

The Virtual ICT Prototyping Laboratory (VIP-lab)

Profile

User-centred design

The two most important factors which establish success of an innovation are the fit of the device in the day-to-day behaviour and the ease of use. However, designers mostly take the view that consumers will gratefully use whatever they conceptualise. But a substantial part of these applications fail, because of the fact that users cannot implement the novelties in their trusted way of doing things. And too often, new applications are too complex in use, so consumers choose to ignore them.

For the design of a successful ICT innovation, it is important for designers to take users as a starting point in the design process, rather than seeing them as the end point of the process. Therefore it is important to ask questions in an early stage of this design process, like: who are the actual users, what are their use patterns, in which environment will the application be deployed, and what are the users' defined as well as implicit needs? Only through an answer to these questions, the designer acquires an overview of the system requirements and can develop an application which users will readily adopt. Such a design process is called: user-centred design.

VIP-lab

Four knowledge institutions (the universities of Maastricht/Heerlen, Eindhoven, Hasselt and Leuven) are, together with multimedia firm Concentra, the instigators of a laboratory environment in which new ICT applications will be designed: the VIP-lab. In this project, running between January 2005 and March 2008, the consortium will develop a structural facility for user-centred design of ICTs, especially for Flanders and the south of the Netherlands. After those three years, all industries, companies, institutions and governments can permanently turn to VIP-lab for user-centred design initiatives.

The project is financially supported by the European Commission, particularly the Interreg Benelux-Mid programme, together with regional and local governments.

VIP-lab will develop its expertise in those sectors where digitalisation and ICTs are a burning issue: the media, government, tourism, industry and health care. In all of these sectors a pilot project will be carried out, in which interested companies and organisations can participate. Actual bottlenecks and also the R&D-ambitions of companies involved are the starting point in choosing an ICT application, which will be developed in collaboration with VIP-lab.

The problems VIP-lab aims to solve are urgent. Therefore the goal is not to build a new institute or establishment, but to create a network in which existing facilities will be integrated into a network, hence the establishment of a virtual laboratory. Existing lab facilities will be used to develop, test and evaluate applications and products, in-house, in-company as well as in field trials (living labs).

Experience prototyping

The cycle which will be applied during the user-centred design process consists of the following stages:

1. Definition of a leading vision, an appropriate innovation context and a strategic plan, from the users perspective;

2. User, task and environment analyses (who are the users, what are their skills, what are their aspirations and needs, which tasks have to be accomplished with the application, in which environment will the application be used and what influence has the environment on the design requirements);
3. Design of a prototype (this will be designed according to the results of the user, task and environment analyses);
4. Usability tests of the prototype (usability tests will be accomplished in usability labs with the users)
5. Field test of the prototype (the prototype will be tested in the 'natural' environment: company, organisation, city of quarter;
6. Evaluation (the prototype and entire design process will be evaluated) and feedback;
7. Redesign of an improved prototype or transfer of research results for the (commercial) production process.

This method of product and application design prevents companies from developing expensive applications which are not usable and/or do not comply with the expectations and requirements of users / consumers / clients and consequently are not successful under market conditions. Adaptation of the design after implementation often brings high costs, which could have been saved when the user perspective had been taken as starting point in the design process.

Partners

Consortium

- **Expertisecentrum Digitale Media** (Universiteit Hasselt)
- **European Centre for Digital Communication** (Hogeschool Zuyd)
- **Centrum voor Usability Onderzoek** (Universiteit Leuven)
- **Department Technology Management** (Universiteit Eindhoven)
- **Concentra-De Vlijt** (Antwerpen)

Financiers en advisory board

■ Euregio BMG	Financier and advisory board
■ Provincie Limburg (B)	Co-financier and advisory board
■ Provincie Limburg (NL)	Co-financier and advisory board
■ Vlaamse Gemeenschap (B)	Co-financier
■ Economische zaken (NL)	Co-financier
■ Brabantse Ontwikkelingsmaatschappij (NL)	Advisory board
■ Flanders Mulimedia Valley (B)	Advisory board
■ Gewestelijke Ontwikkelingsmaatschappij Limburg (B)	Advisory board
■ IWT (B)	Advisory board
■ Kamer van Koophandel Limburg (B)	Advisory board
■ Kamer van Koophandel Oost-Brabant (NL)	Advisory board
■ Kamer van Koophandel Zuid-Limburg (NL)	Advisory board
■ Limburgse Ontwikkelingsmaatschappij (NL)	Advisory board
■ Syntens (NL)	Advisory board
■ Vlaams Software Platform (B)	Advisory board

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