



These ever larger garbage mountains strain the capacity of the incineration plant. Therefore, design researchers from The Danish Design School are now engaged in a pilot project to find new methods for waste management. Photo: Eva Brandt

Innovation in Waste Management

Every year, there is a seven-percent growth in the amount of garbage handled by Denmark's largest waste management company, Vestforbrænding. The volume is beginning to stretch the capacity of the incinerator plant. Now, design researchers and anthropologists working with Vestforbrænding and several design agencies are attempting to solve the problem by developing a model for more efficient waste sorting and a higher degree of recycling. The model also aims to strengthen innovation in other industries.

By Hans Emborg Bünemann

In spring 2008, a team of design researchers at The Danish Design School embarked on a major research project that aims to develop a so-called Design-Anthropological Innovation Model (DAIM). They want to know more about how to run development

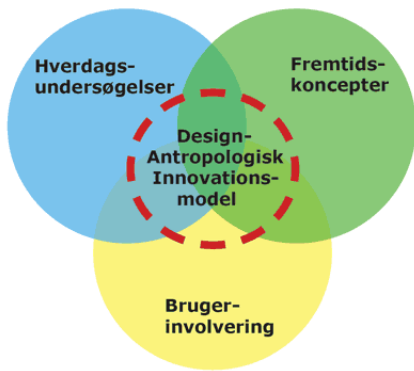
projects concerning complex issues that involve a large number of players. As part of this effort, the researchers are carrying out a pilot project on waste management in Denmark.

One of the researchers, Eva Brandt, is an associate professor at The Danish Design School under the auspices of the Danish Centre for Design Research. She explains that the idea is to use the waste management area as a basis for developing methods that will later be applicable to many other industries.

"The goal is to develop a toolbox with methods that private companies as well as public organisations can use to become more innovative in their project endeavours," says Eva Brandt.

Field Work Inside and Out

In the pilot project, the researchers look at ways of reducing the amount of waste that has to be incinerated, and of sorting the waste into categories: glass, metal, compostable waste, etc. The cardinal point is the need to involve the users in the development



DAIM. Design-Anthropological Innovation Model is an interdisciplinary research project that aims to establish a model for the efficient organisation of innovation processes. The innovation model combines the active involvement of users with anthropological studies of everyday life and design-based concepts of the future. Illustration: Eva Brandt

of solutions. Eva Brandt says that the researchers are engaged in field work to map user behaviour in areas labelled, respectively, the ‘home and intimate sphere’ and the ‘open space and communities’.

“For example, we are looking at Nørrebro Station in Copenhagen and the adjacent streets. We observe how people move through that area, and we interview people to discover how life out there is comprised of a large and diverse selection of fleeting communities,” she says.

In private homes, the researchers talk to the residents, observe their behaviour, make audio or film recordings, and take photos. This field work aims to provide a better understanding of the way in which waste management, sorting and recycling fits into a hectic everyday life in and around the home.

But it is one thing to enlist users as informants who provide the researchers with knowledge through observations and interviews. It is quite another thing to involve the users actively, creating an innovation process where users, anthropologists, design researchers and other agents together develop new solutions for familiar problems. One of the main goals for the researchers in the DAIM-project is to use the findings from the pilot project to develop an

innovation model that promotes user-involvement, and which is also applicable in other areas, such as hospitals and libraries.

Design Lab

In traditional design processes, the anthropologist generates insights into user needs through field work and subsequent analyses and passes these insights on to the designer. Eva Brandt explains that the point of the design-anthropological innovation model is to move the field work material into an open process, where not only researchers but also designers, users and employees from companies in the given industry become participants in the innovation process.

“We bring the notes, footage, photos and audio files that we produced in the field into what we refer to as the design lab. Here, we organise workshops, where we work in groups analysing and interpreting existing practices and developing visual future scenarios that describe the world that we would like to see. The design lab is a way of bringing various competencies, professional backgrounds and interests together, including, not least, the users’. We develop new dialogue forms, new ways of generating knowledge, and new ways of presenting solutions.”

Thus, the work in the design lab should lead to specific solution proposals. In the pilot project on waste management, for example, this might involve new types of campaigns and ideas for collection sites and sorting solutions that make it easier for the citizens to do their bit to solve the waste problem.



Recycled Apples. In an exhibition on 3 October 2008, students from The Danish Design School highlighted key challenges in waste management. Here, Nhalley focuses on society’s waste of good food by offering cakes baked with good apples found in the dumpster behind a supermarket. The whole bag of apples is discarded if just one single apple is bruised. With this ‘special offer’ for passers-by, the students spark a dialogue about stuff becoming garbage, and garbage becoming stuff. Photo: Hans Emborg Büne mann

When Garbage Becomes Stuff, and Stuff Becomes Garbage

The research project is also incorporated into the courses at The Danish Design School, which is currently focused on developing research-based education. Thus, as part of the integration of research and education, in autumn 2008 all the school's 3rd-semester students have done a five-week project entitled Design Research: When Garbage Becomes Stuff, and Stuff Becomes Garbage.

In preparation, among other things, the students have attended lectures on how to carry out ethnographic interviews and on the so-called triple bottom line, which describes product life cycles from an economic, an environmental and a social perspective. The purpose of involving the students in the research project is to enable them to acquire methods and theories from design research.



DAIM Design Lab

About the project

The research project Design-Anthropological Innovation Model is led by The Danish Design School and has the following partners:

- Vestforbrænding (Denmark's largest waste management company)
- Mads Clausen Institute, University of Southern Denmark
- Danish design agencies: 3PART, Arkitema and 1508
- Design agencies outside Denmark: MakeTools (USA), SWECO FFNS Arkitekter (Sweden), Ergonomidesign (Sweden)

The DAIM project has received a grant of 2.8 million kroner from the Danish Enterprise and Construction Authority to be shared between the project partners. The project runs from April 2008 through November 2009. The project findings will be made available on an ongoing basis through the project web site.

DANISH CENTRE FOR DESIGN RESEARCH

The Danish Centre for Design Research DCDR comprises the design researchers at the Aarhus School of Architecture, The Danish Design School, Designskolen Kolding and the Royal Danish Academy of Fine Arts, School of Architecture. The DCDR aims to contribute to establishing a strong design research environment in Denmark and to strengthen the exchange of knowledge about design research and facilitate the identification of potential areas of collaboration for researchers, schools and enterprises, on a national as well as an international level.

MIND DESIGN

Mind Design, DCDR Webzine is published once a month and features articles and interviews about current Danish and international design research. Mind Design aims to present design research and research findings from researcher to researcher as well as from researchers to design practitioners in general. The webzine is free of charge. Please see www.dcdr.dk/uk/minddesign

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