Exploring participatory pre-project processes: Making research work in municipality organizations

Exploring participatory pre-project processes

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Previous Participatory design (PD) and HCI work have discussed the outcomes of research and design projects, their processes, technology innovations, methods, and users. Researchers have also examined the phases of collaborative research projects, including the 'before', 'during' and 'after' stages. There are however substantially more papers describing aspects of participation and collaboration in the during and after stages of a design research project compared with papers discussing collaborative activities before the formal project starts, during the pre-project activities where a project is negotiated, and its finances secured. This paper uses two municipal co-design research projects to explore participatory and collaborative processes as they unfolded before the actual projects started. By mainly considering the before-stage of these projects, this paper sheds light on a less studied aspect of many co-design projects, and research projects in general – how they came into being and the role of participation in designing the project-to-be.

CCS CONCEPTS • Human-centered computing~Human computer interaction (HCI)

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1 INTRODUCTION

This paper explores and discuss pre-project activities of two municipal-situated Participatory Design (PD) projects and how these two projects were shaped and influenced by a set of very diverse stakeholders, including municipality managers and politicians. These stakeholders participated to different degree and with different roles in the projects' planning and establishment phases. Both our example projects were part of a long-term and strategic collaboration between a Danish university and a coalition of Swedish municipalities. Among the group of municipalities, we especially worked with one of the municipalities, and a municipality-led R&D center

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on social care. What we have observed over the so-far five years of collaboration, and as exemplified by the two projects we report on in this paper, is the large number of diverse actors involved in shaping (or reshaping) the project-to-be from the first handshake or agreement to collaborate, until the actual project starts.
The goal of this paper is not about studying a specific problem within a 'user group' or disseminating results from a specific HCI project (like a new device or interaction modality), but about managing the process of setting up a PD or a HCI research project. While we have worked within a municipal context, we see that elements of our work can be relevant to consider when setting up HCI and PD projects with external stakeholder in general and can therefore be of general interest for the wider HCI research community.

Many co-design research papers disseminate results from ongoing or concluded projects. Such results can for example be new or redesigned interaction models and interfaces for services and devices, reflections on political aspects of participation, and new methods for co-design engagements. There is also a growing body of research papers describing post-project aspects of co-design projects and how participation unfolds in use rather than during the initial design project phase (see e.g. [3, 17, 21, 29]). This paper recognizes that there is a lack of literature that consider aspects of participation in pre-project stages and how collaborative practices and future project-activities are negotiated prior to the project's start. Dachtera et al. points to the numerous HCI studies that looks at the user-designer relationship while recognizing the lack of studies considering what happens "when designers and industry partners come together in a publicly funded joint research project" [16, p. 713]. While our work is with municipalities and not industry partners, we have a similar interest to that of Dachtera et al. in understanding what happens when different stakeholders come together in publicly funded research processes. What we have observed, and what we will exemplify in this paper, is that different pre-project activities can have a very direct influence on what technologies, methods, and context that a research project will work with or develop. Why does a specific HCI project apply a specific method or work within a specific use-domain? There are naturally many answers to the above question, including the individual researchers interests and experiences, but another answer may relate to available funding opportunities and negotiations between different stakeholders in finding common ground and shared areas of interest when considering setting up a collaboration.

Dachtera et al. have looked into research-industry collaborations and notice that diverse partners represents different Communities of Practices (CoP) and these CoP must find ways of coming together in research projects [16]. The involvement of end-users and other stakeholders can often be equally challenging as rewarding and collaborating with industry partners in research projects is seldom an easy task. Different organization may have different modus operandi and negotiations of both ways of working together and project goals must often be negotiated throughout a project [16]. Numerous studies have also reported how Participatory Design and co-design projects unfold over time and how the involved actors negotiate and collaborate throughout a project lifetime. Our paper aligns with these reports but emphasizes the pre-project activities that shapes a project-to-be, rather than the actual project itself.

While numerous reports disseminate HCI and PD projects and how different stakeholders collaborate during a project, the PD community have to a much lesser degree reported on how these projects are defined and initiated. Simonsen and Hertzum have described 'a wider set of stakeholders', including politicians, and their role in 'approving' PD projects [31]. Temporal aspects of PD projects have also been investigated [33], and Botero and Hyysalo especially mention 'pre-project' phases when they describe co-design processes and how they evolve [7]. However, the work of Botero and Hyysalo mainly discuss how participation unfolds over

time, and not in the 'pre-project' phase specifically. Björgvinsson et al. describes a "movement away from design projects and towards processes and strategies of aligning different contexts and their representatives" [3, p. 127], shifting the attention from the design project to processes of alignment. There is also a large and interesting body of work discussing the establishment of platforms that can be used to enable design-work like Infrastructuring [17, 25]. Infrastructuring, and the establishment of enabling infrastructures for collaboration and design, is relevant to our work but has been described in literature as processes different from the ones described in this paper. Concepts like Thinging and ongoing design-processes [3] have also emerged to describe the negotiation and enabling of design processes. Björgvinsson et al. describe Things as "socio-material 'collectives of humans and non-humans' through whom matters of concern or controversies are handled" [3, p. 130]. Ongoing design processes acknowledges that design is not something that happens at a specific time and place but rather can span over both time and place. These works however predominantly focuses on the enabling conditions for ongoing design work and participation after the formal conclusion of a design project. Using the 'making of' two different PD projects as a backdrop, this paper presents and discusses how our two example projects were sold in, negotiated among the involved actors and how different stakeholder's needs, perspectives and expectations shaped the two projects and their activities (workshops, design activities, etc.). By applying a retrospective analysis to our work, this paper does not produce an evaluation of PD processes as such [6] but rather reflects on how projects are shaped through pre-project negotiations and the involvement of diverse stakeholders and how participation unfolds in a pre-project phase. Also, while different models exist that describe how we work and collaborate in design research projects, these models are not simply applicable to the pre-project processes we have encountered. We have found the preparatory work of making a project come alive, including funding and implementing the project in an organization, to be highly collaborative and that these pre-project processes directly influence the resulting project. It is therefore relevant for design researchers to explore and better understand such collaborative pre-project processes. The paper also explores the processes of establishing PD research projects with complex organizations such as a municipality.

The paper will now start with a chapter further contextualizing our work, followed by a Related work chapter, and a chapter presenting and analyzing the two projects and especially their pre-project phases used as units of analysis in this paper. The paper ends with a discussion followed by a conclusion.

2 BACKGROUND AND STUDY CONTEXTUALIZATION

As outlined in the Introduction, this paper draws on experiences establishing collaborative research projects in a municipality context. Previously co-design has been used to drive public sector co-learning processes [30], and HCI-studies have looked at how to design and support municipal services [5], and explored place-based policymaking [27]. Nowadays, design thinking and similar practices are often used in the design of municipal and public service contexts to apply a design mindset and approach to improvement initiatives and projects [14]. Previous work has also examined community-level participation and design, including how an urban organic food community shapes its artifact ecology [12] and how to design urban technology interventions that stimulates community-wide engagement [26]. The above examples explore participation in community and IT design but doesn't explore the making of these projects.

In our two case studies we have observed four distinct and iterative phases related to each project, each with their own set of opportunities for design (see Figure 1): 1) Initial agreement, 2) Pre-project work, 3) The

project, and possible 4) Post-project design and maintenance work. The (1) Initial agreement and (2) Pre-project work phases takes place before the actual (3) project work starts. The (4) Post-project phase represents work after the conclusion of the formal, originally financed project ends. Rather than perceiving the whole process (pre-project, project, and post-project activities) as a whole, we have made the above distinction in our analysis as we find each stage to be very unique in its purpose, activities, and stakeholders involved. That said, each stage is very collaborative and involve many different stakeholders with different roles. It should be noted that the R&D center is also the main financial contributor to our work, so in a way we negotiate and work with both a project partner and the grant provider at the same time. Both projects are now concluded but we still collaborate with the R&D center and the group of municipalities. An additional university also took part in one of the projects.

We separate the different collaborative cycles as they do not represent a continuum of activities with a fixed set of stakeholders. Especially in the Pre-project phase there is a very separate type of collaborative activities that also involve other stakeholders compared with the project- and post-project phases. As in other forms of collaborative practices, the stakeholders involved in the pre-project phase may represent different roles, hierarchical power, agendas, and priorities. This paper will mainly discuss the first two stages, with emphasis on the second stage, the Pre-project phase. Our overall work is based on Participatory Design, and we therefore describe the collaborative and iterative processes in each of the four stages as PD cycles.

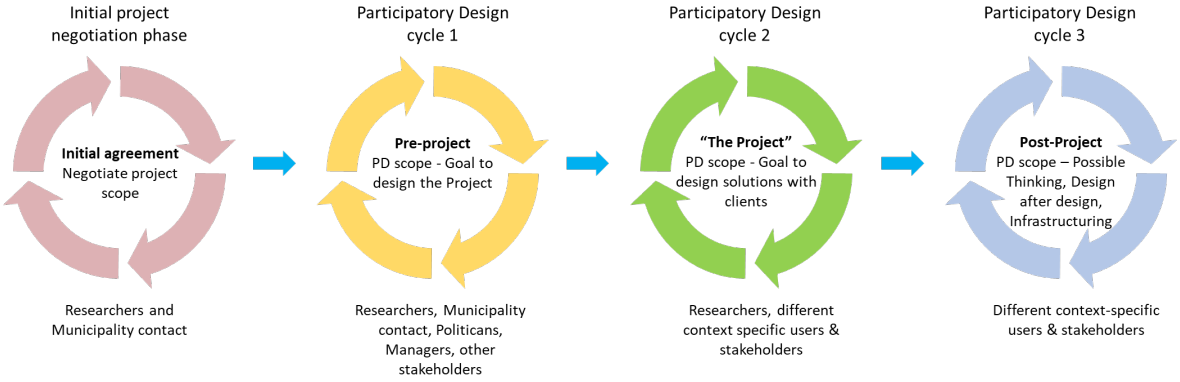

Figure 1: The four identified stages. This paper will mainly discuss stage 2 - the Pre-project. The Pre-project represents the first PD cycle ahead of the Project phase where the 'traditional' PD work normally unfolds.

While the initial agreement to collaborate has been a relatively simple and straightforward negotiation and work process in our two examples, we argue that collaborative design activities started already in the Pre-project phase (PD cycle 1 in Figure 1), it is just a different form of design work compared with the type of PD work usually carried out in the main project (PD cycle 2 in Figure 1). We have for example observed large changes in both the actual context for the project and in the expected outcomes as different stakeholders have been involved in the initial project negotiation and establishment processes. That negotiations takes place between different partners and stakeholders to define a project isn't that surprising, but we observed that in the period from agreeing on doing a project together until the project started, fundamental parts of the projects were re-negotiated, and different stakeholders entered the process and reshaped what had originally been agreed on at different times during the pre-project stages. These changes have occurred all the way up until the actual

PD project started (PD cycle 2 in Figure 1). While previous research have described the design team as a space for negotiation [2], this to a large degree refers to what we call the project-phase in the figure above. Rather, in this paper we will focus on the negotiations that occur prior to the project start.

The first project (hereafter Project 1) started out as an assistive technology design project using PD to support the everyday lives of municipality care receivers. During the pre-project phase Project 1 transformed into an explorative project to investigate the innovation potential within the municipality care organization. Initially the project should work with different care receivers with different care needs while the final project involved three protective housing facilities for young adults (typically aged 20-35) on the Autistic spectrum. The project partners became municipality care workers, the local management at the three housing facilities, the people with autism living in these houses and their close relatives. Additionally, the two authors participated in the project. The second project (hereafter Project 2) was initially planned as an explorative pre-study based on speculative design methods. The initial agreement was that representatives from different municipalities should engage in co-design, speculative design and participatory speculation activities. The goal was to envision and discuss possible and future social care scenarios based on organizational lessons learned from the Covid-19 pandemic. During the pre-project phase the project was however transformed into a small one-off study without the speculative design element. The final project still focused on organizational learnings from the pandemic but in contrast to the original plan, the project mainly collected data through a survey distributed among municipality decision makers complemented with a workshop.

In the different phases, including the pre-project phase, each involved stakeholder had their own needs, specific role within the municipality hierarchy, and expectations on the way of working within the project and how collaborative projects should be defined and orchestrated.

3 RELATED WORK

With its roots in action research and IT related knowledge generation projects, Participatory Design projects have been conducted and disseminated for over four decades [9, 13]. With time, the PD community has broaden its scope, expanding from a workplace and knowledge perspective to also embrace for example prototyping and implementing (IT-)solutions [1, 20], designing and supporting communities [12, 17] and shaping future cities [22, 23]. A legacy from the early PD projects like Utopia [10] include workshop methods and how to engage users in technology development through prototyping and participation in early design processes [11]. In many PD publications the unit of analysis is a project, but there are examples of work that describes more ongoing and longer engagements with for example communities [7]. In the remaining Related Work section, we will highlight 1) Models of PD processes, 2) Discourses on sustaining design processes over time, and 3) Temporalities in PD projects and processes.

3.1 Models of Participatory Design engagements

Participatory Design is often described as an iterative process, represented in models like Tell-Make-Act [8] or in more generic descriptions like the four-step model 1) Participant needs analysis; 2) Ideas and prototypes generation; 3) Testing and further development and 4) Evaluation [15]. While these models contain discrete stages, both models are project-based and intended to be implemented in an iterative manner. The iterative and non-linear use of for example Tell-Make-Act can be seen in the two-way connections between the model's different stages, indicating that one can always freely move between the three stages. The two model-

descriptions above exemplifies the attention to how the main project unfolds, and not the design-work of defining the project before it actually starts. One can argue that the 'Tell' and 'Participant needs analysis' stages include project definition activities similar to the Pre-Project phase in Figure 1, but these stages does not emphasize such definition-activities, and to the best of our knowledge they have not been used describing such activities in literature.

Slingerland et al. [32] have developed four pillars that can serve a checklist for researchers when they are initiating a research project, and especially the research design including the selection of methods and how to engage with stakeholders. While similarities exist, our attention to collaborative processes in the pre-project phase makes our work differ from their very interesting but more project- and researcher-oriented perspectives.

Fredericks et al. introduce the Middle-Out Design approach to support collaborative community engagements in urban HCI projects [19]. Rather than applying a bottom-up or a top-town perspective the Middle-Out approach enable stakeholders from both the bottom and top to collaborate in crafting urban HCI interventions. The authors also acknowledge that often "the needs, wants and aspirations of local communities are not taken into consideration in the early planning and design phases" - [19, p. 1]. The authors promote an early engagement of stakeholders and describe the early Design-phase as a collaborative phase where project activities are planned. While sharing similarities with our pre-project phase, we perceive that the projects exemplified in their paper is more defined then is the case with our two case studies in the pre-project phase.

3.2 Sustaining design processes over time

In the last decade, much attention within the PD community has been on sustaining design processes and how these processes may unfold over time [21]. PD researchers have described how user-driven design processes can continue after the designer or researcher leaves a collaboration or project. Taylor et al. have for example examined the legacy of projects and what happens as the formal research or design project ends [34] and Ehn et al. have discussed 'design after design' and meta-design from a PD perspective [4, 18]. Karasti have also taught us about Infrastructuring in Participatory Design and about support-structures for design [25]. LeDantec et al. have described the formation of Publics and community-based processes that often are prolonged and may not be led by professional designers [17]. To simplify, meta-design allow people, also without a design background, to build on top of existing design work while Infrastructuring can provide platforms to support ongoing design-work [29]. If we relate back to Figure 1, we mainly encounter literature about the above concepts describing work and processes located on the right side of the figure (i.e. the project and post-project phases). One can argue that both meta-design and Infrastructuring can enable new projects to be established, for example have Fabriken in Malmö been used as a platform for both technical and social innovation projects [28]. While inspiring work has been reported on from spaces like Fabriken and in living labs like De Andere Markt [24] , these and similar spaces seems to more often discuss long-lasting design processes and not how they initially came into being.

3.3 Framing temporalities in PD projects and processes

Expanding on the previous sub-section, we will now look at temporal perspectives in the PD literature. Research publications has discussed both how PD projects are shaped and have applied a temporal lens to describe PD work. Vines et al. had a Special issue in 2015 on the 'The beginnings, middles and endings of participatory

research in HCI' where they asked for "accounts of how we begin participatory work with communities, participants, users and interested parties. The aim was to gain an understanding of how researchers establish relationships with participants, and reflect on who determines the research agenda and why certain groups or communities are involved over others." - [35]. This specific call highlights the relevance of understanding these early processes but few works have since focused on describing such participatory pre-project processes, For example have Saad-Sulonen et al. presented five temporal lenses to support an understanding of how participation unfolds over time [33]. What can be seen in their work is the attention given to sustained, participatory design processes that unfolds in the continuum of the original PD project. Among the five temporal lenses described by Saad-Sulonen et al. there is no lens for the pre-project phase and the activities that takes place before the PD project. Our paper uses a 'retrospective lens' [33], but we do so by reflecting on what happens before a project starts, its design, rather than analyzing the main PD project. The work by Saad-Sulonen et al. recognized that participation "develops over time, with interactions and designs influenced by context, prior experience, ongoing learning and changes to and of participants" - [33] and that research have "often ignore how users, stakeholders and collaborators may have participated already in the shaping of questions and project challenges in advance of its formal start." - [33]. Still, there are few descriptions of participatory processes that informs the formation of PD projects. It may be that most projects are funded in such a way that the processes we describe in this paper become more hidden, or that they manifest themselves differently, or perhaps they don't even take place.

4 CASE STUDIES

Our paper is based on experiences from initiating and running Participatory Design projects together with a group of Swedish municipalities. A main contact in these projects was the R&D center located in one of these municipalities and it is that municipality that so-far has been most active collaborative partner in the projects and processes described in this paper. As mentioned in the Introduction, we have used a retrospective analysis on two concluded projects. In this paper we mainly describe and discuss pre-project design activities involving a range of different stakeholders, including actors that only participated in the two project formation activities and not in the resulting projects. In our two case studies, we have experienced a distinct separation between the collaborative design activities that took place in the pre-project phases and the subsequent ones that were part of the actual PD projects. This separation between the two phases is twofold; 1) A very different set of stakeholders and 2) a very different focus and set of activities in the two phases.

In the first case study the project establishment phase initiated about two years prior to the actual project. In the middle of the process the formal contract was signed, and a project description was developed. Still, much of the project framing took place after this stage as for example the signing of the collaboration contract made new actors within the municipality aware of the project. The project and its becoming have been analyzed by looking through documents and personal notes from the two years of work preceding the start of the main project. These documents, including email conversations, draft collaboration agreements, meeting presentations and meeting notes, and the final contract between the collaborative organizational partners (i.e. the municipality and two universities), and early PD activities and their outcomes.

The second case study had a shorter pre-project phase. The process to outline and sign the collaborative and financial contract largely overlapped with defining the project and its activities. However, during the 8 months following the initial agreement the project scope and its activities were reworked. During this period the

project was renegotiated in terms of who would participate in the project and what the main activities of the project would be. This happened as the project was to be implemented in the organization, between the agreement to collaborate and the start of the project activities.

Based on our notes and observations a timeline for each case study and their respective pre-project phases has been developed that portray stages where the case studies have changed as a result from exposure and interaction with different stakeholders, requirements, ideas, and needs. Such input originated for example from the operational part of the municipality, politicians, care managers, care workers, the researchers, and the researchers' organizations. The design and formation of the two PD projects (i.e. activities in the Pre-project phase from Figure 1) have been highly participatory and involved both individuals and their organizations.

4.1 Case study 1: The technology project that disappeared

We approached the municipality to investigate the possibility to collaborate around care and care technology development using an iterative design process with a high level of user involvement. The municipality contact showed interest and especially for the idea to develop solutions for individuals with very specific needs allowing a more independent life for these individuals. The iterative, user-inclusive, and democratic design process we proposed turned out to be a good fit with the municipality's general goal of citizen involvement. From our understanding there was a technology 'thrill' and a level of expectation from the people we met in the municipality about technology and what it could offer, including both software and low-volume manufacturing of prototypes using 3D printers, sensors, microcontrollers and purpose-made PCB boards. Coming from technical universities, an important quality the municipality ascribed us were that of being able to fix very specialized needs using technology. While the project later changed, this first fascination with technology became instrumental for us to 'sell in' the collaboration and project. Specific care receivers and their specific challenges were mentioned by the municipality at this stage with challenges ranging from personalized and tailored water faucets in a shower for a disabled person to app-based shopping aids. The ideas were that we could work with the people needing these supporting technologies, uncover requirements and develop prototypes that answers to the identified needs.

Based on the initial dialogue a draft proposal was written that defined an iterative and collaborative design project to develop novel technologies together with "the users". The initiative led to a three-year agreement between the universities and the municipality to collaborate and where the main funding came from the municipality. The agreement was to run three different projects, one project per year, and where each project goal should be decided over the three years and as part of the collaboration. The reason for this setup was multifold. The municipality R&D center focused more on D than R at the time, but had ambitions to expand the research part, and with that ambition they wanted to establish more collaborations with university researchers. The universities, and us as researchers, were in turn looking for collaborations where innovative technology could play an important role in health and social care. During early discussions we proposed a flat rate based financial schema, where they paid a fixed cost per year, and an additional fixed cost per project. This model is different from the normal financial structure of research where activities and outcomes are specified and then translated into resources needed. A flat rate approach provided the municipality with a clear understanding of the costs involved while allowing activities to be collaboratively specified at a later stage – something that suited both the municipality and us well.

After having signed the agreement, a long process initiated to define and initiate the first out of the three projects. Based on the discussions we had with the municipality up till that point in time, we expected the first project to be on IT development for social care recipients with specific needs, but suddenly a new stakeholder entered the scene: the chairman of the political committee of social services. From a political perspective, the overall project idea and approach were both interesting and relevant, but they emphasized the need for innovation, and especially organizational innovation within the care sector. In a dialogue with our municipality contact, the chairman identified a the opportunity to work with a specific care service: protective housing units. The protective housing units were perceived as places where innovation could bring forth new ideas and opportunities. The chairman posed the question if there is a law of nature that dictates how protective housing units operate. Based on input from the chairman and the posed question, innovation, not necessarily technical innovation, became a key aspect to work with in the first out of the three projects. From this point and onwards, the first project encountered many different stakeholders on different hierarchal levels. Still there was no concrete project or project plan defined as these were still to be agreed upon.

For us, the project we were designing still felt like a rather technology-oriented co-design project so while 'innovation' came into the project vocabulary, we still had a vision of a rather technology-influenced PD project. However, it rather quickly turns out that the municipality's use of the word 'innovation' was not necessarily aligned with our idea of creating technology with some intended end-users. It took a year of discussion sorting out our different ideas before the municipality and we could define and start the first one-year project. At this stage, it was decided that the first project should revolve around co-living houses where young adults on the Autistic spectrum lives semi-independent. The co-living houses are a kind of protected housing units, hence aligned with the wish to work with innovation in the protected housing domain. At the co-living houses, each young adult has their own apartment, but also share some common spaces and there is care staff at the facility 24/7. This suited us well, as we had previously worked with care, design and technology research in both clinical and non-clinical settings. The first project was named 'Autism and Innovation in a Municipality care context'.

The project involved both the municipality care-providing organization and the municipality procurement organization, three geographically distributed co-living facilities, care staff and residents at the care facilities, their kin and the authors (one from each participating university). The municipality care workers and their managers were all part of the care-providing branch of the municipality organization. The main project contact was however part of the municipality procurement organization.

Technology was still seen as an important enabler in the project at this point, but not a mandatory outcome. The process, to work with iterative and very inclusive design processes were still key and we still perceived the final project to be a PD project. The application domain and envisioned result however shifted from being technology-focused to be more closely related to change management and the identification of new ways of working. Retrospectively, we can see that our technology know-how, and demonstration of working technologies from previous projects, opened the first couple of doors for us, but once 'inside' other needs and interests from within the municipality organization became more important.

Up till now the planning had only involved the care managing part of the municipality and not the part of the organization that provides the actual day-to-day care. To also get the care providing part of the municipality organization on board, a meeting was set up between us, with two local managers (one managing one of the three co-living facilities that we wanted to include in the project, and one managing the other two), their joint top-manager, and our contact at the municipality. The project was 'sold in' to the care providing organization as

an opportunity to innovate technology-solutions for the co-living houses, staff and the residents. It was emphasized that the project would include, and preferably be co-driven, with the local managers, the staff and the residents when possible. The local managers agreed to be part of the project and we were invited to visit the three co-living houses, the staff and some of the residents. While we met the staff with an official GO for doing the project, we once more needed to 'sell in' the project to the staff and make them believe in the project and their active involvement. Likewise, separate meetings were also held with the residents. We also held a meeting with the families at a municipality office.

4.1.1 Case study 1: Core pre-project phases and their activities

Based on our observations and experiences from the PD pre-project activities outlined above, we have created an 'activity heatmap' (Figure 2 below) that illustrates the different stakeholders and their involvement in distinct pre-project stages. The two figures also indicate the key stakeholder(s) at each stage and the main drivers and/or concerns for the involved stakeholders at each of the identified stages. We have identified 5 pre-project phases: 1) Drafting project ideas, 2) Concept sell-in, 3) Funding, 4) Project establishment, and 5) Client on-boarding. The rightmost column in our figure represents the actual PD project (phase 3 in Figure 1).

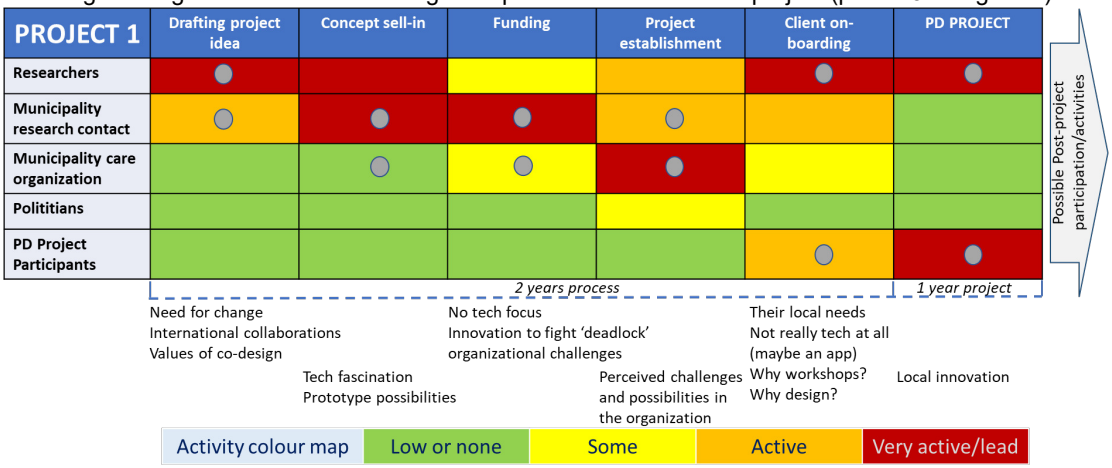

Figure 2: A participatory heatmap for case study 1 including main perspectives/drivers at each stage. A circle indicates the main stakeholder(s) per phase.

Drafting project ideas: In the first phase we contacted the municipality. Together with an initial contact interesting in collaboration we drafted a project plan. We wished to explore co-design and prototyping in a municipality context while the municipality expressed interest in the democratic values of co-design but also in establishing international collaborations. Being situated in the social care domain, our contact also wanted to explore new ways of working and providing social care.

Concept sell-in: Once a draft project plan had been developed a broader set of stakeholders within the municipality organization got involved. Some with input and comments, others as gatekeepers. Many physical meetings, shorter meet-and-greets, presentations of our respective institutions, research backgrounds, visions and naturally our project proposal presentations took place. We later learned that one discussion at this stage was if, coming from technical universities rather than from the care domain, we were suitable partners for projects within the care organization and with their clients. We however passed this stage, and from what we

observed, to a large degree due to a technology fascination (we brought different prototypes from earlier projects) and the visions and ideas of Participatory Design that suited well the municipality vision of participation.

Funding: Figure 2 illustrates that we were active throughout the whole process, but we were not always the most active partner. Neither were we always controlling the process. For example, in the funding stage we got involved on a sort of 'need' basis, discussing overhead, doing cost estimates of activities, and so forth.

Project establishment phase: With a secured budget, it was time to establish the project in the organization. We started the implementation process. Again, we were active, but far from the driving force. However, this stage became very much a municipality-internal process and turned into something much more than discussing the establishment of a project. Politicians became involved and their wishes and perspectives became important drivers for the project. It was for example at this stage the project to a large degree shifted from being a 'technology development project' to a broader 'innovation project' to fight so-called 'deadlocks' – situations and challenges in the day-to-day care that 'went on year after year'. An example of such a challenge could be how to make all care receivers feel that they get the 'right care at the right time' – far from a trivial task where for example available resources and individual preferences become factors to consider.

The municipality reached out to different care units, presented the project, and recruited the future participants. We got involved in meetings with potential project partners presenting ourselves, our work methods and to 'sell in' our ways of working at a managerial level in the care providing part of the municipality organization. Three housing facilities where people on the autistic spectrum lives with 24/7 professional support were selected as 'project partners'. The focus was settled to be on organizational challenges and possibilities in and around these housing facilities, including the residents and their relatives.

Client onboarding: Next we moved into the actual client onboarding phase. We first met with the managers (mid-level and the local leaders for the housing facilities). They did not have any real interest in a technology project. Maybe an App would be interesting (without them specifying any functionality). They felt they had a good understanding of their local needs and what help they required. Consequently, they did not show any real interests in democratic design processes and working in collaboration with for example care receivers and their families at this stage. Still, they were open to the process in that they assumed a neutral stance to the work. Our impression is that the political support the project had acquired during the previous phase influenced the managers and leaders. Once they agreed on the project, we had to re-sell the project again; this time for the housing facilities staff. Each staff group showed different willingness to collaborate with us (ranging from enthusiasm to disbelief). Yet they all agreed to partake and give the project a chance. Once we got their approval, we met with both the residents and their family members/legal guardians. Afterwards, we could start the actual project.

4.2 Case study 2: Changing relevance and priorities

After the first three years of collaboration where we had negotiated, defined, and carried out different innovative projects together with the municipality, that contract came to its end. There was a mutual wish to continue collaborating and the process to establish a new agreement initiated. However, it was now spring 2020 and the world was in the midst of the Covid-19 pandemic and we were understandably not the main foci of the municipality care organization. As a result, the second project initially sustained a rather long phase of negotiations to reach a 'first agreement' where an interesting and valid project scope for the involved partners was identified. The initial idea was very much to continue working with projects like those from the first

collaborative agreement: Co-designing innovative solutions for municipality-led care. Due to the pandemic new needs emerged and the collaboration hence underwent a second, additional phase of re-negotiations also including new stakeholders.

The original intention with our second case study was to both develop a project and secure funding for a larger collaboration – much in line with the previous collaboration. Amid Covid-19 the ambition was dialed down, and the municipality and the university jointly agreed on developing a smaller pre-study of lessons learned during the pandemic and how such knowledge could inform the management of future crisis. If the results were interesting, future projects and activities could be launched. Being a smaller pre-study, the amount of people involved in defining and approving the project were fewer compared with the first case study presented above. Still several stakeholders and their diverse interests and priorities re-shaped the project from the first agreed-on plan to the actual project start. A 'vetting and adaption' process took place as the municipality organization was 'made aware' of the project and different stakeholder got involved as the project got closer and closer to commence. Through a period of about 8 months, the second project transformed into a two-stage pre-study composed by a small online questionnaire with open-ended questions followed by a set of workshops. The municipality R&D organization wanted us to involve the network of in total thirteen municipalities in the region. The project goal was to use the workshops as a platform to involve care managers from the different municipalities in participatory speculation about the pandemic, their situation and what they could bring with them into future crises situations. The intention was to develop future care scenarios, based on what was been learned within the municipality care organizations during Covid-19.

At this stage we and the municipality contact had agreed on the overall format of the pre-study (one survey and three workshops) and that the project would use participatory speculation as one of its methods. On the surface that did not change much as the preparations and the process progressed. However, in the beginning the municipality perceived the survey to be larger and have a wider scope, while from our perspective the survey was more a tool to get the participants to reflect on their everyday and to have some material to discuss and work with, already at the first workshop. A person from the municipality got assigned to assist in preparing the survey, and as we understood it, they perceived it more as a stand-alone quantitative data collection tool. We saw the survey to be more qualitative by nature, providing us with some background data about the study participants and allow them to start reflecting about the ongoing crises with a future-looking perspective. Numerous meetings and email exchanges took place to create a shared understanding of the survey and its role in the project. As we got closer to the actual project start, it was questioned who the participants would be. We had initially agreed that the participants would be the Head of care administration and one additional co-worker from each participating municipality, but due to the lack of personnel during the pandemic a narrower set of participants was decided on. It was decided that each municipality should be represented by only one person involved in taking decisions related to the pandemic, but it did not have to be the Head of care administration.

We encountered many gatekeepers that needed information about the project and its scope, and hence such material had to be produced. In this process, different aspects of the project were emphasized while the overall project design remained intact (i.e. survey and workshops). Other aspects of the project were however tweaked in this process. The questionnaire for example, originally drafted by us, had to undergo different iterations of development, where different stakeholders ascribed it different roles depending on each stakeholder's own interpretation of the project, the questionnaire's value and purpose. Another example would

be the very project description, first outlined to adjunct the financial and collaborative contract. Later, changes in the project description were suggested and negotiated as the project interacted with different stakeholders. These negotiations and adjustments took place both when we were directly involved and in situations where we were not represented. For example, project negotiations took place between different stakeholders representing different parts of the municipality organization or between the different municipalities expected to participate in the study.

4.2.1 Case study 2: Core pre-project phases and their activities

We have identified the same pre-project stages in our second case study as in the first one. However, as the second case study represents a smaller study, each phase is shorter, but not necessarily less complicated. Rather than going through the second study at the same granularity as the first one we will only highlight some key aspects. We refer to Figure 3 for a breakdown of the pre-project activities and the roles of the different stakeholders.

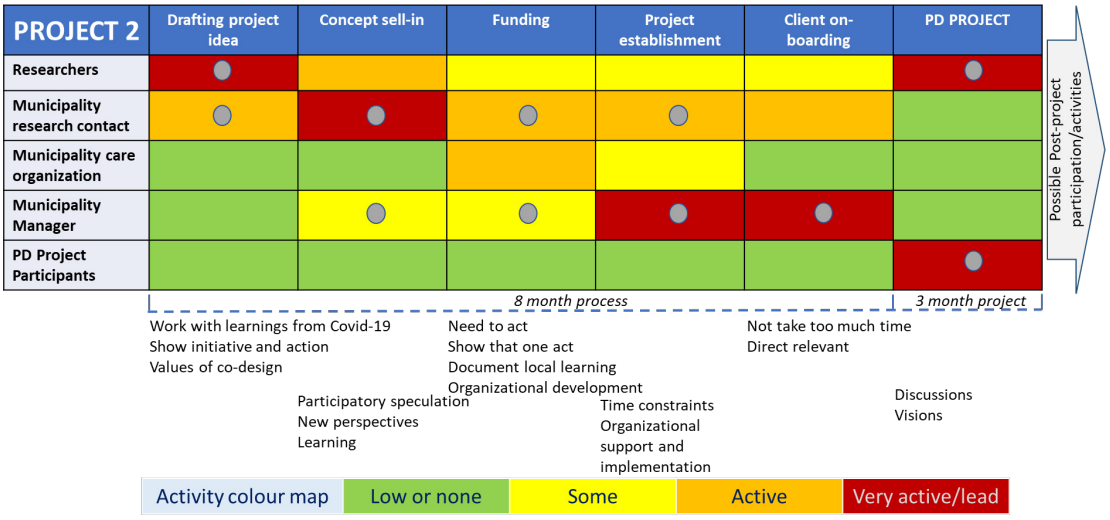

Figure 3: A participatory heatmap for case study 2 including main perspectives/drivers at each stage. A circle indicates the main stakeholder(s) per phase.

After an initial period with discussions between us and our municipality contact person a collaborative agreement was drafted. Due to the pandemic, we proposed a one-year agreement rather than a new three-year collaboration. In this project a high-ranking manager got an important role throughout the pre-project process. The manager, together with other senior members of the care organizations emphasized that the project should be directly relevant for the organization. This became an important point for the municipality as the pandemic strained the organization and required much attention. They were overall very positive to a draft project plan developed by us and the municipality contact person and a contract was signed. Still, the project establishment and client onboarding phases took time. We experienced two particularities at this stage of the project: 1) Difficulties to keep expectations and the project plan in line with the drafted pre-study. Such feature-creep took place even if a rather detailed plan had been agreed on in the drafting and sell-in phases and 2) the importance for the municipality representatives to understand and control the time and resources the future participants

were expected to invest in the project. It is not difficult to understand the importance for an organization to control and understand the expected time-consumption for their employees in a project, but it is interesting how it becomes an important parameter rather late in the process. As noted earlier, it was when the project started to be 'implemented' that the organizations became aware of what they perceived as shortcomings in the plan. Please note that when time and availability is negotiated as a resource, overall project content, possible results and methods must often be redefined as well. Even if funding was secured early in the process, the work done up till the Project establishment phases was rather preparatory. It was at this stage that the project should be presented to the management layer of the care organization. They in turn emphasized some aspects that had to be tweaked before they give the final approval, and the project could start. It should be noted that the main manager was always been very positive to the project.

5 DISCUSSION

The hitherto most common unit of analysis when discussing PD work that we have observed is either the project itself (and its results), or, the process of ongoing and sustained design activities that takes place also after the initial co-design project is concluded. This paper moves the attention to the pre-project participatory processes and by using a retrospective lens examines aspects of relevance in both shaping and implementing our example case studies within a municipal context. We will now discuss some of the main perspectives and take away messages from our retrospective analysis of the participatory pre-project processes that shaped our projects.

In our two example case studies we have concluded that there are many details that must be clarified or reworked to make a project and its process 'fit' into the collaborative organization, including how the project-to-be match or collide with other concurrent projects and activities within the organization. One early 'sell-in' factor we have experienced and especially in the first case study was the capacity to develop technology prototypes and solutions. Thou technology was used in both projects, this paper focus on the pre-project process and not on the technology solutions later developed in the different projects.

The way a larger municipality is organized, makes it difficult to resolve all details before a project is about to be implemented. We have noted a need for flexibility, both in time and project scope to set up relevant research collaborations with the municipal partner(s). Over the years we have done many projects with the same municipality, but the two case studies are representative of how our projects have been defined and initiated. Some aspects, like preparing contracts and budgets become easier with time, as we have found a contractual model that works for both the university and the municipality. Other issues that emerge as the research-projects encounters the reality of the municipal organization still requires time and effort on both sides.

What is evident is that the overall level of participation in the pre-project phase is rather high and involves a range of stakeholders. What we can see in both case studies is that a minimum of one main stakeholder has been involved per phase (indicated by the circles in Figure 2 and 3). Interesting to note is the lack of the actual project participants, the 'users' or others expected to participate in the actual project during the pre-project phase. On one hand this may not be so surprising as the pre-project process also defines the project context and hence what people and roles to be included in the final project. On the other hand, one cannot stop speculating about the effects this particular lack of participation has on the actual project, its scope and activities. Would it be possible to, in a realistic way, connect for example politicians, municipality managers and 'users' to collaboratively define projects in a way that all partners felt secure and OK with, and that did not require the inclusion of a wide range of 'potential user groups' in the process?

5.1 Control of the process

As illustrated in the two heatmaps presented earlier (Figure 2 and 3), we did not always have control of the pre-processes in our two example case studies, nor did we have prior knowledge about all processes that our projects went through. Neither did we always knew who would be involved in shaping the project, including the process integrating the projects into the municipal organization. However, while we did not always have full control of how the projects were shaped, once a project was launched, we have experienced that we have been able to work rather independently with the stakeholders of the main project. Our setup differ compared with for example national and international grants and projects (e.g. EC Horizon 2020) where the applicants (often researchers) have a large control in describing activities, work packages and how the future project will work. In our projects much of the problems and negotiations that normally takes place in a project-phase got handled in the pre-project phase: The work is similar but takes place at different time in the process. An important different, thou, between our projects and for example an EC Horizon project, is that instead of creating a detailed project plan with work-packages, deliverables and so forth, we were as much involved in making the “grant call” and then present a project proposal to the combined funder & partner.

Case study 2 was selected to be part of this publication as it is slightly different compared with the first case study. Due to the pandemic the second project was put on hold during its main phase, and it was later also postponed, a decision we accepted but did not promote. Apart from that specific example, we have experience that once the main project starts, it is the main project participants (e.g. we researchers plus the local stakeholders like social care workers and their clients) that steer the project, not the formal municipal organization. But it requires much work and time to get there, and we as researchers must accept to not always be in control, or even included at times in the shaping of the projects. We argue however that such an approach allows the municipality organization and its main stakeholders to have a say in the project planning and therefore helps making the project and its results valuable and usable for them.

5.2 Accepting and implementing a project in the organization

From our perspective, the municipality organization required the multi-step tweaking and acceptances described in this paper and exemplified in Figure 2 and 3. Each step also led to a re-alignment or reworking of the two projects to better fit with the organization and its needs. These changes in the project, occurring after the contract had been signed but before the actual project started, is from our perspective not a result of bad management or a dysfunctional organization but rather the effects of trying to do research and innovation within a large public organization. While the pre-project phase can be regarded as a bridge between different stakeholders, the actual project stakeholders were in our cases not involved in the pre-project phase, and the involved stakeholders did not necessarily represent very diverse hierarchical positions, making the described processes different from those described by Fredericks et al. about Middle-out collaboration [19].

If we are to embrace a participatory mindset, perhaps we must also be prepared to not only create a space for equal participation in our projects working with ‘users’ but also in its formation. As mentioned in the Related work section there are models describing co-design and research processes (e.g. Tell-Make-Act and the four pillar checklist), but these are project-oriented and do not necessarily help us understand pre-project processes.

The heatmaps presented in this paper can be seen as a first attempt to develop a structured way to describe stages of pre-project activities and processes. Furthermore, we argue that both Thinging and Infrastructuring as described by for example Ehn [18], can be applied in the pre-project phase to support the acceptance and

implementation of a project-to-be in the organization. In his paper, Ehn also briefly mention pre-project aspects of Thinging but do not further elaborate on it. While these concepts so-far have mainly informed discussions concerning the later stages of collaborative design processes, we can see value in using them also in a pre-project phase. In the processes described in this paper it has mainly been few stakeholders involved in each stage (see for example the heatmaps, Figure 2 and 3) and there has therefore not been a Thing where stakeholders come together to make decisions. What we have experienced can perhaps better be described as a distributed and prolonged process of Thinging where different stakeholders enter and leave the negotiation throughout the pre-project process.

5.3 Control through funding

As also mentioned above, many funding bodies require notorious detailed descriptions of the planned work, time plans, resources, and outcomes upfront when a grant-application is submitted. These descriptions become integral parts of the formal contract between the participants and the funding organization, and therefore it often become difficult to alter projects after funding is approved. European Horizon funding schemas for example requires detailed and matched resource and task descriptions. In large projects these rigid structures are often needed and can be a tool for both researchers and the funding agency to steer the projects, share control and accountability. A large grant application can be written without all partners knowing each other or even without them having met each other. A key aspect in writing such an application is proactive planning of resources and tasks. These activities often include a very limited number of people per participating organization.

In our projects we have experienced an alternative way of funding research, built on broader contractual descriptions of our work and utilizing a sort of flat-rate funding schema where it cost a certain sum to work with us, calculated based on known facts and an ongoing and close dialogue with the funding body, in our case the municipal R&D center. Initially the university found it unsettling to have open-ended and underdefined contracts, and it took some time before they recognized the benefits with for example a flat rate financial schema, as in our setup that does not require the university to prepare and send economic reports to the R&D center. On the downside have our collaborations not scaled; the budget is limited. It can finance our activities, including the cost of some research assistants like student programmers, but today it cannot cover a PhD salary.

Due to the Covid-19 pandemic, and as we have explained above, a change of plan was made to the second project. The project was put on hold by the municipality as they needed the project-allocated resources elsewhere. A very detailed contract would have prevented the municipality to pause the work, allowing us to continue with our part of the research. But is that the type of enforcing research and funding we aspire for? Over time trust has developed between us and the funding organization as we have learned about each other needs, methods, and ways of working. We find it rewarding to have the funding body both being an active part in the projects and having a direct stake in the project results. Based on our experiences we would like to see more funding structures where the funding body is not only a provider of funds but also a stakeholder in the project. There is however a need to find models where the funding and the control of the project are separated. From our experience it is possible to keep a shared project responsibility also when one public partner finances the main part of the research and project activities. Co-financing (i.e. in kind) by the university also balances the relationship. A university may also have other resources that can be resources in the collaboration, like video studios, journalists for public dissemination and access to student workers. As we will see below, we propose more long-term research and funding alliances that also respect the different partners' realities.

5.4 On research integrity and building sustainable research and funding alliances

While the pre-project processes exemplified in this paper led to some frustration and a feeling of not being in control, we always decided to 'go with the flow'. We could have referred to the contract on some occasions, but these pre-project processes were interesting both to participate in, to observe, and reflect on. While we at times lost control of how the two projects were shaped, and especially in the first case where the actual project turned out to be very different from our original vision, the resulting project remained very interesting and relevant to our research. We never felt that we, as researchers, got pressured or compromised in our work and these processes did not challenge our research-freedom.

Based on our work, a complementary perspective may be to let go of some control in the project definition phase, to actors that may have a stake in supporting the project after it is concluded. Establishing and sustaining long-term research relations based on reciprocal benefits with the funding organization is important. We hope that more funding possibilities emerge based on long-term engagements and where the funding organization has a real stake in the research. Perhaps, once the main project started, we sometime wanted more guidance and input from the municipality organization and not only the people participating in the actual project activities. That is a noteworthy reflection, as the collaborative setup mean that we work overall much closer with the funding body than we work with the participants in the different projects, if we consider the 'ongoing and over time' perspective. The municipality perceived the first project to be successful and gave us a positive track record within the municipality. We had during the pre-project phase not only discussed the project we were about to start, but also been able to create a mutual trust. Starting to work with a new and unknown partner, being a business or a public or research organization, always incorporates a certain level of risk where continuing working with an established partner in many ways can be safer - for both parts.

The funding body became a research partner and not an entity to whom you apply money from and file reports to. With the open-ended nature of our collaborations at the time we sign the contracts, there is a shared risk. However, an open and over time strong partner-relation with the organization funding parts of our research have so-far ensured a collaboration that is mutually beneficial and that there is a cost vs. results match. It is however a fine balance between letting funding partners shape a project and accepting projects where your research interests and ambitions may be diminished – especially in a neoliberal reality where researchers are expected to bring in excessive amounts of funding. It is important to remain a researcher and not end up as a consult. If the funding partner can move the focus of the research or twist the perspective in a way so that the research question we as researcher are interested in is lost, then we just work for the money and not for the development of knowledge. The legitimacy as a researcher will be lost. But we must also be open for input and alignment of project scope. Looking back at the development of our first proposition to the R&D Centre, and how the first project actually developed it is obvious that the fundamental knowledge possessed by the municipality, and thereby by the R&D Centre, also guided us into contexts and domains we did not know about on beforehand. These were areas which turned out to be of outmost value in our field of research.

5.5 Letters of intent – a possible starting point?

To support flexibility in the pre-project phase, for example to support a partner to make needed adjustments in the project-to-be we suggest a multi-stage agreement strategy inspired by our projects and an industry best practice. We suggest working with an early Letter of intent. A Letter of intent can demonstrate a will to collaborate, name the main research approach (e.g. co-design) and contain an overall draft financial

commitment. In our case the municipality have financed a large part of the research, but the universities have co-financed the work with research-time. Such co-financing has been important for the municipality but also secures a mutual interest in the project. A Letter of intent can then be used to define a specific project and a contract can be signed. Throughout the process both the Letter of intent and a later contract can be used as a reference (rather than forcing) to ensure that all stakeholders remember the intention and scope of the project. Especially in new collaborations where a trust-based relation has not yet been achieved, we see a Letter of intent as a strategy to enable an open, yet somehow controlled process defining and implementing a project-to-be in large organizations like a municipality. We will explore the use of Letter of intents in our future work.

6 CONCLUSION

In this paper we have shared and discussed our experiences of defining and setting up municipal research and project collaborations where the municipality have both provided the main part of the funding and been the main research partner. In the process going from an informal agreement, the signing of contracts and later starting the different projects we have encountered numerous stakeholders, all with their own agenda and needs. In our cases, we argue that the pre-project activities are based on a high level of active participation. What is striking is that the set of stakeholders in the pre-project phase is very different from the participants in the projects. We argue that we indeed have observed two different co-design processes, one in the pre-project phase and another in the actual project.

Applying a retrospective lens on our work we have analyzed and discussed participatory pre-project processes rather than emphasizing broader, or project specific, ongoing design processes. However, the line between pre-project work and early project activities is at times very thin, and while theoretical concepts like Thinging has mainly been used to discuss ongoing design work – we see Thinging and similar theoretical perspectives applicable also in participatory pre-project processes.

Working with municipality organizations, we have observed both a wish to participate, but also the importance for different parts of the organization to make the projects fit their reality, their needs. Implementing a project-plan into the organization can be a time-consuming and lengthy process. We have however experienced that working proactively with the organization has not only been a necessity, but it has also been very rewarding for our projects and overall collaboration.

We like to learn more about alternative ways of funding research and in general what can be learned by exploring different ways of forming collaborative projects with external partners like municipalities. Our projects represent collaborations between Swedish and Danish public institutions. It would be interesting see more work describing cases similar to ours, but also to learn about alternative models of research, and research funding. We wish to see more reports from fellow researchers about the work it takes to make research work.

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