

Reflections on Participatory Design Practices in Public Sector IT Project Management

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Abstract— Participatory Design (PD) is the field that stands by the principles of democratic design practices and user involvement in the design of technologies meant for them. PD is often critiqued as not finding its place in project management in private or public institutions, where technological innovation is constrained by time, costs, organizational rules, and, most important, outcomes. Conducting a critical reflective analysis guided by PD principles, we study in this paper if PD principles are present in Information Technology (IT) project management process in the public sector and provide some guidelines on how PD can contribute further to the process. Findings are presented as open discussion points that require further investigation and application in practice.

Keywords- *Participatory Design; IT project management; public sector.*

I. INTRODUCTION

Participatory Design (PD) is the field that stands by the principles of democratic design practices and user involvement in the design of technologies meant for them. PD emerged in the context of workers requiring more rights in decision-making about technologies in the workplace and developed into other contexts where marginalized user groups were given a voice and say in technology development [1]. Despite the noble aim, PD is often critiqued as not finding its place in private or public business settings, where technological innovation is constrained by time, costs, organizational rules, regulations, and, most importantly, outcomes.

Both private and public sectors need to keep competitive advantage and growth by fostering innovation and sustainable development [2]. To do so, innovation and product development in the Information Technology (IT) world is driven by establishing projects. "Projects" are defined as temporary structures that aim to deliver outcomes within specific timelines, budget, quality, risk, and benefits [3]. Moreover, due to the compartmentalization of knowledge where specific companies/institutions/organizations specialize in offering specific services and products, achieving the project outcomes has shifted from exclusive internal development (R&D) to cooperation with external partners [4]. Hence, making IT sourcing projects a common business practice.

While PD principles seem to align with multidisciplinary project management practices, the

explorative nature of PD and the challenge that it adds to timelines seem to limit its usage.

In the public sector, project management practices are common. However, these practices are subject to constraints dictated by rules and regulations. Additionally, there is a strong call in the public sector for citizens' involvement in every instance to represent their views better and increase the accountability for services delivered.

Hence, in this paper, we question to what extent PD principles are applied in IT project management process in the public sector. We studied two cases in two different countries. Data was collected through official public document analysis, interviews, and minutes of meeting notes.

Based on the data collected, we conducted a critical reflective analysis to what extent and how the principle of PD was present in the two-project studied. Based on these theoretically grounded reflections, in the findings, we present remarks for embracing PD in the public sector. These remarks should be further investigated in future research.

Section 2 will initially present a theoretical background for our work, followed by the method we used for data collection and analysis in Section 3. Further, we present the results of our reflective analysis in Section IV and finally discuss the findings in relation to the theory in Section 5. We contribute to the body of knowledge for public sector IT project management and to PD and the discourse for its application outside of academia.

II. THEORY

In this section, we present the theoretical ground for this paper. We start by presenting PD, its principles, and what characterizes it as a research field. Then, we present the theories on public sector IT project management by starting with what project management is, what characterizes project management in the public sector and some of the latest discourses in public sector IT project management regarding participatory practices.

A. *Participatory Design*

PD is the field of research and evolving practice of design that propagates the relevance of users' involvement in the design of technologies meant for them [1]. It has a transformative agenda in building systems for and with

people [5]. PD stands by the principle of democratic participation and is concerned with the politics of design and users' participation in the design processes [6]. PD practitioners believe in the relevance of situational knowledge and the promotion of mutual learning as the only way to design adequate solutions that address real needs [7]. Mutual learning is a practice-driven concept representing sharing of values and knowledge in PD activities. Capturing situated knowledge and achieving mutual learning is conducted through choosing and applying the right techniques and tools that engage people in telling, making, and enacting [8].

"Participatory design project is set up, so the users are enabled to take an active part in the activities and decisions through which new IT is designed and built." [9]. A PD perspective poses challenges in new projects, such as developing a complex technological solution and opening it for additional learning during design and after. Based on the concept of seeing-moving-seeing from Schon, Bratteteig and Wagner [10] defined participation as involving relevant stakeholders in choice creation, selecting among them, concretizing choices, and evaluating the choices. The design decisions should be reflected in the design result. Bratteteig and Wagner [11], in their discussion, argue that the design result can be the artifact developed that influences the context for which it was designed by contributing to changing existing power structures. Another PD result is to give users a voice – and a say, so they can assume power over their situation by participating in major design decisions that are visible in the artifact. Moreover, it is important to understand if the designed artifact presupposes (or suggests) changes of power structures in the use situation as a prerequisite or as an effect of using the artifact.

Finally, reflecting on projects without being able to promote concrete change but sharing participants' insights and experiences is a key aspect of research and may, over time, contribute to the changes PD argues for.

Hertzum and Simonsen [12] discuss PD application in organizational settings and propose an effects-driven IT development to pursue and reinforce PD when applied in commercial IT projects. This approach has three steps: specify effects, iterative prototyping, and pilot implementation. Whittle [13], with a similar approach, studies 6 PD projects in terms of outcomes and concludes that PD is much more focused on processing and would benefit if managing the process focuses on defining outcomes and keeping track of their deliveries. They also suggest that an Agile approach can contribute to PD to make the process leaner. Additionally, they state that while software development researchers have looked into PD to integrate its principles [14], scarce efforts (e.g., [15]) have been the other way around to reflect on agile PD practices. Ferrario, et al. [16] describe a project management framework for software engineering for "social good" where elements of agile and iterative development are integrated with actions research and PD principles. The process has four phases: prepare, design, build, and sustain, which move incrementally and promote partnerships and

mutual learning among all relevant stakeholders by applying PD creative problem-solving techniques and delivering working prototypes that can be moved further to product development.

B. *Project Management and the Public Sector*

Project Management (PM) emerged in the mid-20th century, and since then, it has become a prevalent way to manage business activities. Project Management Institute (PMI) defines a "project" as "a temporary endeavor undertaken to create a unique result" [3]. A result could be a product, service, document, capability, deliverable, or outcome. Project types vary in terms of their level of complexity, technology uncertainty, pace, and novelty [17]. In technology-driven organizations, project types can be categorized based on the types of organizational change described by Orlikowski and Hofman [18]: planned or anticipated, emergent, and opportunity-based. The emergent and opportunity-based ones are defined as innovation projects [19].

Distinctive methodologies have been developed for conducting a project from the start till delivery (such as PMI, PRINCE 2, PM2, AMP, SCRUM etc.). These methodologies variate in focus, and while some can be descriptive (PMI), others are more prescriptive (PRINCE 2) [20]. The study of Ghosh, et al. [21] shows that, in general, projects involve initiation, planning, execution (in distinct stages and iterations and by aligning with software design and development phases), controlling, and closing.

User requirements and business justification drive the project. The stages of project management can be distinguished by the phases of product delivery involving design, building, and testing [21]. Each of the techniques has its strengths and drawbacks. For example, PRINCE 2 has strength in framing the process but does not elaborate on the involvement of human resources and suitable techniques for project leadership and procurement issues. All methodologies propagate the necessity to tailor the project management based on the project needs, and in practice, the different project management approaches are merged. However, in each project, the following elements should be managed (PRINCE 2 ref): Time – When will the project be finished? Cost – Projects need to give a return on investment, and costs need to be controlled. Quality – Are products passing their quality checks, and will users be able to use the project product as expected when delivered? Scope – Is the scope clear to all stakeholders? Benefits – Expected benefits must be known, agreed and measurable. Risk – All projects have risk, so risk needs to be managed so the project has a better chance of succeeding.

While the project management approach is commonly encountered in the private sector, citizens' demand for better public services and accountability for using taxpayers' funds incentivized the public sector organizations to apply this approach [22]. Moreover, with the digitalization of public services being a big part of governmental budgets, public organizations find many IT

projects over budget, behind schedule, and producing fewer benefits than expected [22].

Project management practices in the public sector are influenced by the necessity for accountability, legally regulated conduct, resource management, and the political motivation to deliver results within specific time limits [23]. Accountability is exercised toward a broad range of stakeholders, such as elected officials, various members of the government management structure, employees, citizens, special interest groups, and the media [23].

The field of collaborative public innovation recognizes the necessity of collaboration among multi-actors and -institutions. Each stakeholder contributes knowledge, imagination, creativity, resources, transformative capacities, and political authority [24].

Citizens' involvement varies in regard to different conceptions of democracy and a certain mode of governance [25]-[29] such as: a) Traditional Public Administration (TPA) that position citizens as clients and relies on experts' perspectives to decide the agendas for the public sector services, b) New Public Management (NPM) that regards citizens as customers who can influence the public services by choosing to use them or opting out from them [23], and c) New Public Governance (NPG) where citizens are given a more active role as co-producer [24]-[25] and co-creators [26]. However, achieving such cooperation with citizens is challenging because the public administration mistrusts citizens' expertise and their motives [30]. Additionally, for citizens, it is time demanding. It usually attracts resourceful citizens, thus, lacking the perspective of the rest of the population.

Agger and Lund [25] use the concept of co-innovation as an umbrella term for the involvement of citizens in public innovation in all stages as co-initiators, co-designers, and co-implementers. In each phase, citizens can, as public consumers, engage more directly in producing new public services, thereby becoming the locus of value creation.

Marketization has also influenced public sector IT service provision. Marketization refers to a broad span of arrangements where private sector organizations contract with public sector bodies to deliver a welfare service in exchange for public funds [31]. Marketization can be applied by contracting out public services to private companies or by promoting free choice reforms where citizens are given the right to choose between public and private providers of welfare services [32].

Contracting in the public sector follows regulations on how to manage procurement to incentivize competitive advantage for all interested private companies. However, the procurement processes are usually rigid and, instead of promoting innovation, impede it. Lean Agile procurement applies principles and practices from design thinking and agile software development to propose changes to procurement and the contracting process between public and private to promote partnerships that can promote innovation [33].

III. METHOD

We collected data from two public IT project management cases, one in Albania and one in Norway. The cases were selected strategically to address different public sector IT project management practices representing a developing and developed country with established democracies and a free market.

For Albania, we applied document analysis to map the process of IT project management in the municipalities. With that knowledge, we interviewed an expert in auditing such projects. The selected project was inspired by observing the changes in IT infrastructure in the municipality area and the aim of such infrastructure change to contribute to citizens' well-being.

For Norway, the case selected was a project where the first author had been involved from the initiation phase as part of the project group. The project took a stand in applying a PD approach and involved the interaction of many stakeholders at different stages to deliver a public IT project within healthcare. The data collected consisted of documents, emails, and minutes of meeting notes from the whole process.

Data analysis was done in three phases. Initially, we applied content analysis [34] with a priori codes from the project management phases presented in the literature: initiation, planning, execution, closing, and controlling. The result of this analysis is presented in section IV with the presentation of the cases.

To assess the degree to which the PD approach was applied, in each case, we conducted a reflective practice analysis [35]. Reflective practice is "learning through and from experience towards gaining new insights of self and practice" [4]. Dewey [5] was among the first to identify reflection as a specialized form of thinking ignited by doubt, hesitation, or perplexity related to a directly experienced situation. In design, reflective practices have been commonly applied [36] and contribute to advancing knowledge. Initially, we reflected on how and to what degree the two main PD elements described in the literature were present in each case: a) participation – seen both in terms of mutual learning and power balance concerns and b) the PD design result. Then, we conducted a second round of reflections by looking across cases.

IV. FINDINGS

In this section, we initially present the findings regarding the project management lifecycle for both cases by describing in rich details what activities entailed in each case. Then we present our findings regarding the application of PD in public sector IT project management as critical reflections that end in proposed remarks on how to apply PD in such context.

A. Case Vignettes

Below we present the findings from our two case studies. Findings are organized based on the project management phases described in the Section 2.

a) Safety Cameras (SC)

As municipalities make up a large part of the public sector and have standardized and regulated processes they need to follow, we decided to study the project management process for municipalities in Albania. Specifically, we present the case of a project to install cameras around the city to guarantee citizens' safety and increase the chances for accountability in case of misconduct. We found that the municipality outsources most IT products or services projects. The project unfolded as below:

Initiation phase – The Municipality has established practices to engage with citizens and identify prevailing needs in the community. This is done through reports or meetings. Different departments are responsible for different social aspects within their area of expertise. In this way, the municipality's experts in citizens' safety mapped the need to have a way to increase control in all the urban areas through the installation of safety cameras. This project brief and other project briefs were submitted to the Budget Committee. The projects are usually discussed in different working groups and prioritized by applying various criteria such as urgency, necessity, budget availability, and in compliance with the long-term plan that the municipality has. A budget proposal is presented to the municipal council. After due review and further discussion, the final budget for the year is approved. SC followed the same process. A budget estimation was approved to be applied in 4 months.

Planning phase – A project work group was established, involving the citizen safety department as the project executive, a functional safety specialist representing the citizens' view, and a technical safety specialist representing the technical requirements. Together with the project manager, they started drafting the requirements. A procurement officer was appointed and joined the project group to help prepare the solicitation package - define sourcing strategy, evaluation criteria, and communication methods. Moreover, the project group worked on an initial plan and timelines for delivery. The budget estimation was revised once they knew more about the requirements for the cameras, both functionally and technically. The documents produced involved: Request for Proposal (RFP), product or service specifications, contract conditions, and bid evaluation criteria.

The municipality bids are, by law, to be published on an official sourcing site for public institutions if they surpass a certain fund limit. The safety camera project was established and published there.

When the bidding was open, the procurement specialist received requests for more information from different potential suppliers. The answer was made available to everyone, and it was treated carefully not to allow disclosure of the company information without their consent. On the bid deadline, all offers received via mail were opened in a common meeting with everyone from the project group. Each project member assigned previously to the bid to be part of the evaluation committee was provided

with the documents from each company. The evaluators had several meetings to discuss and endorse a winning company. The mayor made the final decision with the approval of the municipal council. The winner was announced on the municipality website. It was only after the contract signing that the project group would meet the supplier and, together with their plan for the implementation.

Implementation – The project started with a design phase where the supplier, in cooperation with the technical and functional experts in the project group, defined the best strategy to deploy the cameras around the city to fulfill the safety need. Different scenarios were discussed during the design. Additionally, the project group discussed the monitoring room and how that will be managed. Once the design was agreed upon, the installation phase started. This lasted for 4 months. Training was provided for the IT experts operating and maintaining the cameras.

Monitoring and control – Many controlling entities were involved in the previously described phases. The project manager must report to the business owner (the citizens' safety department), the mayor, and municipal council. Other controlling and directing entities are the budget committee and the procurement officer. Regarding implementation, the project group controlled the deliveries from the supplier and reported to the adequate board entities regularly.

b) Patient Healthcare Record (PHR)

The aim of this project from the start was to investigate technological possibilities that would support patients in need of rehabilitation after Acquired Brain Injuries (ABI) to take control and get empowered in their rehabilitation process. A rehabilitation hospital offering specialized services to such patients in Norway initiated the project. They engaged with an academic institution to cover the needs and design exploration phase.

Initiation Phase – The common initiative resulted in a PhD researcher funded by the academic institution who worked at the hospital to investigate the need for a collaborative tool between patients and healthcare practitioners to empower the patients throughout their rehabilitation process.

The hospital and the academic institution shared an interest in participative methods and encouraging users (in this case, patients, and healthcare practitioners) to have their say in the design process, being service design of technology design. Two PD workshops with patients and two with healthcare practitioners were organized to investigate needs. Additionally, the PhD researcher spends circa 6 months conducting ethnographic studies and mapping existing practices at the hospital. The knowledge collected was then applied to organize two design workshops for patients and two design workshops for healthcare practitioners to reflect on existing practices and envision future solutions to help patient empowerment. As the design ideas highlighted the necessity to cooperate closely between patients and healthcare practitioners, two power-balanced PD workshops were organized with

patients and healthcare practitioners to envision the future solution and practices.

Planning phase – The research and design (R&D) results were applied to ideate a project and apply for external funds to develop a technological solution to support the needs defined during the research phase.

Innovation Norway (IN) is an institution jointly funded by the government and municipalities' budget. IN aims to incentivize business development that is profitable for the business and that contributes to society's needs to boost regional development. Public institutions can apply for funds for projects that can help them address a need and cooperate with the private sector to purchase the solution and academic institutions to contribute to research. Innovation Norge granted the project funds to the rehabilitation hospital to develop the technological solution envisioned.

A project manager was assigned. A project group and project board were established. In the project group, representatives from the hospital (patient representatives, management representatives, IT experts that know the existing technologies), the researcher from the academic institution, and a representative from the funding institution were included. The project board involved all the relevant stakeholders that would contribute to decision-making (each group was represented).

The following project management process was recommended to follow. It included the following phases: Describing Needs; Market Dialogue; Bid; Development, and Implementation, as shown below:

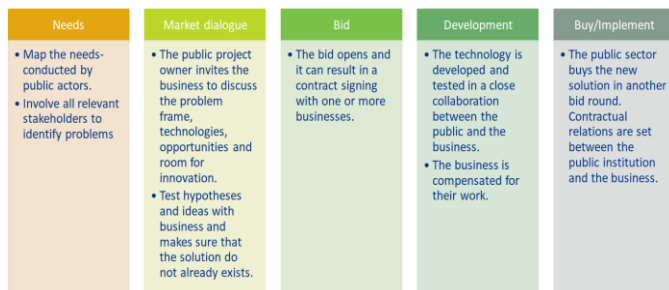


Figure 1: Process followed in PHR.

The initial planning phase activity was to describe the needs. The project group worked jointly on the document. Once consolidated, the document was forwarded for approval to the project board. Once the project board accepted, a date for a market dialogue was published on the Norwegian official public procurement site. The market dialogue aimed to show the business the project's aim and the problem to be solved. The business could discuss with the hospital their current technologies and the extent to which they match their needs. The market dialogue agenda included a presentation of the project and an invitation for each potential supplier to two group workshops to discuss the project and the innovation possibilities the supplier could offer.

The participants from the market dialogue were: The hospital (clinical and technical knowledge

representatives), patients (patient representatives), the project manager, the procurement specialist, and the technology regulators in healthcare in Norway, which provide the platform on which this new solution should work.

After the market dialogue, the needs were revised, and the final functional and non-functional requirements were described to be further published as an RfP on the public procurement site 'Doffin'. A date for a Bid Conference was assigned prior to publishing the bid. The conference addressed potential suppliers' questions regarding the bid and the documentation they needed to provide.

Once the bid period was closed, the project group evaluated them in many discussion rounds and provided recommendations to the board to make the final decision.

Implementation phase – The implementation phase started with a kick-off meeting between the project group and the selected supplier. Both parties discussed a plan for the implementation that would follow these stages: design, development, testing, further refinement, and final delivery. The first designs were delivered in March 2023, and the project is still ongoing. Thus, for the project closure, we do not yet have information.

Monitoring and Control – The project was monitored and controlled by several mechanisms. In the initiation phase, the agreed PD approach was a control mechanism for the planned activities. Instead, in the following phases, the project management framework was used for monitoring and control. Moreover, the project manager continuously reported to the board for specific and routine decisions. Another control mechanism is the official procurement site that safeguards a fair procurement process. During implementation, the project team oversees the supplier's work and reports progress to the project board. Codes of conduct that regulate the relationship between patients and healthcare practitioners are considered during the testing phase.

B. PD in public sector IT project management

Here we will present the findings on how PD elements have been applied in the two projects we studied. We conclude the analysis with guidelines on how to increase the presence of PD in public-sector IT project management.

a) Enhance user participation in the planning and implementation phase through PD methods

In both cases, we found that some degree of participation was exercised in each phase of the projects. In the SC project, citizens were involved through established networks of engagement with citizens to evaluate ongoing needs. Similarly, patients' and healthcare practitioners' voices were represented in the identification and articulation of the needs to request external funds for the PHR project. The citizens' and users' representatives remained participants in the project and were involved in discussions with technology experts and possible suppliers.

In the SC project, a technical expert was assigned to work on the project together with the citizens' representative(s). In the PHR project, the market dialogue brought the user needs to the business to discuss possible solutions.

In both cases, the bidding process involved regulated information exchange with the bidders regarding asking questions and providing responses. In the PHR project, such exchange happened during the bidding conference. In each case, the procurement regulating authorities framed how participation was implemented.

The implementation phase in the SC project involved the encounters between the technical experts and the supplier selected. Instead, in the PHR project, the supplier engaged again with end users in the prototype's evaluation and feedback-gathering phase. The way the implementation is organized depends on the final product and how the supplier organizes the work. Due to contractual binding, they are obliged to report back to the project group. It is up to the project group to organize how citizens or end users should be involved in the implementation phase. This was the case with the PHR project, where the experience of the project manager in PD approaches and the interest in participative practices led to public display evaluation not only for the board and higher management but also for end users.

Based on the above findings, we conclude that: The discourse on participation and relevant stakeholders' involvement should also be promoted during the planning and initiation phase. Tools and techniques from PD practices can be applied to promote co-design. Moreover, new PD techniques for project management in public sector digitalization initiatives should be explored.

b) Promote Mutual Learning with Suppliers in Market Dialogue PD workshops

Hearing the voice of users/citizens seems to be a well-established practice in organizing project management work at the municipality. At the hospital, the same approach is present. However, our analysis shows that while policymakers and design experts learn from citizens, the learning is not mutual. Citizens are not involved in later stages where they can learn about design alternatives and possible technologies and eventually make their own decisions. Moreover, each actor in the planning phase represents a specific area of expertise. They engage with each other to draft the high-level requirement document presented in the bid. While some mutual learning happens in those instances, they are detached from the real setting where the knowledge of alternatives stands, the suppliers.

In the PHR project, such a gap in mutual learning is filled by market dialogue. This allows the end users' representatives to sit with the possible suppliers to discuss: What is a viable solution with existing resources? What would the supplier be willing to do to engage in innovative solutions if the requirements are not covered fully by what is provided today? The market dialogue approach is open and does not infringe on any rule imposed by procurement regulation. It also allows the possibility of having an

objective, quantifiable evaluation process later, while still providing a true participative venue for mutual learning and creating alternative visions.

During the implementation process in the SC case, no more mutual learning is happening. This has a negative impact because citizens are not consulted on the design and implementation of the solution in practice. Thus, the supplier applies what they consider best and might lose sight of what the citizens need. Meanwhile, citizens not knowing how their needs were addressed and the benefits and risks that the technology brings can experience an unethical impact in the long run. Instead, in the PHR project, the design phase involved the discussion of the designs directly with the end users and higher management by using high-fidelity prototypes. While the project is ongoing, it is relevant that the evaluation of the prototype does not focus only on the look and feel and functionalities provided but is used to capture more in-depth and inherited issues of technology that should be cleared with the users, such as accountability, integrity, and accessibility of data.

Based on the above findings, we conclude that: The market dialog provides the opportunity in sourcing IT projects to have both user and technology representatives to share knowledge and values, engage in co-design moves, and produce design alternatives. PD techniques and tools should be applied in the market dialogue. We will define this as market co-creation techniques and suggest using generative tools [4] that the suppliers can provide.

c) Making "Power" a central theme to consider in each phase

We found that the power dynamics discourse is the most underestimated PD principle in both projects. For the SC project, the discussion of power is inexistent. The municipality considers the elected representatives as guardians of democratic decisions that favor the majority that has elected them. In the PHR project, the discussion on power is deeply considered in the initiation phase. The final result addresses the power imbalance between patients and healthcare practitioners with the aim of patient empowerment. However, the power balancing has been more tacit during the process, counting on representatives having equal power during the project management process.

Project management relies upon established organizational hierarchies and agreed-on processes to deliver on time and within budget. These hierarchies can create power imbalances if all actors' involvement are not treated equally.

Based on the above findings, we conclude that: The power discourse should be part of IT project management. It should become a central theme that is reflected upon in every phase and activity where different stakeholders engage. The discussion on power should be balanced with the necessity to follow the regulations that define the frame for some project management activities. That is why engagement with the possible suppliers during the market dialogue and not after the official bid is published provides

a practice that adheres to PD principles and follows project management regulations.

d) Control and monitor the delivery of “PD results”

In the municipality project, the design result addresses an issue that the citizens brought forward, and it is not in principle related to the empowerment of a marginalized user group. While the focus is on the result, the discussion on the solution's impact on marginalized user groups and how to make the solution suitable and understandable for every citizen category remains obsolete. Instead, in the PHR project, the design result is ideated based on PD principles. The project impacts empowering patients and giving them more control in their rehabilitation. The involvement of the PD expert as a project advisor contributes to highlighting all relevant stakeholders and involving them in the design process. The process adopted by IN also promotes PD project management. Moreover, in the project, power dynamics are actively considered and addressed, so the solution represents the views of everyone and creates the opportunity to have emerging new practices.

Based on the above findings, we conclude that: The design result represents the user need in IT project management. However, that is not sufficient. Broadening the scope of the design result toward a “PD design result” can contribute to delivering more citizens’ friendly solutions and guarantee an ethical and responsible process and delivery. New methods should emerge in PD literature to become part of IT project management control and monitoring.

V. DISCUSSION AND CONCLUSION

PD is a field that stands by a bold commitment toward bringing voice to marginalized user groups and promoting equality and power balance in design [1]. PD can be applied to any context and strives to find methods, tools and techniques that promote engaged participation in projects from idea and vision to delivery [3]. Conversely, project management is driven by timelines, budgets, quality requirements, risks, benefits, and outcomes. Whittle [9] discusses six projects and states that PD researchers have not engaged with agile approaches and vice versa. This is true because compromising power balance for fast results is not a choice for PD, and compromising timelines for achieving the true power balance among stakeholders is not feasible in the face of resource limitations, existing organizational structures, and defined regulations that halt the project from delivering what is expected. These elements are even more present in public-sector IT project management [20].

However, we found that in the public sector IT project management, PD practices are present. The degree to which participation is considered varies from the SC to the PHR project because PHR was initiated by embracing the PD approach, and it takes place in Norway, where PD emerged and the discussions on equality and power balance are strongly positioned in the public discourse [22]. While

in the SC example, citizens are considered consumers of public services and are involved only in the co-initiation of the project, in the PHR project, they are treated more as co-producers and contribute to co-design [24]-[26]. In a similar position are the private sector companies that contribute to the marketization of services [29] who also become just clients in the SC project and co-producers in co-design and co-implementation in the PHR project. We acknowledge that historical, cultural, and political differences between the two countries influence how the project management process is established.

We argue that as agility has become a central theme in project management, participation and power dynamics should also be used as central concepts to revise the project management processes and profit from the benefits that a PD approach enables. Initiatives like lean-agile procurement and practices like the market dialogue(e.g., [30]) are adapting the design thinking approach to the project management world [10]-[12], but adding to this approach PD principles and PD techniques and tools can contribute to delivering projects that matter and are accepted by all end users. Moreover, it can contribute to projects that focus on the design of software used for cooperation [2].

PD initiatives like the effect-driven PD [8][34] have raised the concern that PD should be driven by delivering benefits and contributing to achieving the desired effects. While the effect-driven PD provides a good framework as a high-level approach, the issue remains in finding techniques and tools that can be applied within the project management process and not burden the timelines and budgets of the project.

The market dialogue is an example of a practice of mutual learning and if PD techniques and tools are applied to promote dialogue and engage in co-creation activities, the project will not only deliver but also drive innovation.

However, in both fields, additional questions and remarks should still be explored, such as: who should organize the participatory activities, how to balance between existing hierarchical structures and the necessity to cooperate, how to make PD techniques and tools more efficient and delivery driven, and what tools and techniques are adequate for each phase of project management? What does participation mean in project management? To what extent is power balancing possible?

Answering these questions requires PD and project management researchers to reflect on them in future research by exploring new practices or adapting the existing knowledge to co-flourish and contribute better to society.

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