvements collectively to realize benefits.

### **4.2 Objective of the Solution**

With the overall problem definition as foundation for this design science research project, objectives of a solution must be identified. To do so, two approaches were taken. On the one hand, a preliminary qualitative study in twelve large organizations was conducted that evaluated the state of benefits management after a projects result is delivered [26]. The study reveals shortcomings of current practice that lead to implications for the design of the to be designed artifact (O1-4). On the other hand,

literature on service systems engineering gives directions on the integration of resources and how actors can co-create value. Based on this research stream, a novel approach is taken that focusses on user-integration to co-create not only ideas for improving a software but also implementing the proposals by applying deep contextual understanding of engaging users (O5,6). The resulting objectives and their related sources are subsumed in Table 1.

**Table 1.** Objective of the proposed Solution

<i>No.</i>	<i>Objective</i>	<i>Source</i>
O1	Enforce continuity of benefits management that outlasts projects	[26]
O2	Accompany transition and early usage phases with an ongoing action-oriented approach instead of only a retrospective one	[26]
O3	Identify emergent benefits after the transition is completed and regular work practice is achieved	[26, 30]
O4	Establish ways to deal timely with improvements	[26, 31]
O5	Mobilize resources to enable user-driven change	[3, 32-35]
O6	Establish a platform that allows actors to engage	[33, 36]

The first objective considers the dynamic during projects and afterwards that ownership of benefits is changing dynamically (O1). Therefore, an engagement platform should ensure that change proposals are consistently related to the initiator or a governing actor to be able to take on actions that support progressing with the change. Thus, distinct actors are aware of the benefits related with the change and can monitor its realization. Additionally, they have the ability to communicate the usefulness. Secondly, practical insights show that current benefits management practice is mainly retrospective in the post-project phase. Therefore, a solution needs an action-oriented approach (O2) to enable actors to improve the deployed software according to the specific needs to ensure the realization of value in context. Hence, it is not sufficient to solely collect change requests to propose follow-up projects. As users establish work routines with the introduced software [37], a solution should support users by identifying further unintended benefits (O3). By doing so, users can be more engaged by improving the software and contextualize it based on their specific needs. Analogously, by establishing approaches to timely implement and thus improve the introduced software (O4) users' engagement is likely to increase and as a result benefits realization increases as well. As a major challenge in service systems engineering is the mobilization and integration of resources, a solution should incorporate approaches to do so (O5). Following Breidbach et al., the solution should have touch points that provide structural support for actors to realize the exchange and the integration of resources [36]. Finally, a solution to enable users to improve introduced software needs to be designed as an engagement platform (O6) [33, 36]. Consequently, the solution should facilitate exchange between users.

### 4.3 Design and Development

To address these objectives and as the third activity of the design science research process a concept is developed with the overall aim to enable end users to contribute to adaption and customization of an introduced software. Hence, the concepts integrate mechanisms to engage all users of a software recently introduced to exchange and integrate resources to improve the software. By striving for this goal a fundamental change takes place as an internal crowd is empowered to change software utilizing a bottom-up approach. This approach leads to empowered users that can propose, interact on, and realize changes to a software. In this context, opportunities are supported, which help to mobilize and access previously untapped resources of users leading to a contextualized adaptation of the software and thus bearing the potential to improve benefits realization [38]. Doing so facilitates and empowers users to build and strengthen capabilities for implementing change initiatives using dynamic resource integration as an internal crowd. This concept shifts benefits realization from strictly formalized processes towards support in collecting experience and perception of users directly affected using the new software.

As this research takes a problem-centered approach, the design is mainly driven by the aforementioned practical and theoretical insights. Due to the strong commitment of the client organization, each iteration that lead to this concept was demonstrated and refined with practitioners. Nevertheless, the concept represents an abstraction and therefore, can comprehensively be adapted to other contexts as well.

Following the objectives, the concept for empowering users to co-create change initiatives and to enhance benefits realization in software introductions consists of three core components. A user joins the engagement platform and follows the concept in a sequence by proposing a change initiative (C1). The second component (C2) aims for gaining crowd-commitment as supporting factor for realizing the change initiative and embody validation by the internal crowd if the change initiative is worthwhile realizing. Last, the third component (C3) supports users to realize change initiatives that are accepted by the crowd and deemed beneficial. However, the concept has an iterative character which allows re-entry in earlier components based on insights gained during the initial change initiative. Possible insights can be further change initiatives, spare change initiatives or insights which impacts the proposed change initiative.

Every component subsumes several functions that aim to transform an expected input into desired output. Subsequently, we describe the three core components of the concept in detail. We thereby focus on functions, their interfaces, cross-sectional dependencies, and design variables that need to be considered for instantiations of the concept in various service systems.

#### **Proposing a Change Initiative (C1)**

The aim of this component is to provide an engagement platform for users that enables them to collect ideas for change initiatives (Table 2). These initiatives are only emergent during the use of the introduced software in specific contexts. If for example, a process lacks accuracy during its runtime users can report immediately and contribute a change initiative for the redesign of this process. To propose a change initiative, users specify the change initiative (C1F1). This is done by describing the idea or issue (C1F2)

and the related software as well as suggestions how a resolution could be realized on the engagement platform. To join the platform users should first create a user profile with information about skills and to further relate to matching change initiatives (C1F3). By using the platform, the profile will be extended with tags of interest for initiatives a user engaged with and thus represents a user’s context holistically. Another mode to join the platform is to anonymously participate on the platform. This design decision must take into the effects of anonymity in communities’ consideration as well as relatability of individual opinions. Table 2 subsumes the functions and highlights design decisions made in the organizational context of the project.

**Table 2.** Overview Component C1: Proposing Change Initiative

<i>Objective</i>	O1, O2, O3	
<i>Input</i>	idea statement, improvement proposal, solution design	
<i>Functions</i>		<i>Design Variables</i>
(C1F1) initialize change initiative		<b>idea, solution, problem</b>
(C1F2) describe change initiative		free text, <b>defined template</b>
(C1F3) create user profile		anonymous, <b>single-sign-on</b> , new profile
<i>Output</i>	well formulated change initiative	

### **Gaining Crowd-Commitment (C2)**

The overall aim of this module is to gain crowd-commitment for a proposed change initiative. Thus, users are supposed to engage to co-create suggestions and possible solution designs. Accordingly, one purpose of this component is to build communities of interests. To participate in such a community modes of crowdsourcing can be distinguished in general between the modes ‘wisdom of the crowd’ and ‘marketplace/contest’ [39]. With the aim of improving usage of software and with the boundary condition of limited members in the user base it is not suitable to compete against each other. Moreover, the overall aim is to work collaboratively on a solution to an identified problem. This is in line with the guiding definition of internal crowdsourcing which declare an ‘open call for participation’ [9]. Therefore, the concept should provide opportunities to discover change initiatives (C2F1). This can be instantiated using search and filter functions for new and relevant change initiatives. A more proactive and dynamic way to discover change initiatives is by demonstrating success stories related to user profiles by recommender engines.

Providing feedback for change initiative, developing suggestions and solutions (C2F2, C2F3) as well as rating change initiatives (C2F4) requires engagement between actors (C2F5). To prioritize change initiatives rating mechanisms can be implemented inspired by funding, voting and rating mechanisms. Based on the feedback and a prioritization change initiatives are selected which have particularly high and relevant benefits for software usage. To address a broad range of users, groups of interests and departments these functions must be provided across the organization to give all users the opportunity to participate as well as to involve users (C2F6). Therefore, communication such as blogs or forums are needed. Additionally, opportunities to address single users explicitly with sharing functions or with tagging systems that may

suggest potential experts are needed to support communicating change initiatives and to engage users. A web-based information system which provides users a communication infrastructure is needed to allow them to share change initiatives, feedback, design discussions and helping to build solver groups. The participation of users will be strengthened in this way and they can contribute their expertise to provide improvements for a wider range of users. Gaining crowd-commitment does not only aim for gathering feedback for a change initiative but moreover to build a realization team to solve the issue and implement the developed solution design (C2F7). In this regard a user volunteers as a solver and thus teams up with the requestor and other committed users. This (virtual) formation can be supported for example by expertise matching tag systems as well as direct addressing potential solvers.

**Table 3.** Overview Component C2: Gaining Crowd-Commitment

<i>Objective</i>	O2, O4, O5, O6	
<i>Input</i>	change initiative	
<i>Functions</i>		<i>Design Variables</i>
(C2F1) discovering change initiative		<b>search function, success stories, recommendations, filter function</b>
(C2F2) feedback change initiative		<b>blog, forum, instant messaging</b>
(C2F3) develop suggestions and solutions		<b>free text, mock-ups</b>
(C2F4) rate change initiative		funding, rating, <b>voting</b>
(C2F5) communicating change initiative		<b>passive, active</b>
(C2F6) involve users, experts		<b>tagging, mail, newsletter</b>
(C2F7) building solver-team		<b>self-organized, direct communication</b>
(C2F8) govern crowd		<b>self-regulating, passive controlling, community-manager</b>
(C2F9) monitoring status change initiative		promote, remove, <b>provide status</b>
<i>Output</i>	(virtual) team formation, refined and validated solution design	

Further mechanisms should be considered that adopt functions of managing the crowd. For example, in the case of inadequate comments guidance how to govern the crowd are required (C2F8). This might imply the need for community management as well as reporting mechanism. Additionally, by monitoring the status of a change initiative and information about recent activities, community management can actively promote or remove outdated change initiatives (C2F9). The hurdle lies in the activation of users to engage on the platform, discovering change initiatives and to participate with feedback, rating as well as solving change initiatives. Guided by the demand to design an “engagement platform to incentivize certain actors to contribute their resources and enable service-for-service exchange” [33], corresponding motivation, activation and incentive mechanism for users have to be established. Therefore, motivation and incentives can be distinguished between the source of incentive (intrinsic, extrinsic) and the object (monetary, non-monetary) [40] and should be embedded in the instantiation of the concept [41]. However, the willingness and

openness to participate on the engagement platform may be restricted by social influences. By designing communication, coordination, motivation and incentive guidelines the boundaries of individual decision making within an organization and closed communities should be considered. Actors act within a structure restricted by social rules and collective meanings, which are part of the organizational culture [42]. This is mirrored as well in the overview given in Table 3 including the design decisions in the case organization.

### **Realizing Change (C3)**

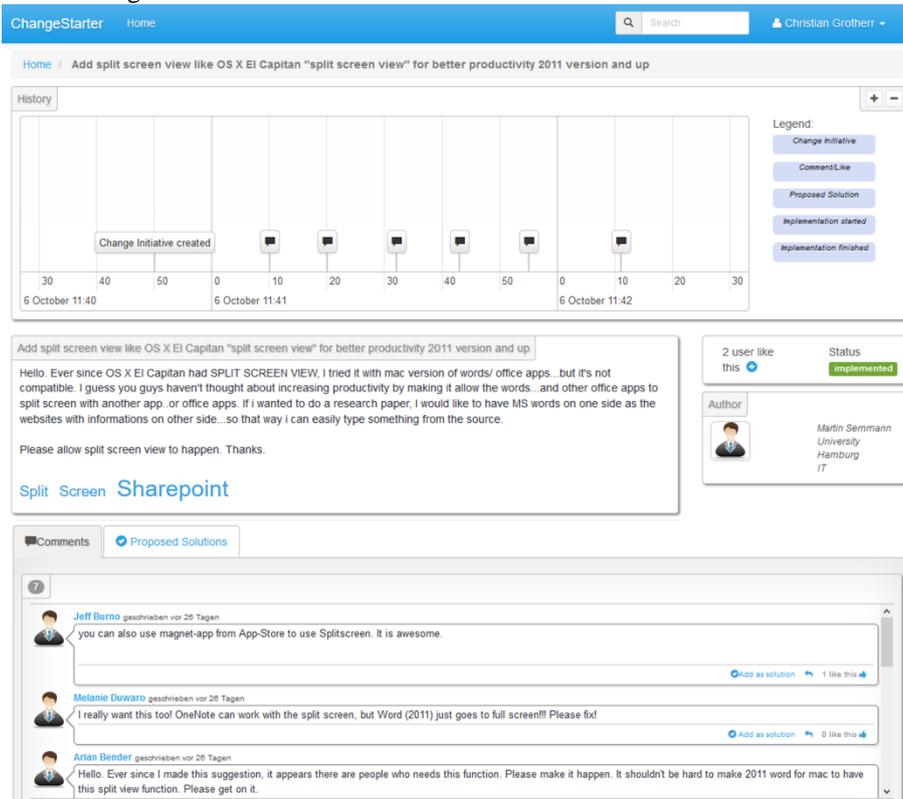
As the overall aim of the concept is to realize change initiatives. As organizational context also embodies limited time for additional activities and lack of access permissions, change initiatives will be implemented jointly by the crowd and transferred to regular operation (C3F1). By providing dedicated time for users or adding additional resources users are empowered to realize benefits for themselves and for other users (C3F2). It is also possible that projects arise, which are equipped additionally with budgets and possibly additional resources and handed over to general project management. Other ways to support realization of change initiatives are crowd mechanism (C3F3) such as task management [43]. Building tasks to split workload and provide the possibility for lightweight participation in the realization process. Further dividing realization projects into small tasks supports automated testing and automatic integration [43]. After users have realized a change initiative, the solution should be tested and evaluated regarding defined acceptance criteria (C3F4). This also depends on the context and thus needs to be defined during instantiation of the engagement platform. After realizing and deploying change initiatives engaged users are informed and rewarded as defined during instantiation of the engagement platform (C3F5).

**Table 4.** Overview Component C3: Realizing Change

<i>Objective</i>	O2, O4, O5	
<i>Input</i>	solution design	
<i>Functions</i>	<i>Design Variables</i>	
(C3F1) realizing change initiative		
(C3F2) enable realization	<b>attracting experts/consultants/IT</b> , providing dedicated time	
(C3F3) building, assigning tasks	<b>self-regulated</b> , supported by tools, only if no additional tools are needed	
(C3F4) testing and evaluating change initiative	how ( <b>not mandatory</b> , acceptance criteria), who (IT department, <b>user</b> )	
(C3F5) reward participants	monetary, <b>non-monetary</b>	
<i>Output</i>	realized, deployed change initiative, realized benefits	

#### 4.1 Demonstration of a Preliminary Instantiation

The conceptual results of each design and development cycle were already initiated as prototypes and demonstrated within the case company. Starting with a reduced prototype the demonstration of the components and their functionality was initially conducted with a low-fidelity prototype (mock-ups). By extending the concept incrementally based on the preliminary results of the demonstration, the overall concept was instantiated as a responsive web application based on open source frameworks as shown in Figure 1.



**Figure 1.** Instantiated User Engagement Platform supporting Benefits Realization

In sum, five workshops were conducted lasting two hours each including highly relevant stakeholders such as the CIO, head of IT operations, senior managers, representatives of the workers' council, and privacy commissioner to gain strong commitment of management as well as workforce.

Within the demonstration phase, feedback was gathered regarding the set of design variables and their manifestation to meet the requirements of the organization like the condition of voluntary and autonomous participation on the engagement platform. The results are highlighted in Table 2 to 4. Additionally, further extensions and improvements of features were discussed. For example, features were added to support

discovering change initiatives (C2F1) like search functions and success stories. Despite this, every workshop helped streamlining the overall usability by simplifying the user interface to decrease adaption barriers.

## **4.2 Evaluation**

As the first completed demonstration of the concept and its instantiation was successful, an extensive evaluation is currently planned. This evaluation is will be operationalized at the case organization and is open to all employees. Based on the gained commitment of relevant stakeholders during demonstration phase, we can deploy the prototype within the systems of the client and ensure deliberately low participation. Moreover, the evaluation does not have a dedicated timeframe and thus the internal crowd of the organization can evolve over time. The goal is to include 100 FTEs during the first phase of the evaluation. To achieve this goal, a set of potentially interested users is identified that could act as promoters for the concept within the organization. These users also serve as pre-tester to populate the platform with initial initiatives.

By evaluating the artifact within the organization, feedback is gathered applying qualitative methods such as interviews or thinking aloud to get insights on user's perception [44, 45] as well as gathering usage data. Accordingly, we do not only focus on the technical evaluation but also seek to gain insights on the social consequences of the artifact. Thus, the evaluation will contribute to the ongoing debate on socio-technical artifacts [46, 47]. The experiences and results of the evaluation are directly incorporated into further development and refinement of the concept.

## **5 Conclusion**

Striving for a rise of benefits realization after a software introduction is formally closed, we presented a novel concept of an engagement platform. This concept utilizes a service systems perspective to empower users by a bottom-up approach to propose, engage and discuss and finally implement changes for this software and work routines. By doing so, the entirety of users can improve sociotechnical interaction to enhance the creation of value in context. Consequently, users are empowered to realize benefits that could not sufficiently be addressed during the software introduction project but even more, can deal with emergent benefits collectively. As the design of the concept integrates practice-oriented as well as theoretical insights within a case organization to instantiate the concept, in depth knowledge on the integration of resources in a complex service system as well as engagement strategies can be gained. Thus, this research is a core foundation towards an evaluation that is evidence-based and bears the potential to further improve design knowledge on actor-centered service systems engineering. Additionally, the proposed concept relates to current research on benefits management that seeks to understand how benefits realization can be fostered on actor level.

As a next step, the concept will be evaluated in practice within the introduction of Microsoft SharePoint. Moreover, it is planned to apply the concept to other contexts to assess and further enhance the transferability. Especially, regarding the design variables

we seek to identify beneficial combinations to strengthen the engagement of users and thus contribute to the still emerging research on actor engagement in service systems.

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