# Paper Book

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# Democratising knowledge: co-creating the future, insights from the iWeek 2013

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**Abstract**

Citizens knowledge and laymen knowledge are increasingly recognised as valuable assets in creating innovations to reach social or environmental benefits. This entails a deep form of knowledge democratisation, where different groups in society are involved in the process of knowledge construction. Acknowledging the plurality of worldviews can therefore ensure that not only the views and interests of dominant groups are reproduced, thereby making the arena of knowledge production more democratic.

However, democratising knowledge may sound beautiful, but bringing it into practice successfully is highly context dependent and not as straightforward as one might hope. Enabling circumstances have to be in place to include all relevant actors, give everyone a voice, and create inclusive processes of participation.

During the iWeek 2013, an unconference on 'interactive methods for social change', organised by OtherWise (the Netherlands), various case-studies were presented on recent experiences with interactive methods for fostering participation.

In this paper we will look at three case-studies, in Haiti, Kenya and the Netherlands, which were explored during the iWeek 2013. The participatory process and its outcomes were analysed. The analyses suggests that, whereas in some cases co-creation might be considered as the ultimate stage of participation, in others co-design might be more effective to reach social and environmental benefits.

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*"Mikoko Pamoja" from Swahili: "we and the poles are one"*

## Introduction

"Knowledge plays a significant role in 'development' and 'environment'. It is important because it shapes society not only through technology, but also through instilling values and assumptions which motivate human beings and inform national policies", as Pimbert (2006) states.

But what exactly do we mean when we speak of knowledge? Whose expertise are we talking about? Nowadays, citizen and laymen knowledge are increasingly recognised as valuable assets in creating innovations to reach social or environmental benefits. At the same time there is a declining trust in professional expert systems, which are often dominating problem-framing and solutions offered to complex societal and environmental problems.

## Towards Knowledge Democratisation

With the failure of innovations made behind closed doors (lack of transparency, consultation and societal participation) trust of society in science and its innovations has declined. Reason and Bradbury (2008) state it as follows: "First, around the world there has been an erosion of faith in expertise to solve pressing problems and issues. Whether because of the failure of science

adequately to predict or control risk (Beck 1992), or because of a growing acceptance of differing ways of knowing." Moreover, when seemingly reliable knowledge is constructed within a narrow discipline or social arena, it might be easily contested by other groups in society, whose voices were not heard (Nowotny 2001).

The boundaries between expert and public knowledge are becoming blurred, and different forms of knowledge, both professional and lay, are being recognised as valuable assets in constructing effective innovations. Fisher (2000) states that the process of knowing is increasingly becoming the outcome of a negotiation between people with "expert knowledge and the actors in the everyday world, including the experts themselves." Hence he argues that this process should not be regarded as merely the domain of professional expertise.

Woodhouse and Nieusma (2001) elaborate that whilst "some peoples values are systematically over-represented through access to and representation by expertise, others are systematically underrepresented." A more democratic approach is hence needed in which the voices of otherwise excluded people are integrated in problem solution and innovations. Acknowledging the plurality of worldviews can ensure that not only the views and interests of dominant groups are reproduced, thereby making the arena of knowledge production more democratic.

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In order to move towards a more democratic knowledge arena, "there is a need to actively construct knowledge for diversity, decentralisation, dynamic adaptation and democracy" (Pimbert 2006). In this context, Nowotny (2001) argues that we should "move towards socially robust knowledge". Knowledge will become more socially robust when it meets several conditions. Firstly, knowledge should be tested for validity in the real world, that is to say: outside the laboratory. Secondly, it should involve an extended group of experts, rather than a select team of professional experts. Lastly, it should result from having been repeatedly tested, expanded and modified. In this manner a type of knowledge will come into being which is more socially robust and can resist in a social world with its controversies, hazards and complexities.

All in all, this argues for interactive and participatory methods to engage citizens and laymen in the process of knowledge creation. Citizen knowledge is not an ultimate solution but a contribution to finding such solutions. Integrating local, endogenous knowledge within the process can lead to a wider spectrum of knowledge diversity and hence to more robust innovations. But, how to adequately involve citizens in the process of innovation creation?

**Stages of Participation**

Citizens can be involved in innovation processes and imple-
mentation in a number of ways. When looking at participatory processes different interlinked stages can be defined. Levels of participation are widely addressed in the academic literature. The participation ladder and the participation wheel are widely used concepts (Reed 2008, Sutcliffe 2011, Lam 2013). Levels identified in the participation ladder of Arnstein (1969), most commonly are: manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control. The ladder, being rather static and hierarchical, made place for a wheel in which one stage would follow the other subsequently. The wheel of participation (Davidson 1998) "emphasises the legitimacy of different degrees of engagement" (Reed 2008). In the wheel of participation four main areas are addressed: inform, consult, participate and empower. These stages show an increasing input and interdependence in the process. From top-down communication, involving a one-way flow of information, to two-way information exchange and dialogue between all relevant actors (adapted from Rowe and Frewer 2000).

In this article the following stages of participation will be used, from passive participation to co-creation. These have been synthesized from different domains, from politics to economy and natural resource management (Bauwens 2008, Blackstock et al. 2006):

- Passive participation: when citizens receive information from professional experts about innovation development and imple-

mentation, but have no input in the process and do not have the possibility to express opinion or give a choice.

- Self-service participation: citizens can choose between innovation options, but these options are static and they have no influence to shape them.

- Do it yourself (DIY) participation: citizens are involved in innovation development and implementation. They have the possibility to adjust certain parts of the innovation process.

- Co-design: citizens have input and influence the process based on their needs. They have the opportunity to shape innovation development and implementation with professionals. It is based upon a partnership between the relevant actors, but the final outcome is implemented and lead by professionals (adapted from P2P foundation 2014).

- Co-creation: all actors (including laymen, citizens and professional experts) are involved in the creation of innovation from the beginning. It is a transparent process in which all relevant actors are co-responsible for the innovation creation and implementation (adapted from Owen et al. 2012).

In the context of co-creation, Derrick and Pavone (2013) speak of "up-stream and down-stream engagement and decision-making", where up-stream engagement signifies the

involvement of the relevant actors from the very beginning of the process, and down-stream refers to the research agenda having been set without the involvement of actors.

According to Kristensson et al. (2007), involvement of actors in the co-creation process produces more creative ideas, the innovation is better valued and more easily implemented (Kristensson et al. 2007). However, this does not imply that one stage of participation is necessarily preferred over other stages of participation: "different levels of engagement are likely to be appropriate in different contexts, depending on the objectives of the work" (Reed 2008). In some cases a high level of involvement "might result in confusion over aims and judgements" (Rowe and Frewer 2000).

**Enabling Circumstances**

The stage of participation which is wishful for a specific innovation is highly context dependent. Contextual forces such as location, technology, social relations, legal requirements, political regime of the country etc. might support or block participation. For instance, economic decline can abolish the support for the innovation development, or political regime instability can prevent actors abilities to engage in a process (Brown et al. 2003, Nadeem and Fischer 2011).

Enabling circumstances have to be in place for all relevant

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actors to be able to fully participate and ultimately reach a stage of co-creation. Firstly, knowledge is a major factor that can allow and enable participation. Lack of access to relevant skills and knowledge is often a factor of exclusion (Liberatore and Funtowicz 2003). In order to increase participation it can, in some cases, be crucial to allow actors to become more knowledgeable on the topic and gain expertise needed (Corus and Ozanne 2012). Second, the environment of trust is crucial to participation (Derrick and Pavone 2013). Actors need to trust each other in order to collaborate and work together. Trust building is a long term process which involves listening, long-term relationships and presence in communities (Brown et al. 2003). Third, power structures can easily disrupt or enable and catalyse participatory processes. Involving diverse groups of actors will imply that there will be a divergence in  levels of wealth, education, political clout and other sources of power (Brown et al. 2003). In order to be able to cope with such divergence, it is important that such power relations are firstly acknowledged and secondly balanced within the innovation process. Fourth, closely related to the issue of power relations, also tangible resources (such as financial means, sufficient time) and facilities need to be in place and accessible. These resources and facilities should be used in a rightful manner, benefiting all actors involved (Rowe and Frewer 2000, Nadeem and Fischer 2011).

Summarising all points above, enabling environments are needed for participatory processes, in which there is trust amongst the involved actors, in which power relations and means are balanced and in which access to relevant knowledge and skills is available and accessible.

## Insights from iWeek 2013

OtherWise foundation (Wageningen, the Netherlands) yearly organises the iWeek. The iWeek is an unconference on interactive methods for social change. The iWeek forms a platform for knowledge sharing and co-creation of interactive methods for social change. This means that methods and practices from over the world with regard to participation are shared and reflected upon. Central question during the iWeek is: what are recent experiences in the field of interactive methods and what can we learn from each other? In this paper we highlight three case-studies we came across during the iWeek 2013. We will describe and discuss these and give some tentative evaluation on the stages of participation and enabling circumstances.

## Case Study A: EcoSan Toilets in Dessources, Haiti

On January 12, 2010 Haiti was struck by an 7.0 Mw earthquake, which caused immense damage to major cities and ports, affecting approximately 3 million people. Vital infrastructure was severely damaged or destroyed. In this context, Silent Grace Foundation (SGF) was founded. SGF focuses on conceptual-

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izing and implementing community-led projects that address local needs in the fields of public health, ecological agriculture, engineering, renewable energy, education, and leadership. SGF started to work in Haiti with Organisation de Jeunes Honnêtes pour le Développement d'Haïti (OJHDHA) in 2010. They have been leading the community development project held in Dessources, a village with 400 inhabitants.

This project followed a six-step participatory process: (1) diagnosis, (2) local needs analysis, (3) design and selection of options, (4) project planning, (5) implementation, (6) follow-up and evaluation. The diagnosis was based on a study of local needs identified through formal interviews, participatory dialogues and observations. From this process, several principal problems were defined: underground water contamination, food insecurity, and an alternative solution to open defecation practices. In order to deal with the wide scope of the above mentioned issues, the Ecological Sanitation (EcoSan) toilets project was chosen. It addressed Dessources' community's environmental, public health, and social needs, while improved agricultural outputs through a custom-designed off-site composting system. The toilet design and engineering took into consideration the particular conditions of the community such as: high water table, extreme flooding, and limited financial and physical resources.

As of August 2012, three EcoSan toilets were built in Dessou-

rces by community members and supported by SGF engineers. An impact evaluation of the EcoSan project was completed through an adoption assessment realized by students from the University of Puerto Rico School of Public Health. In the assessment, perceptions and adoption rates were documented as well as recommendations for further development.

The implementation of EcoSan toilets increased and strengthened social capital in the community. The community was organised for setting up a self-sustaining project, converted human waste to organic compost and made it available to local farmers. The importance of listening to the community and including them in every step of the planning and implementation process was crucial to the sustainability of this project.

## Case Study B: Mangrove Conservation in Gazi Bay, Kenya

Gazi bay, on the South coast of Kenya, has a population of approximately 2,000 inhabitants. Mangrove forest, which covers the coastal intertidal zone, has a valuable direct and indirect benefit to the local population. Mangroves can, amongst others, act as nursery for fish, as a buffer from storms, the trees can be used as building materials (poles) for the community and can have a medicinal value. In 2005 the Kenya Marine and Fisheries Research Institute (KMFRI) started monitoring the carbon stock and its deterioration trend, and identified major causes of mangroves degradation in Gazi bay. In a community

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with high poverty levels and the mangroves being the main source of livelihood, forest degradation was a severe threat.

Key stakeholders, such as Kenya forest service, KMFRI and Gazi bay community came together. However, the community felt side-lined. They protested against conservation laws which were supposed to prevent them from cutting trees.

KMFRI decided to involve the community in a process to design a locally adapted strategy for mangrove conservation. In this manner a bigger sense of ownership and belonging came into being, related to the conservation goals. Alternative sources of livelihood from mangroves conservation were identified. For instance, KMFRI cooperated with the Municipality of Belgium which funded the construction of a boardwalk as a motivation for ecotourism. Other livelihoods projects such as beekeeping and integrated aquaculture were introduced with the help of United Nations Environment Programme (UNEP).

A key project in the conservation process was formed by Stewardship of KMFRI called "Mikoko Pamoja" a name which was carefully chosen meaning in Swahili language "we and the poles are one". This name was chosen to focus attention on the community, which relied on the mangroves poles for construction of their house, and is thus a valuable local resource. In a later stage the project was handed over to the community. Since the community is directly benefiting from mangrove conservation,

up to now they are still actively conserving the forest.

## Case Study C: 'Operation Atlantis' in Northeast Friesland, the Netherlands

The region Northeast Friesland, the Netherlands, is facing a demographic decline, which impacts many sectors. Facilities are closing down, employment opportunities decrease, housing agencies suffer. All this leads to a downward spiral, in which fewer younger generations are motivated to settle or stay in the region. The social housing cooperative Thûs Wonen took the initiative in 2012 to deal with the shrinkage and its consequences. They approached Institute Societal Innovation (ISI), which proposed a methodology for creation of 'safe zone' for social innovation.

Based upon the book The New Atlantis by Francis Bacon (1626) a participatory methodology was developed. He mentioned twelve boats "that sail into foreign countries [...] that bring us the books and abstracts, and patterns of experiments of all other parts". ISI used the metaphor of boats because water is an important historical aspect of the region. After in-depth interviews ISI selected the crew of the boats, based on their willingness to participate, connection with the region and diversity. They finally had a crew of more than 50 people such as bankers, aldermen, artists, the director of a day-care institution, etc. Participants recruited new participants through mouth-to-

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mouth advertising. The crew departed in their 'boats' and came up with ideas based upon literature and own experiences to cope with the consequences of demographic decline. In several facilitated sessions the crewmembers exchanged their findings and ideas. Gradually the ideas were funnelled into social business cases.

After almost two years of using the methodology 'Operation Atlantis', a network of local, diverse and connected change makers designed twelve social business cases. These business cases are dealing with the demographic and societal challenges of Northeast Friesland. Overall, the methodology 'Operation Atlantis' created a 'safe zone' where a group of diverse people could meet each other and freely create innovative solutions.

## Preliminary Analysis

A tentative analysis suggests that the different contexts and enabling circumstances in which the participatory processes were implemented, determined the stages of participation. In all three cases the relevant actors were involved 'upstream', so in an early stage of the innovation process. However, whereas in one case co-creation could be considered as an effective and plausible stage of participation, in the others co-design and 'do it yourself' were suitable to reach social and environmental benefits.

The participatory process in Dessources, Haiti, touched upon several stages, from participatory problem definition, to participatory implementation of the innovation. Herewith the participatory process could be regarded as so called 'Do it yourself' participation. In Gazi Bay, Kenya, after an initial failure of several stakeholders to create an acceptable solution for mangrove conservation, a move was made towards a more inclusive approach of co-design. In this manner a process was set up in which people felt more empowered and took ownership of the programmes, resulting in a more sustainable conservation approach. The 'Operation Atlantis' in Friesland, the Netherlands, involved citizens in an innovation process where all participants were involved from the beginning in a process of co-creation. For this process a wide spectrum of enabling circumstances, such as resources (both financial means and time), trust, knowledge, and balanced power relations have been indispensable.

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