Scenario workshops and urban planning in Denmark

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Denmark's culture of participation

Denmark has a strong tradition of integrating both representative and participatory (or 'direct') democracy. By law, local authorities have to make a plan for any change in a local area and this is sent out for a local hearing among the citizens before the final decision. For example, in 1996, when Copenhagen was the European Cultural City of the year, all citizens, associations and enterprises were asked for their ideas.

There are deep historical roots to the strength of Denmark's integrated political processes. Nicolai Frederik Severin Grundtvig (1783-1872), a clergyman, philosopher and teacher, founded 'Folk high schools', where adults participate in life-long education and empowerment. These were further developed by political philosopher Hal Koch, who believed that active and engaged people were better citizens. In 1984 a public referendum was held in which Danish citizens rejected nuclear power. The active social movement that resulted in this technology assessment by the whole population was one of the factors that led to the formation of the Danish Technology Board in 1986 by the Government.

Scenario workshops

The focus of Scenario Workshops (SWs) differs from that of most consensus conferences and citizens' juries that focus on society's use and regulation of technology. Like the Citizen Foresight approach (see Wakeford, this issue), SWs start with a commonly recognised problem and then look for solutions.

The Scenario Workshop is a local meeting that includes a dialogue among four local groups of actors:
- citizens;
- policy-makers;
- business representatives; and,
- experts.

The core of the Scenario Workshop is a presentation of possible future developments in the area. These so-called Scenarios have been formulated in advance and describe different ways of solving a problem. They have to be different with respect to both the technical and organisational solutions described and the social and political values embedded in them.

In the workshop, the scenarios are used as visions and as a spur for discussion. The criticism of the Scenarios by the participants linked to knowledge from their own experiences form the basis for the visions and action plans that they then develop. The aim is to form a basis for local action, but the Scenario Workshop furthermore serves to gather knowledge about which visions the participants have on the given topic. It also clarifies their attitudes to the presented Scenarios and their preconditions.

Workshops under the auspices of the Danish Board of Technology are usually part of a larger project. Here the participants' visions and attitudes towards new technology constitute a bank of ideas and a basis for the further discussion and assessment among experts and politicians. Furthermore, visions and attitudes are communicated to a broader circle of citizens, so they can carry on the debate among those who are likewise affected by the development.

The topic of the Workshop should not be too narrow. It should deal with assessment and choices between different types of technology. Furthermore it is important that it lies within the participants' sphere of action, i.e. that there is an opportunity for influence and that all decisions have not already been taken. It must be a topic which is relevant to society and where there is consensus that local action is a necessity. The exchange of professional insight and users' experience must generate new knowledge.

The Scenario Workshop is a particular type of meeting, which follows a certain set of rules. During the Workshop there will be time for brainstorming, discussion, presentation and time for voting. The work shifts between plenary and group sessions. The format and ground rules of the Scenario Workshop are there to ensure that everyone gets their say, that all ideas can be tabled for discussion and that the work is aimed at an action plan.

The Workshop typically lasts two days, and goes through three phases.
• Criticism phase
• Vision phase
• Realisation phase

In the criticism phase, the task is to criticise the Scenarios, both positively and negatively, from one's own experience, knowledge and viewpoints. The Scenarios are images of different possibilities for the future. This is not about making predictions and the task is not to choose between the scenarios, preferring one to another, or to assess which one is more probable. The Scenarios are meant to inspire criticism which can assist in the generation of new visions and action proposals. Participants are allowed to extract the modules or elements which they want in their own vision for the future, and combine them with other elements.

On the basis of the common knowledge derived from the criticism of the Scenarios, the vision phase focuses on developing the participants' own visions. In the realisation phase, the task is to devise an action proposal which can implement the chosen visions. The work is conducted in theme groups so there is the opportunity to work in depth with a preferred theme and formulate a number of action proposals. In order to realise the visions, a range of obstacles will present themselves, a stage which it is important not to overlook. For example, such obstacles can be financial, organisational, political or technical.

The 'vision realisation' proposals of the theme groups are discussed in plenary with a view to clarification and prioritisation. At this stage, action proposals for a final action plan are developed. In the final plan, those proposals which have been prioritised are described in detail, along with assigning responsibility for action.

The Danish Board of Technology have used the method in a larger subject area regarding *Ecologically Sustainable City and Habitation Type* and in the project *Library of the Future*, where the aim was to develop visions and proposals on the use of information technology in the public library. Our experience with the case of the Ecologically Sustainable City follows in the next section.

Case study: ecologically sustainable city

This scenario workshop was developed within the context of the Rio de Janiero Earth Summit in 1992 and was aimed at building on a broad, political consensus concerning the need to develop and transform cities and urban communities in a way that was ecologically sustainable. As it developed, it became clear that the project was dealing with an extensive process of societal transition that could not take place overnight. The project had to consider the whole technical infrastructure for energy, water, wastewater and solid waste management,

as well as daily life, habits and values of all the actors involved, including residents.

This multitude of issues is what we, as citizens in a technological world, are often confronted with. The problem focus of the scenario workshop method, together with its emphasis on local problems and local solutions, makes it necessary to handle multi-technological and even non-technological problems. Scenario workshops have a broad and open approach and are thus well suited for handling local problems. They are open to citizens' visions on innovation and technological design.

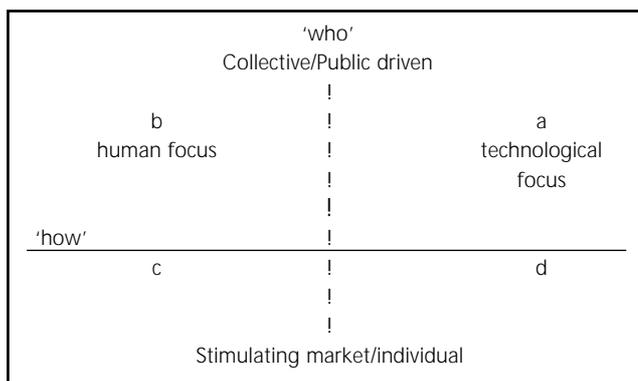One project team was faced with the task of organising a project that could provide for:
• the creation of new knowledge on locally existing visions, barriers and opportunities to realise visions;
• the production of policy proposals: who must do what to accomplish the changes required; and
• a more qualified debate based on an increased exchange of experience and knowledge; this was regarded of great importance, if changes were to stabilise over time.

To fulfil these aims it was not sufficient merely to consult engineers and other technical experts. Local actors had to be consulted to get the knowledge and experience required. It was assumed that the meeting of a variety of social actors, from different places and sectors in society, would create new ideas on visions and barriers and produce proposals for sustainable urban development.

The scenarios described a day in the life of a certain family in year 2010, portraying four different kinds of life in future housing areas. They described alternative ways of solving urban ecology problems in residential areas and individual houses. The scenarios were presented as visions, not predictions, with names (see Box 1 and Figure 1):
a. block of flats;
b. low-rise high-density housing area;
c. people's solar house; and,
d. intelligent house.

Figure 1 Two dimensional representation of four urban ecology scenarios (a,b,c,d)

'who'
Collective/Public driven

| b | | a |
| human focus | | technological focus |

'how'

| c | | d |

Stimulating market/individual

All four scenarios represented urban ecologically sustainable solutions in the sense that they fulfilled the criteria for saving resources and non-pollution, which were officially agreed upon for Denmark for 2010. They were different with respect to both the technical and organisational solutions described in each vision and with respect to the social and political values embedded in them.

These scenarios were presented inside a two-dimensional cross (see Figure 1.). The first dimension centres on who will be acting and the second on how they will act. In the 'who' dimension, the question is whether the local authority or the market is to be the catalyst of development. Who will be carrying out the individual activities: the local authority, individual households, or somebody in between? In the 'how' dimension, the question is whether a focus on technology will provide the answers or whether people must solve the problems themselves. For example, will the necessary savings result from the creation of a programmable water tap or from changed habits?

Scenario workshops were conducted in four local communities during 1992. The criteria for choosing communities were that there should be some positive effort and experience regarding urban ecology, and that the four places should be of different size and different scales of urban development. Each participant took part in two workshops with 20-25 participants.

First, there were stakeholder-group workshops, where participants from the same stakeholder group, but four different localities, met. The task was to develop visions using the scenarios as a prompt. The cross local dialogue provided new knowledge on barriers to change and new ideas on visions, both to participants and to organisers. Reports from the first workshops were used as input for the next round; i.e. local workshops arranged in the four local communities. At the local workshops, participants were split into theme groups, according to experience and interests. The task was to agree on a common vision and produce local action plans for energy, water and waste.

The results from these workshops were evaluated and fed into local political debate. The outcome was a report and a national plan for urban ecology, which was presented at a public conference in January 1993. Subsequently this was partly implemented by the Danish Ministry of the Environment.

Since 1993, the Scenario Workshop method has been 'exported' to a range of projects under the EU Commission, the Value/Innovation Programme, DGXIII. The aim has been to create a connection between research and development activity and the needs of society. The Danish Board of Technology has been part of these projects. There has been a significant development and publication of material. Scenario Workshops have been conducted in many countries and a comprehensive network has been developed.

Discussion

The results from the project have played an important role in the Danish debate on sustainable housing and planning during the years following the conference. An evaluation among all participants shortly after the project showed that the experience had been an important learning exercise and paved the way for better dialogue at local level. However, the long-term changes in the four communities have not been monitored.

In contrast to citizens' juries and consensus conferences, where lay people are the core participants, in scenario workshops, citizens are just one group of stakeholders that interact with a number of others. Each group comes with its own expertise and contributes its experience drawn from local activities. This is a necessary reaction to the planned and regulated conventional top-down approach to community planning and encourages the engagement and participation of many citizens. In our experience, the scenario workshops tended to bring people together who did not normally engage in dialogue, even though they lived in the same place.

What may be more difficult is creating a national level impact from just working in four local areas. Scaling-up such a process requires large amounts of time and money. It also requires the organisers to document and present the results to policy-makers in a structured way. Furthermore, information organised thus can then be used for lobbying purposes, in order to raise the interest of the media and politicians in such local level initiatives. It works best if there is a 'customer' at local, national or international level who needs the results and wants to use them. Yet the 'product' for the customer is not easily described and its result cannot be predicted in advance.

Above all, the success of the scenario workshop has been to empower citizens to get involved at an early stage of the design and selection of criteria for developing new technologies. The major challenge, as with so many participatory techniques, is to make the politicians listen to the outcome.

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