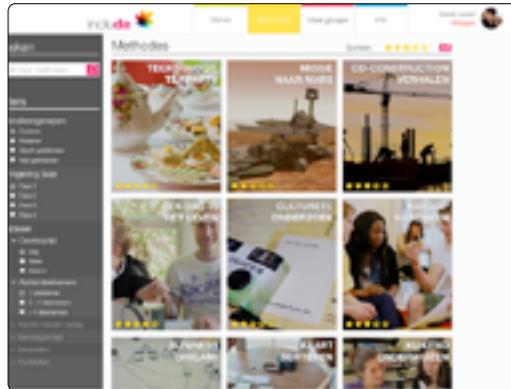


# 48. Involving the end-user in the design process

Good product design contributes to good business. Unfortunately, many people have difficulties with using everyday technological products. To solve this problem, the end-user should be more involved in the design process.

We have developed the Include Toolbox to support small and medium ICT-enterprises in applying 'inclusive design methods' in their product development. By involving the end-user in the design process, inclusive design tries to include as many users as possible.

The user of the Include Toolbox first chooses a method tailored to the specific design phase and envisioned user group. Next, the user receives step-by-step support from preparation and execution of the method to analysis of the results. Several toolbox methods have already been applied, which resulted in two apps. The first app supports children around the neighbourhood, for example, by keeping them safe and helping them make new friends. The second app supports elderly to organize adhoc help when needed.



### ICT science question

How can we bridge the gap between theory and practice of inclusive design? The tool needs to be sufficiently detailed to address all end-user groups in a meaningful way. At the same time the tool needs to be comprehensible and accessible for both experienced and inexperienced users.

### Application

The tool is specifically aimed at small and medium ICT-enterprises. The Include Toolbox enables the application of scientific knowledge to business practice.

The Include Toolbox is a web-based toolbox where small and medium ICT-enterprises can find



**Jacomien de Jong**  
jacomien.dejong@tno.nl  
**Carien Caljouw**  
c.caljouw@eaglescience.nl  
include.eaglescience.nl/

COMMIT/ project  
VIEWWW Virtual worlds for well-being

guidance in involving end-users of their products throughout the entire development process, from recruiting participants to analyzing the results.

The toolbox does not educate bad designers to become good designers. It supports the small and medium enterprises with early discovery of possible product failures or exclusion of the user group of the developed ICT product or service.

Although a few digital inclusive design toolboxes already exist for research and designers, none of them is adapted to small and medium enterprises that develop ICT products and services.

### Alternative Application

Design is everywhere.

The toolbox can be extended with other end-user groups and methods, evaluation of methods, best practices, design guidelines and design patterns.

### Nice to know

The Include Toolbox itself is designed by including small and medium ICT-enterprises in the design process, with methods currently available in the toolbox, and will be evaluated by these end-users as well.



A toolbox supporting ICT design for specific user groups. End-user involvement lowers risks of new-product introduction and facilitates accessibility of ICT products and services for all civilians.



A toolbox that helps you design for your specific user group and various design phases by providing methods with step by step support. From preparation of the method to analysis of the results.



A toolbox that enables redesign of current products and design for new end users. Stimulating innovation that is really needed and used built on a solid scientific knowledge base.



A toolbox that presents existing theoretical knowledge on inclusive design methods in such a way that SMEs can apply it to designing their products, and provide practical suggestions for improvement.