

Negotiating the future

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Creating societal acceptance for renewable energy projects by negotiating the future

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The transition to a large scale renewable energy system

The current introduction of renewable energy technologies is part of a large scale and long term transition to a sustainable energy system. Within the field of renewable energy a growing number of different technologies exist, ranging from wind turbines to biomass plants, from carbon capture and storage to energy efficiency systems and from hydrogen fuel cells to salinity power (energy gained from the diffusion of sweet and salt water). Most of these technologies are relatively new, still developing and not applied on a large scale yet. Therefore uncertainties still exist about their future applications, scale and consequences. A second feature of the transition to a large scale sustainable energy system is its major impact on daily life. Private people have to adapt to the use and presence of new energy technologies in their own house, car and neighbourhood; and industries, governments and other organizations have to reorganize their daily policy and functioning to a new energy system.

Past and current sustainable energy projects show that both features of the above described transition may lead to a certain amount of resistance among stakeholders.¹ This resistance arises out of conflicts between stakeholders on future visions about the (results of the) project, about the impact and desired working of an innovation, or about other aspects of the project, its approach or used technology. This resistance can influence the project and development of technologies in different ways (Heiskanen et al., forthcoming). In some cases the resistance is too little to have direct influence, in other cases the resistance leads to adaptation of the project in size, location, used technology, timing, etc and in some cases the resistance leads to a complete failure of the project. In general, resistance is considered as an aspect influencing the success of

¹ Examples of past and current energy projects in which more or less resistance existed are the 25 case studies of renewable energy projects in Europe and South Africa investigated within work package 2 of the project Create Acceptance (www.createacceptance.net).

In this article the term 'stakeholders' is used for all parties connected to the project formally or informally, including project partners, investors, (local, national or regional) governments, scientists, consultants, but also inhabitants, NGOs, neighbours, media and the public in general.

the project negatively and in order to increase the chance for a project to become successful, the resistance should be minimized.² In other words, the societal acceptance of the project should be increased.³

Creating societal acceptance is thus an important aspect for every renewable energy project. Several methods exist to create societal acceptance but none of them contains the holy grail to success. This paper focuses on a newly developed ready to deploy multi-stakeholder tool for consultants and project managers to enhance creating societal acceptance for renewable energy project by negotiating and active intervention in future visions. This intervention takes place after a careful analysis of future visions and strategies for working towards the future desired world. The instrument, which is currently tested, consists of six steps. It is based on literature from the Science, Technology and Society (STS) studies and the evaluation of the existing Socrobust tool. In the following paragraphs firstly these foundations of the new tool will be introduced. Secondly the six steps of the new tool are described and thirdly the first results of the testing phase of the new tool are presented.

STS-literature and the Socrobust tool

In literature on project management several methods exist to create more societal acceptance.⁴ Additionally in STS-literature the link between three analytical levels is described: a micro-level with niches, a meso-level with socio-technical regimes and a macro-level of a socio-technical landscape. Developments concerning technological innovations can be understood as outcomes of multiple interactions and co-evolutionary processes between these levels (Rip and Kemp, 1998 and Kemp, Schot and Hoogma, 1998).⁵ Following this perspective, resistance against new technologies is linked to societal transformation and impact on the three levels. Technology developers and policy makers often only focus on the techno-economic dimension and assume that this should be sufficient for the adoption and diffusion of an innovation. In practice many energy projects face severe resistance from stakeholders. This resistance is shown to be associated with the societal transformation and impact of the innovation on the different levels and conflicting visions about the consequences and desirable path (Verbong, Mourik and Raven, 2006).

Based upon the three levels described in STS-literature, support tools like Socrobust are introduced (Laredo et al., 2002). Socrobust is developed by STS-researchers who noticed that many technology projects failed due to a lack of consideration of the diffusion and social embedding of innovations. 20 years of STS-literature is incorporated into an exploratory method, a tool-kit and protocol for technology developers and project managers to anticipate on future stakeholders reactions to innovation. Socrobust consists of four steps in which the current project and future vision are described (step 1), the necessary strategic (key) changes are identified (step

² For example in H. Rohracher, 2005

³ Following Heiskanen, ed (forthcoming) 'societal acceptance' refers to the institutionalization of action and meaning concerning the technology within and between social groups which leads to the alignment of different social interests to support the application of the technology in society.

⁴ Well known are the participative methods for project managers implying involvement from stakeholders in the project ranging from partnerships to one way information supply (described for example by Friedman and Miles, 2006).

⁵ This STS-perspective on the interaction and co-evolutionary processes between the three levels is later further developed and described as the Multi Level Perspective (MLP). See for example Geels, F.W. 2002, 2004 and 2005)

2), an assessment of the key changes (step 3) is made and the lines for action of the project are set out in a short term action plan (step 4). The steps are backed with the use of several tools which all contain a visualization like a map, table or graph.

ECN have tested and evaluated Socrobust (internally) further on innovations on the field of renewable energy (Kets et al. 2003a and 2003b). Several improvements in the process were identified and applied. But also some radical adaptations of the tool were recommended. Firstly Socrobust is a learning and evaluation tool and could not actively promote societal acceptance or intervene. Secondly the tool is developed with a single stakeholder perspective: the innovator / project manager, and could not be used by multiple or varied stakeholders that are involved in the project. And thirdly the tool was not targeted at the actual market entry phase of innovations (Verbong, Mourik and Raven, 2006 and Poti, ed., forthcoming).

A multi-perspective tool, based on intervention

The consortium of research institutes cooperating within the project Create Acceptance recently transformed the Socrobust tool into a new multi-stakeholder consultancy tool.⁶ To form a database of reference projects, twenty-five case studies on more and less successful renewable energy projects in Europe and South Africa were carried out by the consortium. Within these case studies special attention was paid to the visions of the stakeholders and the conflicting situations between them. Together with the evaluation of the Socrobust tool and the STS-literature these case-studies form the base of the new tool. The new tool aims to enhance the success of a market entry of the innovation, includes the visions of the innovator and the perceptions of other stakeholders and actively promotes societal acceptance by recommendations for negotiating and intervention in future visions. The new tool is performed by a consultant (outsider from the project) and consists of six steps and several instruments which are described below (See table 1).

Step 1: project past and present

In the first step the project historical and present development, context and actors are analyzed and described. The step is mainly reflexive. The goals of this step are to help the project manager to explicit his project, to let the consultant learn about the context, to prepare the selection of relevant stakeholders and to produce information about factors on both relevant national and local level of the project, independent of the project manager (to be used later in the process to confront the project manager with the outside world). To achieve these goals several tools are used. Factual information about the historical and current situation is presented in the *narrative* (a chronological, story-like text) and the *defining moments table*. The current local, national and regional context of the project is examined in the *barriers and opportunities tables*. The stakeholders and their impact and role is identified in the *actors table*. This first step is carried out by the consultant in close cooperation (by interviewing) with the project manager.

Step 2: Vision building

In the second step of the new tool the visions on the project and society are identified in future visions of the project manager and the stakeholders. Goal of this step is to

⁶ Create Acceptance is financed by the European Commission within the 6th framework programme. More information about the project and its partners can be found at www.createacceptance.net.

start a face-to-face interaction network-building process by confronting the project manager and stakeholders with their visions on the future. Several tools and actions are used to build up the several visions in a similar way including a map, a story-like text and a title. Based on the narrative, the actors table and context analysis and an interview with the project manager, the *Project Manager (PM) Future Vision* is described. Building upon the context analysis, the consultant further develops a *Business as Usual (BAU) Vision* in which the future is described without the project. Based on the actor table an *Overview of the Core Group of Involved Stakeholders* is identified. The core group consists of representatives of different groups of stakeholders (for example, experts, public administration, private companies, NGO's, etc.). In order to inform and prepare the members of the core group for their interaction in the project in the following steps, the consultant presents the *Strategy to involve the Core Group* to them in face-to-face interviews. A second aim of these interviews is building the *Core Group Representatives Stakeholders Visions* to complete the future visions of the project.

Step 3: Vision confrontation

In this step the future vision of the project (project manager) is confronted with the future visions of society (stakeholders) on paper. The goal is to analyze the possibly conflicting interactions between these project futures. This step consists of four tools performed by the consultant in cooperation with the project manager. Firstly an *Extrapolation of current Business as Usual Scenario* is made with elements from the context analysis. Secondly an *Internal consistency Check* is performed by the consultant by translating the visions of the project manager and stakeholders in qualitative scenarios. The results of this check (quantitative data) are added to the *Key Changes Table* which is the base for the *Analysis of Possible Conflicting Issues*. The result of the third step is a list of possible conflicting issues to be negotiated within the next two steps.

Step 4: Identifying project variations

In the fourth step alternative options for the project are identified. The aim of this reflecting step is to do a feasibility study of various scenarios by testing their flexibility and robustness. In order to get an overview of possible and acceptable room for manoeuvre, the possible pathways, three tools are used. The consultant will firstly perform an *Analysis of Possible Conflicts with External World*. Secondly the possibilities for the project manager to change the external world are identified in the *Capacity for Influencing Overview*. Thirdly also the options to change the project (for example different location, different technology or different project partners) to deal with the identified conflicts are identified in the *Capacity for Adapting Overview*. In order to complete the last two tools, external experts may be asked to perform for example a risk analysis or other specific research on (an aspect of) the scenarios.

Step 5: Stakeholder workshop

The aim of the step is to test a wider set of stakeholder's reactions to the possible pathways identified in step 4. In order to validate the different project scenarios two tools are used. Firstly the *Identification of all Relevant Stakeholders* (broader then the Core Group) takes place. These stakeholders are invited to join the *Participatory Workshop(s)* in which negotiating between the stakeholders is facilitated by several communication strategies as role playing. In the report of the workshop acceptable project options are identified and ranked.

Step 6: Action Planning

In the final step of the new tool concrete actions to implement the societal accepted project are defined. To compose the concrete recommendations an *Overview of Project Options* is made in which the different acceptable options are described. Based on the identified actions to adapt the project and the external world and the identified different pathways (from step 4), subsequently the *Capacity for Action Table* is composed including elements of timing. The last tool of the new tool is the *Recommendation Table* in which the concrete next steps to achieve alignment and extension of the network are presented.

Testing and evaluating before made freely publishable

Currently the described new tool to enhance creating societal acceptance is being tested in practice in five renewable energy projects in Europe: a carbon capture and storage project in the Netherlands, a solar project in Italy, a hydrogen project in Iceland, a wind project in Hungary and a biomass project in Germany. The coming months the six steps of the tool will be further defined and adapted according to the experiences within these demonstration projects. At the end of this year the tool will be finalized and next year it will become freely accessible for direct use.

At the time of writing, step 1 and step 2 are being performed in the demonstration projects. The first evaluations show that the applicability of the tools differs according to the type of project (new, on-going or follow up project) and the type of project manager (experienced or not experienced). Also the demonstration projects show that the complete set of tools consumes more time then expected from both consultant and project manager. Therefore it is suggested to add a project and project manager typology to the tool which results in a prioritizing in the tools and selection of necessary and supplementary tools in each step.

Apart from the demonstration projects the tool is currently presented at several national and international workshops, conferences and seminars, to be discussed and evaluated with other experts on the field of transition-management, renewable energy, technology innovations, societal acceptance and future studies.

Questions for discussion

During the testing and evaluation of the new tool to enhance societal acceptance we would like to discuss the following issues in the seminar 'Negotiating the future' in Oslo:

- The Business as Usual (BAU) vision. One of the future visions composed in step 2 is the BAU-vision. This vision is made by the consultant and describes the future without the project. *But is a BAU-vision feasible? How can a consultant compose a neutral BAU-vision as he or she is already involved in the project? On which knowledge or sources must the consultant base this vision? Etc...*
- The role of the consultant. The consultant of the new tool has a double role. Firstly he or she is a process manager and is responsible for performing the tool according to the six steps and within a timeframe. Secondly the consultant is an executive manager and responsible for getting the right input from the

right stakeholders and carrying out the steps. *But how does the consultant perform this double role? How does he or she stay neutral? To what extent should the consultant be involved in the project? And what qualities and skills must a consultant have to perform its role? Etc...*

- The involvement of stakeholders. For both step 3 (vision building) and step 5 (stakeholder workshop), stakeholders are involved. A reoccurring point of discussion in the involvement of stakeholders in general is the information supply towards the stakeholders. *How much information do you need to give stakeholders to gain successful involvement? Who is giving this information? In what form is it given? Should all stakeholders receive the same information? Etc...*

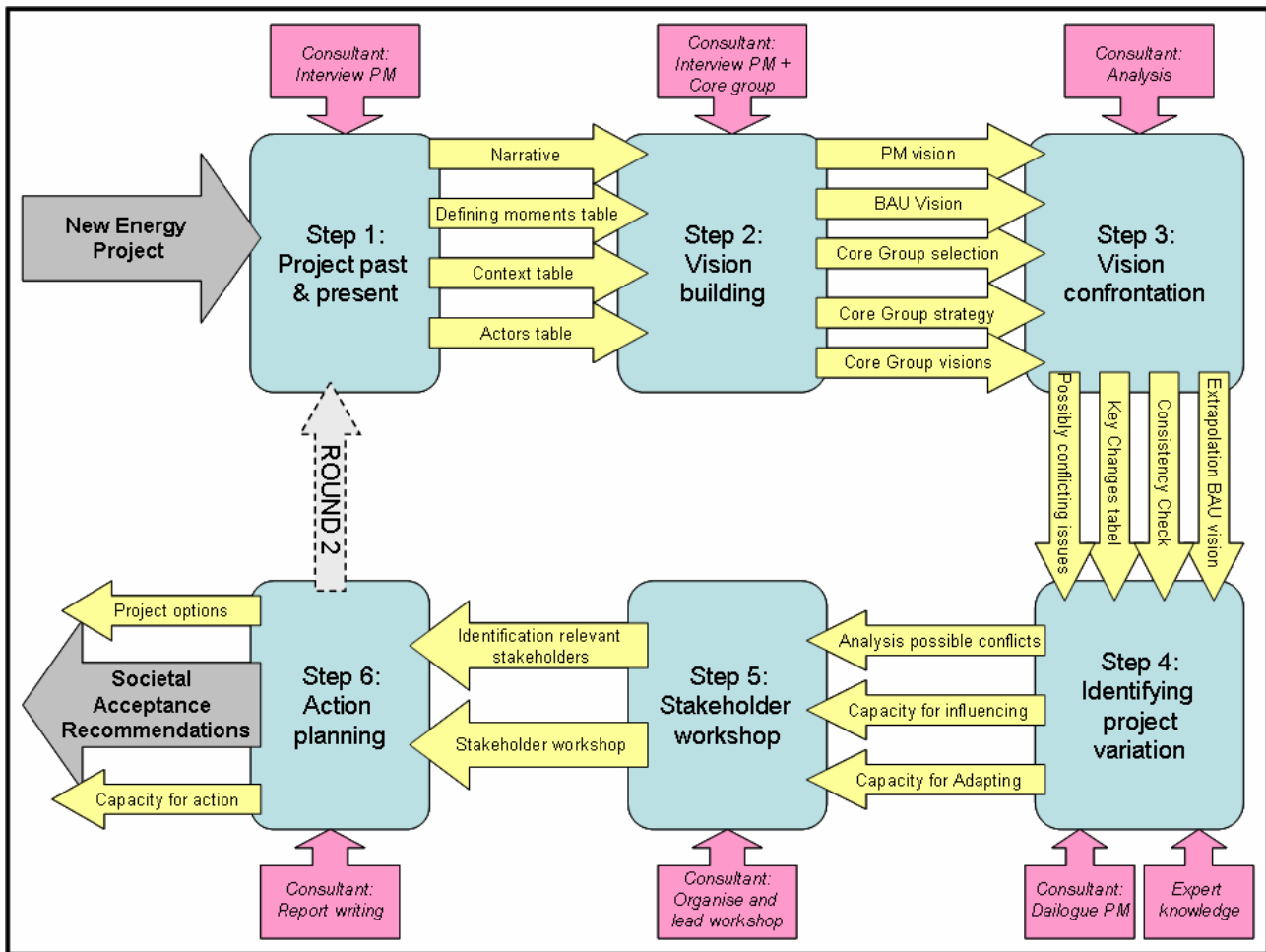


Table 1: overview of the new tool to enhance creating societal acceptance

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