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CITIZEN PARTICIPATION THROUGH 'INTERDISCIPLINARY EXPERIMENTATION'

RECLAMING WASTE AND PERMEABLE GREEN CITY AARHUS

Colophon

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Content

Preface

The rethinkIMPACTS reports are the important results of the cooperation between Aarhus University and Aarhus 2017. The reports will contribute to creating new knowledge about the many different aspects of being a European Capital of Culture. The reports seek to communicate the findings of the different research and evaluation projects that will be completed before, during, and after 2017, as part of the rethinkIMPACTS 2017 project. The purpose of these reports is to disseminate this knowledge widely.

This report presents the result of one of the first nine research projects initiated in early 2014. It is a part of a larger engagement of the scholars Britta Timm Knudsen and Carsten Stage in the collaboration between the university and the Aarhus 2017 project. Their engagement is oriented towards questions of sustainability as well as democracy, thus addressing two of the three core values of Aarhus 2017. In the projects presented in this report both are strongly present. In addition they are examples of interdisciplinary collaborations between scholars from different disciplines as well as between researchers and practitioners. In this way their project is an example of the ambition of rethinking the role of researchers in European Capitals of Culture.

1.0 Introduction

The following report introduces two different environmental projects involving citizen participation and interdisciplinary research: *Reclaiming Waste – a living experiment in Ry* (2014–2015), funded by rethinkIMPACTS 2017, and *Permeable Green City Aarhus – Combining Life Politics, Biodiversity, Citizen Empowerment, and Sustainable Urban Drainage to Create an Ecologically and Socially Resilient City* (2014–2016), funded by the DCE (the Danish Centre for Environment and Energy). Even though only one of these projects is directly linked to the status of Aarhus as Capital of Culture in 2017, we include both projects in the report, as they share many similarities, although they also differ in ways that give rise to fruitful discussions of how to develop democracy and sustainability (two of the core values of the Aarhus 2017 project). Democracy as a core value is described by Aarhus 2017 as 'that very Danish attribute of collectivity and cooperation. The collective effort, working together, deciding together, delivering together with a common approach to solving problems, to socialising, to planning futures' (http://www.aarhus2017.dk/en/themes/our-values/1947/).

As a part of the focus on sustainability, Aarhus 2017 has developed the Aarhus Sustainability Model (ASM), which Aarhus 2017 has dedicated itself to following. ASM is a project plan setting out a staircase of three steps in the process of implementing sustainability agendas in Aarhus 2017 activities. The three steps encompass a strategy, a policy, and a plan of action. Four sections are mentioned as focus areas concerning sustainability: Food & Beverages, Daily Operations & Mobility, Architecture & Physical Framework, and Communication & Behaviour.

Our two projects also have democracy and sustainability as core elements. They take the shape of 'living experiments' that explore various processes and phases in democratic participation. Participation has clearly become a buzzword, and is something in which everybody wants to be involved. But

how should people participate? Who does it involve, and at what levels? Where, when, and with whom is participation desirable? And what exactly does it mean? We believe that it is important to be involved in and experiment with participation, in order to understand the pros and cons of the various understandings and models at hand. And we believe that these two projects undoubtedly contribute to this investigation of how to foster strong participatory processes and societies. In our projects we have tried to avoid two extremes of the understanding and use of participation: 1) Using participation as a strategic tool to control and avoid crises, and 2) using participation as an ideal of direct democracy and full citizen control. Instead, we approach participation as *an experimental practice, creating specific and designed encounters between various groups and forms of knowledge, in order to investigate how to solve or reframe particular challenges*.

As far as sustainability is concerned, we see culture as the fourth pillar of sustainable development, alongside the ecological, social, and economic pillars. This is a well-established point. We do not limit ourselves to a narrow definition of culture as the arts and creative-cultural sector. Instead, we understand culture as the ideas, habits, and practices that hold together communities, and thus, cultural change is an important driver of (or obstacle to) sustainability processes and the development of new ways of living together, new cultural landscapes. *Reclaiming Waste* and *Permeable Green City Aarhus* use citizens' lived environments both as a laboratory for material/physical change and as a dreamscape for utopian futures. We have employed a common strategy of participation in both projects, which we will describe and discuss in this report under the heading of 'interdisciplinary experimentation'.

We consider the overall framework and global challenge targeted by both projects discussed here to be the *anthropocene*, the new reality of the engineered and 'climate-changed' world that all living creatures have to adapt to and inhabit. Our two projects focus on waste management through the creation of 'glocal' (global and local), circular flows of resources, and on biodiversity in urban areas, and aim to alleviate the impact of resource exploitation and to explore different and more localized waste solutions than the stand-

ardized and centralized versions that are common in Danish waste management on a national scale. But this is not all there is to it. On the way to addressing the challenges of the anthropocene, multiple values may be developed: local belonging, stronger community ties, practices of doing-togetherness, developing creative skills. Perhaps most importantly, the future suddenly reopens due to a global threat. The challenges posed to every society and community by the anthropocene cannot be responded to in standardized ways. The whole of humankind has to react in multiple ways, and this scenario – that communities must stand together to find localized solutions (together despite their differences) to imagine and pave the way for a new future – makes for a very strong point of departure that captures and sets free the imagination. Adding to this, we may say that both projects implicitly state that sustainable solutions that consider all four pillars of sustainability, and include participation at all levels, also build resilient communities that form strong connections with the outside world, without being too permeable and vulnerable to global crises. Both projects contribute to building greener solutions, livelihoods, and vibrancy in smaller communities in Denmark, and outline local alternatives to standardized and blue print solutions that prevail in the rest of Denmark.

Boundaries are transgressed in multiple ways by the projects discussed here, between disciplines in our interdisciplinary set-ups, including both 'wet' (natural) and 'dry' (human) sciences, between companies/entrepreneurs, university experts, public authorities and citizens, between the university as an academic institution and civil society, and between what is normally considered scientific research *on* a part of reality that existed prior to the research process and a more exploratory research process based on the co-constructed reality of living experiments that is scientifically explored while the experiments are being imagined, built, and practised. This last approach is called 'action research', and is a well-known practice in some research environments (e.g. Education, Development Studies, Design Studies, Geography), but in others it is rather unknown territory.

We imagine the report's readers to be the organizers of Aarhus 2017, as they are funders of the *Reclaiming Waste* project, and also future cultural actors in

various sectors who wish to engage in participation and sustainability in new ways. We hope that they will find the outlined strategy of 'interdisciplinary experimentation' useful for further developing their own approaches to participation.

2.0 Experiment 1: *Reclaiming Waste*

Reclaiming Waste was a short-lived project carried out at Ry from April to November 2015. Ry is a small community of around 5,000 residents in the Central Denmark Region, a perfect setting for a site-specific laboratory for reimagining organic waste management in new ways. Ry produces 344 tons of organic waste per year. The interdisciplinary core team consisted of researchers, designers, and experts and residents from Ry. The research team was composed of researchers from the Faculty of Science and Technology, the Department of Environmental Sciences (project participant Marianne Thomsen), and ourselves, from ARTS, the Department of Communication and Culture. The private architectural company, *We make Space* (project participants, Paw Stryhn and Maibritt Skjoldborg Jensen, Jens Rodevad), interactive and digital artist Signe Klejs, and graphic recorder Abdul Dube took part in all the workshops. The third part of the main assemblage was Omstilling Ry, a local association for sustainability in Ry (www.Omstilling-ry.dk), which is part of the global green movement called *transition towns*, and transitionnet-work.org. The association has already established local initiatives such as a small-scale market for selling locally-produced food and other products, and a piece of land, called *Skovhaven*, for community-based urban gardening for growing produce. As the project developed, other participants were added or removed from the assemblage, such as waste management companies (Re-noSyd www.renosyd.dk), energy companies (Nordic BioEnergy www.nordicbioenergy.dk), water management companies (Regnvandsspe-cialisten, www.regnvandsspecialisten.dk), public authorities (The Municipality of Skanderborg), and organic farmers from the area.

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kompostering
by-landbrug

Source: Visual design 1 by We Make Space

The *Reclaiming Waste* project had three major goals: 1) to replace linear re-source flows of organic waste management in Ry with circular resource flows; 2) to see whether it was possible to get the local community to take over the community's organic waste management (the status of organic waste would be transformed from that of leftovers handed over to private companies, to a valuable resource benefitting the local community in several ways); 3) to in-tegrate all the pillars of sustainability thinking, meaning that waste manage-ment would also encompass social and cultural components.

Reclaiming Waste consisted primarily of a series of three workshops in which the residents of Ry cooperated with various private companies in an effort to change the linear resource flows in Ry to circular flows. An ambition was to investigate whether all the waste management parameters (environmental, economic, socially and culturally) were sustainable. The form of citizen partic-ipation in this project was not only *deliberative*, meaning staging debates on sustainable waste management issues. Neither did we practice *material par-ticipation*, in the way it played out in the *Permeable Green City Aarhus* pro-ject described below, in which an urban space (a park) was the experimental playground, transformed according to the investment of the citizens involved. The form of participation investigated in *Reclaiming Waste* was much more *imaginary* and *utopian*, with projections of the various desires of the commu-nity into a possibly sustainable future of Ry. The aim of the project was to *im-*

agine and *visualize* how citizen-driven, sustainable development might unfold in local resource management. The university experts' aim was to approach the zero-waste strategy through circular flows taken to the highest possible degree, and to make an effort to include all the sustainability parameters. But exactly *how* this goal would be achieved was absolutely open to the participants' imaginations.

2.1/ The process

The core team for *Reclaiming Waste* was involved both as process designers and workshop managers during the project period. Before the sessions of workshops started in August 2015, we mapped Ry in several ways. We made a stakeholder map and a spatial map, seeking out the area's economic, social, and spatial resources. We held a series of preliminary meetings with possible stakeholders, in order to determine who should be added to the assemblage. We also needed to establish a common ground and language for this project, with its interdisciplinary team that included actors from various professional backgrounds and from Ry Omstilling. The series of meeting resulted in the development of a process design consisting of three workshops: an inspiration workshop, an imagination workshop, and a workshop in which the visualized and conceptualized scenarios were brought as close to reality as possible. The next phase of the project – if further funding becomes available – would be a realization of circular resource flows in Ry.

It is possible to divide our academic endeavour in *Reclaiming Waste* into three different areas: 1) the development of a project and a process design for the whole *Reclaiming Waste* project, 2) the management of the labour in between workshops as well as the management of the workshops, 3) the constant observation of, and reflection on, the processes while they unfolded, and the evaluation of the various written exercises used.

2.2/ The three workshops

All three workshops took place at the same place (a local school), at relatively short intervals (August, September, November), were scheduled at the same time in the evening (19.00–22.00). All the meetings were strictly man-

aged and structured in the same way: all featured PowerPoint presentations by experts – university researchers, architects, biogas experts, water managers – group work, and presentations of the group work (see Abdul Dube's drawing below). Workshop II also featured a reading of a workshop assignment that all participants had to do between workshops I and II.
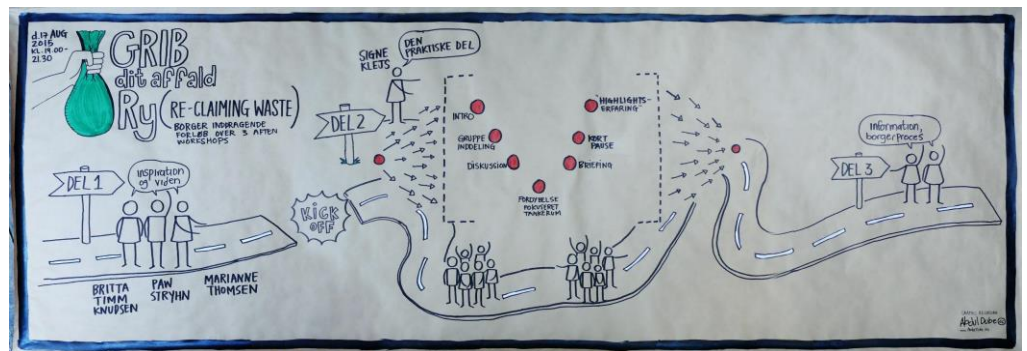
Source: Visual design 2 by Abdul Dube

The aim of workshop I, the Inspiration workshop, was to outline the scope of the project's sustainability. It started with a presentation of the four pillars of sustainability thinking, continued with an outline of the environmental and economic gains of organic waste management at both local and global levels, and ended by describing how the design component creates opportunities for added value and uses of urban space. The tools used in the workshop were mind mapping based on key words, and reflection on which of the sustainability pillars were significantly motivating, or how could they be combined. The result of the workshop yielded three areas of focus or paths, which altered a bit during the process. Those were 1) a resource centre imagined as a physical facility for knowledge-sharing and production (handling and repair of discarded electronics, upcycling activities); artistic events and tourism-related activities were also mentioned; a show-case for Ry as a frontrunner in sustainable solutions; 2) a biogas facility supplied with organic fertilizer from organic farmers, and eventually, organic food waste from local restaurants; some of the biogas produced could be used to heat swimming facility that the residents of Ry have wanted for a long time; 3) green islands in the urban space, serving as deposits for organic waste, but that could also fulfil other functions.

Workshop II – the imagination workshop – was supposed to let participants work out which area of focus they wished to fill out in greater detail: the Resource Centre, or the biogas-swimming facility option. Participants did this using 'Build with puzzle pieces' of various sizes and colours.

Source: Tool 1 developed by We make space and Signe Klejs

The written assignment that we asked participants to do between the first two workshops was formulated as follows: 'Write a small story about one of the focal areas of your choosing. Begin the story with: "In the year 2017, in Ry I am heading towards..."' Participants were encouraged to think big. This narrative and imaginary fictionality tool was supposed to give the whole workshop a more utopian character. In some senses, it worked. More voices were heard, and a poetic tone was introduced to the project. Note that the original three areas were suddenly reduced to two. In fact, what happened during the three workshops was that the areas of focus changed quite a bit. Sum-

ming up, we may say that the rubbish bins for organic waste did not have a
strong appeal. Therefore, they receded slightly from the horizon. In contrast,
some participants from Ry were intensely invested in the idea of a swimming
facility, and therefore it also received quite a lot of attention from the archi-
tects (workshop III). The focus on all the pillars of sustainability (including so-
cial and cultural sustainability) added a willingness to address biowaste, as it
seemed to have greater potential to provide a livelihood for minorities (for
example, minor artisans from refugee zones, or vulnerable groups of any
kind). Urban gardening as an area of focus – that Ry Omstilling already offers
to some extent with Skovhaven, a park with edible plants http://omstilling-
ry.dk/skovhaven/ – emerged during the workshops, and was included in the
resource flows of the biogas and swimming facilities. These points are made
in order to document the openness of the workshop design. Within the
framework of a sustainability agenda, the areas of focus were user-driven. As
previously mentioned, the aim of workshop II was to flesh out these areas in
more detail, and to find the right spot in Ry for the activities/facilities.

Source: Visual design 3 by We Make Space

Workshop III – conceptualizing the previously outlined paths – had two prima-
ry aims: the first was to present some architectural scenarios of the ideas de-
veloped by the residents of Ry, the second was to establish concrete scenari-
os of action in the immediate future, and to have citizens of Ry 'buy into' the
outlined paths. A core group was formed to write an application to realize the
Ry project. The architectural scenarios focused on three original paths: 1) the
bio-resource-network in Ry focused on the biogas-swimming facility network
(see concept below), including local biowaste as an energy producer, 2) the

resource-academy, focused on the network of things (reuse, repair, redesign), and 3) the green islands of waste collection distributed throughout the urban area. Relevant stakeholders (biogas and water drainage experts) were invited to the third and final workshop, so they could state whether and how they would be included in the project from that point onward. Per Thostrup (Nordic Bioenergy) and Arne Mayoh (Rain Water specialist) both made presentations during workshop III.

Source: Visual design 4 by We Make Space

Workshop III resulted in the establishment of a small committee with the authority to continue working on an application to raise funds and to continue meeting with relevant stakeholders, such as municipal authorities.

2.3/ Immersive environment-making

The interdisciplinary group that formed the core team of the workshops added some distinctive features to the workshops, which are worth mentioning. As already noted, the core team consisted of scientists, architects, visual and interactive artists, and members of Omstilling Ry. The strong visualization that the team added to the assemblage proved to be an asset in creating an atmosphere of creativity and of us "imagining the world anew", sensuously concretizing the projected future, building up universes that nourished imagination and mobilized energy to investigate the future. Visuality and 2D prototyping were core elements of the *We Make Space* architects' contribution.

The architectural visualizations gave the inhabitants of Ry many images to dream themselves into. Secondly, interactive artist and designer Signe Klejs employed a set of hands-on tools to translate ideas into concrete paths to take, such as mind-mapping, building with puzzle pieces, "taking the lead" exercises with smaller Minecraft figurines. Thirdly, our visual recorder, Abdul Dube, recorded our workshops in real time through drawings and texts, and presented what he heard and saw as the workshops unfolded (example below). Such an immediate record of workshop interaction proved very efficient in for filling the space with energy, desire, and hope for the future.
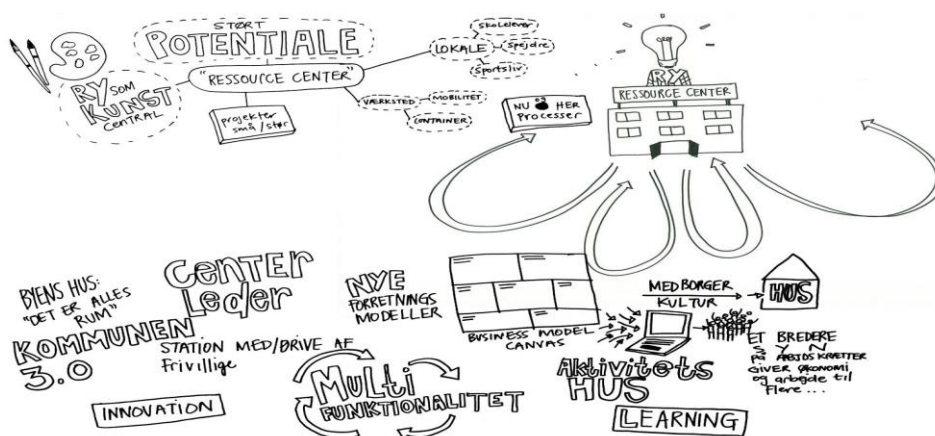
Source: Visual design 5 by Abdul Dube

2.4/   Communication channels

Reclaiming Waste used many means of communication to offer a taste of the world yet to come (workshops, meetings, PowerPoint presentations, visual recordings, photos, texts, assignments). When it came to more concrete forms of communication, RW used: 1) Advertising in the local newspaper, *Rybladet*, in the form of an invitation to the first workshop; 2) The formation of a Facebook group aligned with the webpage of Ry Omstilling (Grib dit affald Ry); 3) Handing out of paper invitations at markets and events hosted by Ry Omstilling; 4) Word of mouth; 5) Invitations sent out directly to possible stakeholders as a result of the crowdsourcing, especially between the workshops II and III.

2.5/ Outcome

As stated above, the experiment of the *Reclaiming Waste* project was to see how far we could take a sustainability agenda and a participation agenda in a small, local community that was already active and participating in local sustainability issues. An important difference between *Reclaiming Waste* and *Permeable Green Cities* is that *Reclaiming Waste* started out with the al-ready-established 'green' association of Ry Omstilling. This meant that we could go quite far during the very short project period. On the other hand, we may have lost some new members along the way, who may have been in-timidated by Ry Omstilling as frontrunners and gatekeepers of green initia-tives in the local area. Another important difference is the character of the concrete experiments: the participation strategy of *Permeable Green Cities* is mostly material, whereas the participation strategy of *Reclaiming Waste* is imaginary, meaning that the content of the workshops was mostly about *dreaming and imagining* a new future with alternative resource flows.

The *Reclaiming Waste* experiment was two-fold: on the one hand, we tried out an open-ended process design in which participants had a strong say in the content of the paths of sustainability. On the other hand, we aimed to in-vestigate the visual and affective tools used, and their roles in the process. In particular, the fictionalized narrative about Ry in the future and the evaluation built on seven parameters of participation (inspired by Chris Kelty et al.) are important, with regard to how participants themselves experience the whole project. In general, the evaluation of the interdisciplinary assemblage of the project and the lay experts – university experts encounters that the project fa-cilitated was very positive. The learning potential of the project scored highest in the fields of biogas, architecture, citizen participation, new green technolo-gies, and potential and possibilities for Ry. Even more significantly, the out-come of the workshops that scored the highest (47–53%) were a sense of community, optimism regarding green readjustments, trust that one can influ-ence the future, the feeling of being creative. Significantly enough, we may add that following the processes in the three workshops revealed an in-creased awareness and the will to apply multiple sustainability values to the described paths of action. It was obvious that a change in mindset was about
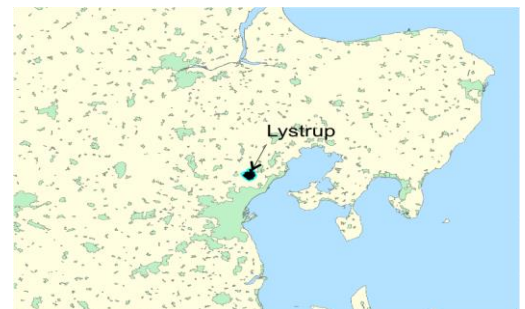
to happen: full-scale sustainability thinking that generated circular flows of resources. Another significant feature of *Reclaiming Waste* was the role of the swimming facility in our assemblage. At first sight it may seem luxurious, as swimming facilities are very costly to install (around DKK 100 million), but it quickly became a kind of emblem of the right to vibrancy in a smaller town. Trying to realize circular resource flows in Ry included in our case a swimming facility, apparently.

More critical concerns were also expressed in the evaluation. The question of whether the series of workshops was 'only an exercise', and whether Aarhus University was ready to take responsibility for actually going through with the whole project came up. This concern touches on project ownership, and is therefore crucial, and it shows that even though it is not within the reach of the project researchers to promise anything, they acquired the role of 'providers', of fulfilling the dreams of these projects.

Compared to the *Permeable Green City Aarhus* project, which immediately led to small changes in an urban area, *Reclaiming Waste* boosted an optimistic-entrepreneurial feeling in the community of Ry. *Reclaiming Waste* is still alive as a project. At the time of writing we believe the *Reclaiming Waste* project in Ry will either become a case study in the EU project, *A decentralized management scheme for innovative valorization of urban biowaste* (2016–2020) http://pure.au.dk/portal/da/projects/a-decentralised-management-scheme-for-innovative-valorization-of-urban-biowaste(f6525745-53ec-40ca-b3ff-f3cad821e6ea).html, with Marianne Thomsen, ENVS, as the project leader, or we will submit an application for decentralized, sustainable solutions for smaller localities in Europe, in order to receive funding from Velux or Innovation Fund Denmark.

3.0 Experiment 2: *Permeable Green City Aarhus*

The second project, *Permeable Green City*, takes place in the small town of Lystrup (with about 12,000 inhabitants), and runs from 2014 to 2016. The interdisciplinary group includes Aarhus University researchers from the natural sciences

(environmental social science (project leader Marianne Zandersen, AU) and biosciences (project participant Rasmus Ejrnœs, AU)), and ourselves, from the humanities. The goal and purpose of the project is to investigate the potential role of citizens, local authorities, and scientists, in developing green infrastructures that stimulate biodiversity, rainwater management, and civil participation. The project consists of two key, intertwined, elements.

1) One project element was a real-life demonstration of how to combine biodiversity and rainwater management in practice, which is realized in a specific urban park, called 'Hovmarksparken', in the town. This location was chosen in collaboration with the Municipality of Aarhus and Aarhus Water, because the project could be connected to an established climate adaptation

plan for the park, due to recent flooding in the area, and in this way increase its potential for actually restructuring the park. In some senses, our project had the chance to add 'biodiversity' as an extra focal point of the already planned restructuring of the area. This was done through a range of interventions (removing nutrient-rich soil, moving new plants into the park, leaving a felled tree in the park) aimed at creating an environment with fewer nutrients, which benefits the living conditions of multiple species often not present in public parks in Denmark. Partly due to established discourses concerning tidiness, control, and neutrality, public authorities in Denmark are expected to keep public parks clean and structured, and a more biodiverse park could be a significant aesthetic disturbance to many residents. For that reason, the project was renamed, and aligned with the already-established initiative, *Vild med Vilje*, and therefore named *Vild med Vilje Lystrup* (trans. *Intentionally Wild Lystrup*), to indicate that the changes in the park were not a matter of 'letting go' or municipal cutbacks.

2) A citizen engagement process aimed to expand citizens' aesthetic sensitivity to different types of nature by creating sensitizing experiences of the interconnection between humans and nature, by creating awareness and knowledge of biodiversity, and by strengthening citizens' sense of co-decision and ownership with respect to the urban park and the project. An important part of the project has been to involve local residents and institutions in the project, in order to increase awareness of the question of biodiversity, to generate dialogue concerning what should actually take place in the park, and also to sensitize the local community to a less groomed version of a local park environment.

3.1/ Involving citizens, local organizations, authorities

The process of citizen participation evolved through four phases.

Phase 1 (August 2014 – November 2014): This phase focused on internal project meetings and on fieldwork in the area, talking to local residents and groups with an interest in biodiversity and the area, on creating alliances and mapping institutions. In other words, we used this period to understand and get a sense of the environment, and to understand the cultural dimensions defining the contexts: who was already engaged, who could be connected to others to create more engagement, where could possible resistance occur?

Phase 2 (November 2014 – May 2015): In this phase we held a large number of preliminary meetings with local institutions and gatekeepers identified in phase 1. The local municipal council – in Danish *Fællesrådet* – became an important partner for establishing a first contact with the area, because they had an interest in the project, and the infrastructure and knowledge, making it possible for us to engage with the community in efficient and trustworthy ways.

Phase 3 (May 2015 – March 2016): In phase three we held a large public meeting to facilitate an open dialogue (in cooperation with Fællesrådet and another local Rethink project) at the local sports centre (with approximately 75 local participants), which focused on explaining biodiversity, the idea behind the project, and discussing people's dreams and ideas about how to develop the park into a more relevant and vibrant place. All local residents living next to the park were invited by post. During the meeting, the community's strong desire for greater engagement was evident: many people complained that the park was simply a transitional space, for dog-walking and biking, not a place to linger, interact with others, or create. Furthermore, the recent flooding created a rather positive atmosphere towards the park trans-

formation: basically, the changes were understood as contributing to securing the area and nearby houses against future crises. Following the public meeting, two smaller public workshops were planned, which focused on imagining the future park (through a writing experiment, where people described a positive experience with nature and how the future park might be experienced), and on establishing smaller action groups, for instance.

Part of the involvement process included the development of platforms for sharing and discussing the project through a website (http://www.vildmedvilje.dk/lystrup/), Facebook (135 members; www.facebook.com/groups/874946265931487/), physical signposts, public events such as biodiversity walks led by Rasmus Ejrnæs, organized with the local library, a tree downing event to encourage residents to relate to the materiality of the park, and to combine experiences of biodiversity with other more recreational activities.

Phase 4 (March 2016 – end 2016, project concludes): Through the first three phases, those being the dialogue meeting and workshops, specific projects – or paths – have been defined, and these were launched in various ways during a fourth phase. Some have resulted in long-lasting initiatives, others in events, and one still exists only at a conceptual level. All paths are co-determined projects that were initiated after the public meeting and workshops, and created in collaboration with local institutions or residents.

#Path 1: Establishing a cow grazing guild based on local memberships and leadership: This idea generated a lot of interest, and with assistance from Dansk Naturfredningsforening, today the guild – 'Lystrup Kogræsser- og Naturplejeforening' (http://lystrup-ko.dk) – is organized and run by area residents. Four calves, owned by a citizens' guild, were bought, and graze in the park. Members pay for a share of the calves, and thus receive part of the meat when the animals are slaughtered. All thirty-two shares are sold, and only supporting memberships are available. The cattle support the development of biodiversity and park maintenance, but their presence also renegotiates what a public park may look like, and be used for, and how citizens may engage with the park. For these reasons, the guild and the introduction of the cattle created a lot of local interest/joy and media interest, and also stimulated discussion (e.g. in a Facebook group for Lystrup residents) concerning the problems that might be experienced by city residents living near cattle, and the community's ability to take care of them. It was striking how the release of the calves – a nonhuman factor – in the park was what changed the affective level of engagement and interest in the project most radically. Initially, the community was rather divided over the idea, but today a general atmosphere of curiosity seems to have been established. People constantly share images and videos of the cattle online.

#Path 2: Together with the local library, a little, free library focused on sharing books and hosting insects has been built in the park. Here, books (more or less linked to biodiversity), seeds, and plants are shared among the residents, and a small, stone wall for hosting insects has been created. This free library also signals that the park may be used in new, citizen-driven ways, and it serves multiple purposes at once: a platform for sharing, for lingering, for protecting insects. Fur-

thermore, the local library has used the project to launch other events, such as nature walks.

#Path 3: A third idea was to establish zones of 'edible nature' in the park. The idea generated a lot of support during the meetings, but it was difficult to organize a local action group around the theme. This clearly shows that citizen participation may be rather unpredictable: some ideas (although rather complicated, such as the cow grazing guild) are quickly organized, due to a constructive encounter between people and institutions, whereas other ideas (not necessarily very time consuming) do not generate the same level of action.

#Path 4: The idea turning the park into a space for playfulness, creativity, games, and lingering – instead of transit – was also raised several times. This resulted in a public play event in September 2015, involving approximately fifty area residents playing nature-related games in the park. The local scouts were involved in planning and hosting this event, and developing the games in collaboration with Mathias Poulsen from *Play Consulting* (http://playconsulting.dk). Additionally, two students from the department of Experience Economy, Simone Hougaard and Cecilia Clemmensen, Aarhus University, developed a biodiversity game for the park (placed in the free library), and designed a learning event with one of the local schools (Elsted Skole), where pupils at the secondary level (4–6 grade) learned about biodiversity, and designed and installed their own hanging insect hotels in the park.

In planning and developing the process of citizen participation, we were inspired by three important strands of current research on participation. The first understands the concept of participation as a political and democratic concept (Arnstein 1969, Pateman 1970, Carpentier 2011), and stresses the importance of creating situations of actual co-decision (here, related to initiatives in the park) between citizens and authorities. The second strand approaches participation as a process of putting together, or creating assemblages of, non-human, human, institutional, and technological components, with the intent to investigate multiple capacities, outcomes, and effects

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RETHINKIMPACTS 2017

(Stage and Ingerslev 2015). Here, participatory situations are to be designed, approached, and analysed as very specific and complex assemblages involving a variety of interests, motives, and effects. The third, related, material approach focuses on processes of materializing participatory and sustainable practices (Marres 2012b). Here, we were inspired by Noortje Marres's work on material participation and sustainable technologies, and her description of materialities' capacity to frame or code everyday situations as arenas for participatory citizenship. In a sense, the Lystrup project is a big, living experiment attempting to create and re-code – with the area residents – the meaning and importance of the materiality of the park – the flowers, the water, the trees, the animals. Or to create processes of 'co-articulation', where material practices are invested with various co-existing values. The flower is not just a flower – it is a biodiverse flower, and taking care of the flower is a practice with multiple values of local, affective, political, and sustainable importance.

We have also been inspired by Marres's concept of the 'material public', focused on 'public engagement as an embodied activity that takes place in particular locations and involves the use of specific objects, technologies and materials' (Marres 2011, 7). In this we do not evoke only the traditional 'informational citizen' as a political subject, but try to understand the creation, maintenance, and development of materiality – here, the park, the library, the guild, and so on – as an important type of everyday political participation.

4.0 Participation as 'interdisciplinary experimentation'

After describing the two projects, we now outline the common understanding of participation, which has guided, and has also developed through, the projects. Participation is difficult to define, but we approach the concept as having a political aim (Arnstein, Pateman, Carpentier). Participation occurs when citizens normally excluded from decision-making processes are included in decisions and actions, which they find relevant to their lives and communities, or when a social structure exists that allows for citizen-led action and change. Examples include when citizens are invited to co-decide changes, instead of simply witnessing a transformation of their local community, or when citizens are invited into processes that imagine how their community will evolve, instead of just being receivers of decisions made at municipal or state levels. In this sense, participation does not occur when authorities simply inform about, or debate decisions with citizens, which have already been made.

Participation and citizen involvement are already important to a range of local authorities and organizations. In 2014 and 2015 the municipality of Aarhus, together with 700 residents, developed a so-called 'Medborgerskabspolitik' ('Citizenship Policy'), where increased opportunities to participate play a crucial role. It extends the attempt to formally integrate citizen participation into all levels of municipal policy, work that had already begun in 2004, with the 'Aarhus model for citizen involvement'. Citizenship (or Medborgerskab) is described as a goal, a vision for a better society, a method, and a way of being a good citizen. 'Our ambition is that everybody living, working or studying in Aarhus will engage in citizenship' (p. 1). Citizenship is not something that one simply has through a logic of rights, but something that one 'takes on' by being involved in society. In some sense, citizenship becomes a way of framing a more creative, helpful, and potentially demanding relationship or contract between citizens and the municipality. The concept of participation is used in the policy paper, but its exact meaning is not

clear, as it seems to simultaneously imply that citizens should have more in-fluence on urban planning, that all citizen with something at stake should help to define goals and the means of attaining them, that citizens should be included in the dialogue, and that citizens should help co-create and take re-sponsibility for Aarhus as a city. It is unclear whether citizens 'participate' when somebody from the municipality informs them, interacts with them, in-cludes them in important decisions (p. 8), or whether the citizen simply should perform everyday exchanges such as talking to a stranger (p. 6). Although the policy paper attempts to formulate a general appeal for further citizen engagement, its weakness is the abstract and overtly bendable use of 'partic-ipation'.

The municipality and island of Samsø, and its Energy Academy in particular, have also focused extensively on citizen participation as a model for sustain-able innovation. As partners in the Interreg project, *Implement*, the municipal-ity and academy have been involved in developing a more specific model for involving citizens in green innovation in the most effective way possible (http://peopleandbiogas.com). Here, the reason for engaging in citizen par-ticipation is less focused on democracy and citizenship, and more on creat-ing effective processes with great chances of success. On www.peopleandbiogas.com there is a description of how one may avoid massive resistance from local communities by involving them, and creating local ownership. This may be done through a three-step model of 1) prelimi-nary work (defining success criteria, creating a process plan, mapping and getting to know the community, stakeholders, gatekeepers, channels of communication, local authorities), 2) process (creating a platform for com-munication, planning and holding large and individual meetings in close col-laboration with the community, documenting ideas and results, creating trips and excursions to key sites), 3) engaging the local community (creating local groups, maintaining engagement through continuous activities).

A third local approach that we wish to mention was developed by the socio-economic company, *Sager der samler* (SDS), which is a dedicated arena for participatory citizenship and everyday activism, founded in 2012, and it has developed into an important laboratory for participatory experimentation in

Aarhus. As a verb, 'Samler', means something like assembling or gathering, which stresses that gathering people around various social causes and challenges is the key method of SDS. 'Sager' translates into issues, causes, projects, or affairs. Thus, SDS aims to provide an infrastructure or meeting point where people gather, and act on, issues/challenges such as sustainability (green action), inclusive communities, or health. SDS sees itself as linked to two cultural transformations: 1) an increasing need to develop new solutions, from the bottom-up and across sectors and forms of knowledge (hence the focus on gathering different kinds of people), 2) an increasing desire among citizens to engage, to 'do more' than simply vote, to help transform society for the better (hence a focus on initiatives coming from citizens with a vision of practical knowledge related to a certain issue) (http://sagerdersamler.dk/foreningen/). These three principles serve as guidelines for SDS's work, and stimulate a more spontaneous and active civil society, acting on the challenges it faces: 1) begin with lived everyday experience, 2) shape action through reciprocal communities, 3) find opportunities for action where one does not need to ask for permission, or one does not need to raise money.

Our projects share many values and methods with the citizen policy of Aarhus, the Samsø guidelines, and SDS's every activist approach, but also add something to them. With the policy paper of Aarhus, we share an interest in cultivating new relationships between public authorities and local residents, making it possible for the latter to take the initiative and interact more effectively with the municipality. However, we also stress the need to develop clearer and more precise understandings of what participation means, and models and guidelines for effective citizen involvement. This urge to be specific is something we share with the Samsø model, but our projects attempt to approach citizen involvement in a less instrumentalist way, by focusing on the unpredictable, imaginative, experimental, and aesthetic-affective dimensions of citizen involvement, as well. Participation is more than a method to 'get things done' in an effective way, or to avoid citizen resistance. SDS's focus on participation as a process of assembly has been a major inspiration for our projects, but we add a focus on citizen participation as a process of research

development and on a stronger acknowledgement of power differences and disagreement, as inherent parts of citizen participation.

In the two citizen participation projects described above we have used and developed a strategy that we call 'interdisciplinary experimentation' to reach our goal of relevant co-decision. The strategy is inspired by the previously-mentioned Dutch sociologist, Noortje Marres, and her work on material partic-ipation and everyday experimentation in relation to green technology and innovation. The strategy aims to apply eight key guidelines in the design, de-velopment, and evaluation of participatory processes. The strategy is espe-cially suitable for processes dealing with the presentation and development of sustainable changes in specific local communities. It is important to stress that the strategy is both *used in*, and also *a result of* the two projects. Some of the guidelines were already formulated before the projects, others were there before the projects, but not clearly articulated, others evolved during, or even after, the projects. Furthermore, the guidelines are to be understood as *ideal* guidelines, which means that in specific processes some may be more rele-vant than others, and for various reasons, some may be difficult to acknowledge in the process taking place. Here, we briefly describe our key guidelines or recommendations.

4.1/   Guidelines of citizen participation as interdisciplinary experimentation

1) Experimentation: Citizen participation is and should be approached as a process of experimentation aimed at generating solutions for defined challenges. This means that the challenge and process are clearly framed by the people initiating and developing the experiment, and also that the outcome and process are open and unpredictable. We experiment because we do not yet have the right solution to the problem being investigated, or its local realization, not to simply implement an already defined solution. A process of experimentation leaves open a space for genuine participant influence.

2) Expertise: Citizen participation is not only about direct democracy or letting citizens decide. It should also consider and integrate established expertise, in terms of both theoretical and practical knowledge, in relation to the challenge or context. We acknowledge that expertise is also to be found at lay levels and can be involved through for instance crowdsourcing.

3) Interdisciplinarity: The expertise involved should combine various disciplines, in order to engage cultural, technological, and scientific approaches to the challenge and process. Private companies and public authorities, lay experts and entrepreneurs must be engaged.

4) Assemblage: The process should be envisioned as a dynamic and evolving assemblage consisting of various parts (e.g. citizens, facilitators, experts, businesses, gatekeepers, local authorities), the combinations of which produce ideas for solutions to the challenge. However, an assemblage is not only an agglomerate of social actors, it is also a whole environment consisting of technologies, built spaces, matter, things, auras, energy flows, and atmosphere. The experiment simply consists of bringing together relevant parts to see whether, by being related to each other, they produce something valuable to addressing the challenge. And in the

process, the questions of 'Who and what do we need to involve to make this better/succeed?', and 'How will we make the assemblage and solution strong and effective?' should be continuously addressed.

5) Relevance: A key focus in designing and developing the process should be to make the challenge and process relevant to the community involved. This may be done by mapping existing local interests and energies in relation to the challenge, and doing an ongoing cultural analysis of the community: what interests them, how solving the challenge may become important to them, the level of co-decision in which they are interested? Relevance may be strengthened by using established channels of communication and forums, to focus more on material dimensions and transformations, to invite citizens into processes of imagination, to involve and learn from local stakeholders.

6) Aesthetization: We have worked with aesthetization in two ways: firstly, by creating immersive environments in our workshops, to encourage and facilitate innovative ways of thinking. The environment that we have wanted to create is one of utopian dimensions, one that encourages all involved to co-create a possible future. In this way, the workshops and their atmosphere of co-creation function as a preview of a future that is both within reach and yet to come. Thus, the future becomes material, and tangible, and within reach, and partly already realized. Secondly, we have used aesthetics as a tool to engage actors in alternative ways in the processes that stimulate their imagination, for example, through the use of fictionalization.

7) Disagreement: Avoiding discussion or opposition during the process is not a goal in itself. An effect of the process may be that a certain issue or problem becomes debatable, or is raised by a community, which could stir both disagreement and affect. Questions could include, What is a public park? How should a citizen of our community behave? What level of diversity is acceptable? How far are we willing to go to solve the challenge? Instead, 'raising issues' could – following Marres – be defined as an inher-

ent goal of participation, one with which collectives may engage in new ways.

8) Multiple values: A participatory process is often described as successful if it is smooth, fast, conflict-free, and obtains long-lasting and effective results. We also aim for long-lasting change, but would argue in favour of focusing more on evaluating the multiple values of participatory processes. Focusing on multiple forms of value production in both designing and evaluating participation would also imply an acknowledgement of how participation could motivate learning and new understandings, learning to participate in society and local communities, experiential intensity, feelings of empowerment, new relations among citizens, mobilization for future activities besides material transformations, solutions, or decision-making.

5.0 Resources and related projects

The report is linked to, and grows out of, an array of previous research publications and events related to Aarhus 2017. Together with other colleagues we have organized the two rethinkIMPACTS 2017 conferences. The first was *Rethink Participatory Cultural Citizenship*, November 14–16, 2013, at Aarhus University, involving many of the informal key stakeholders in the arts and cultural sectors in Aarhus. The second conference, *RE-DO– On Sustainability and Culture's Role in Sustainable Futures*, October 28–31 2015, tried out alternative, very localized meeting forms and formats, in order to facilitate encounters and interaction between conference participants and locally based initiatives on sustainability. At this conference both projects were presented as interdisciplinary papers. Additionally, we organized two workshops within the framework of rethinkIMPACTS 2017 (Kulturbyakademi). One research workshop on Community Work and Innovation, *Rethink Action Research Methods* (March 19 2014), and one entitled *Cultural Entrepreneurship and Regional Development* (March 26 2014). Professor Katherine Gibson, from the University of Western Sydney, Economist Geographer and specialist in Action Research and Community Development, was invited during the spring of 2014, to strengthen our endeavours in action research, and to align our research agendas with strong international environments.

We end this report by listing a range of inspirations for further reading about participation, and links to other projects, events, or units related to the work presented in the report:

6.0 Litterature

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The citizenship policy of the municipality of Aarhus (in Danish): https://www.aarhus.dk/~/media/eDoc/2/3/0/2306122-3581323-1-pdf.pdf

The Samsø model of citizen involvement: : http://peopleandbiogas.com

Description of Sager der Samler (in Danish): http://sagerdersamler.dk/foreningen/

Link to the Rethink conference on participation: http://conferences.au.dk/rethink-citizenship/

Link to the Rethink conference on sustainability: http://conferences.au.dk/re-do/

Link to Rethink project on participation and cultural centres:
www.reccord2017.eu

Link to the AU research unit on participation:
http://cc.au.dk/en/research/research-programmes/cultural-transformations/research-groups/participatory-culture/

Link to summer school on participation and affect with AU as partner:
http://cc.au.dk/en/research/research-programmes/cultural-transformations/ssct-phd-summer-school-and-other-ct-phd-courses/
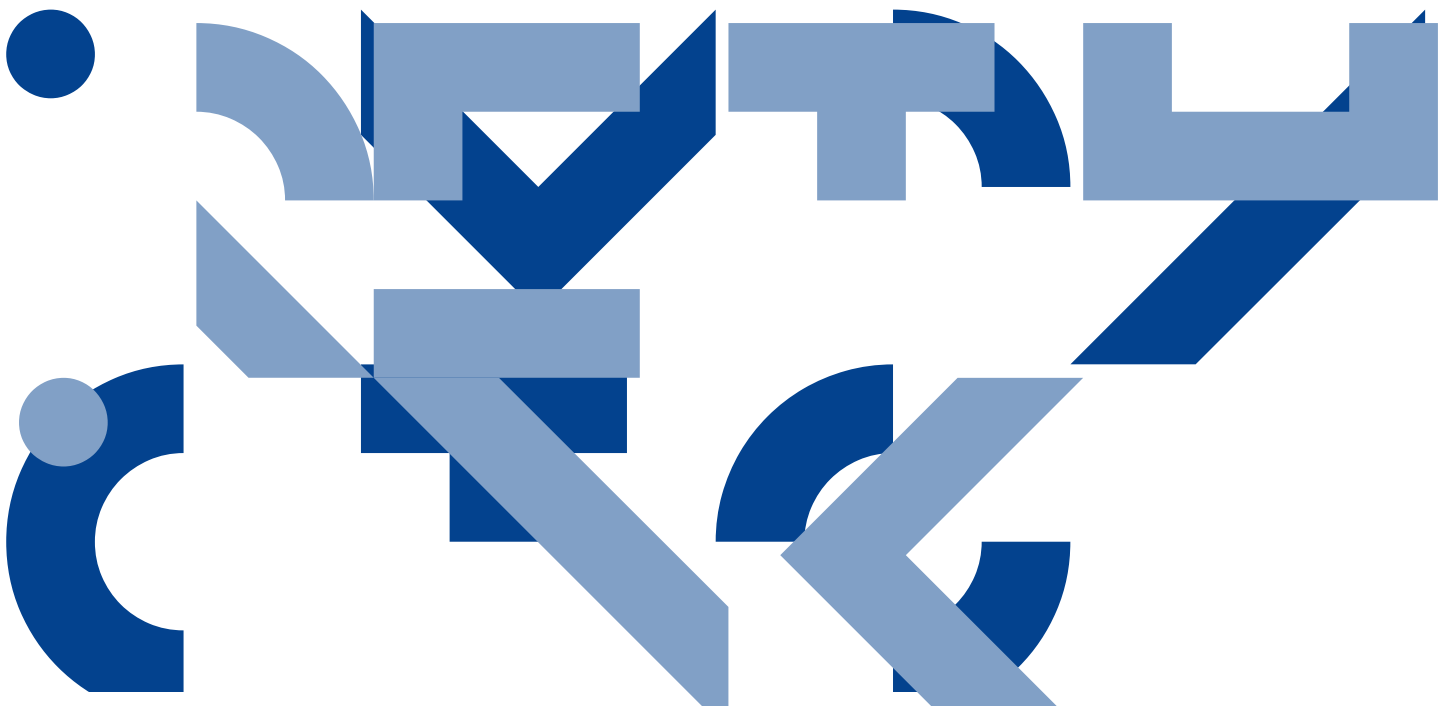
Abstract: The report introduces two different environmental projects involving citizen participation and interdisciplinary research: *Reclaiming Waste – a living experiment in Ry* (2014–2015) and *Permeable Green City Aarhus – Combining Life Politics, Biodiversity, Citizen Empowerment, and Sustainable Urban Drainage to Create an Ecologically and Socially Resilient City* (2014–2016). They take the shape of 'living experiments' that explore various processes and phases in democratic participation. Through these projects the report argues in favour of understanding participation as 'interdisciplinary experimentation', which is defined as *an experimental practice, creating specific and designed encounters between various groups and forms of knowledge, in order to investigate how to solve or reframe particular challenges*.

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Carsten Stage is Associate Professor in the School of Communication and Culture, Aarhus University, Denmark. Previous publications include Global Media, Biopolitics, and Affect: Politicising Bodily Vulnerability (co-authored with Britta Timm Knudsen, Routledge, 2015) and Affective Methodologies: Developing Cultural Research Strategies for the Study of Affect (co-ed, Palgrave, 2015). He is co-editor of the journal Conjunctions: Transdisciplinary Journal of Cultural Participation (http://www.conjunctions-tjcp.com/) and a member of the steering groups of the FKK-network Take Part and of the participation research project Reccord.