2.11 The Netherlands

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2.11.1 Overview on experiences of user participation in R&D

In answering the question on user participation in R&D projects and on training, a distinction has to be made between user participation as a partner (expert user) and as an object of study. This distinction also relates to a more fundamental problem in end-user participation in R&D as expert. End-users have subjective experience in the use of assistive devices which make them valuable in development work, - as "subjects". Involving users as experts, e.g. partners, demands objective expertise from the users, which may be difficult to come about, given the individual and personal involvement.

As far as can be regarded "expert user", user participation in R&D has no structure, and certainly no national structured organisation. The way expert users participate in R&D is organised in an ad-hoc fashion where researchers tend to rely on previous project experiences and/or personal contacts. Participating or consulted expert users are considered expert users because of their personal situation, their function in some organisation (user organisation) or because of their participation as expert user on earlier occasions. Because of this lack of structure there is no training for expert users other than participating in projects.

Expert users can be found either by contacting patient organisations (national organisations of patients suffering from the same decease) nationally co-ordinated by the Nationale Gehandicaptenraad, or via research centres or agencies involving end users in their projects on a frequent basis.

The participation of end users as subjects do not have a national structure either. The involvement of end-users is so diverse that a national organisation may not be feasible. The way subjects are found in projects and the methods applied are equally diverse.

Within IRV, an inventory was carried out on usability testing concerning number of subjects (users), methods applied, type of subjects and most important type of project. Regarding type of projects, distinctions should be made between the stages of development of the particular product, whether it is focusing on comparisons of

alternative products or not, and whether the results of the usability test should be generalised to a larger population. The projects that were included in the inventory were all externally financed and included: speech disabled, deaf, elderly, and non specific/diverse disabilities. The methods applied in the studies were user trials, questionnaires, field studies, interviews, empathic modelling, group discussions and expert discussions.

The methods applied should be related to the development phase of the product, and the type of information required. Subjects are recruited from purpose maintained panels, via homes (e.g elderly), via hospitals, special schools, local groups of patient organisations, and the "Council aid advisory system".

2.11.2 Inventory on user participation in different R&D projects

The contact centre in The Netherlands has chosen to look into several R&D projects known to the institute, and they have identified user participation according to the list below. The results are given in the table on the 2. next page. Some remarks are given after the table.

1. How have the end users been recruited?
    1. Through user organisations
    2. Through organised user panel groups
    3. Through personal contacts
    4. Other
2. Have the users been through some training?
    1. Type of trainin
    2. Training content
    3. How is the training being organised

3. How is the user participation been organised?
    1. Members of project groups
    2. Members of steering committees
    3. Members of reference groups
    4. Members of working groups
    5. Members of user panels
    6. Ad hoc participation

4. Where in the project phases does user participation take place?
    1. Needs assessment
    2. Needs and activities analysis
    3. Product analysis
    4. Product environment analysis
    5. Functional specification
    6. Basic R&D
    7. Design & construction
    8. Production
    9. Overall evaluation
    10. Testing - technical, safety and functions
    11. Usability testing
    12. Methods and prerequisites for AT service delivery
    13. Market analysis
    14. Standardisation

5. Methods of approach
    1. Market surveys
    2. Creativity processes such as brainstorming sessions
    3. Activity diaries
    4. Direct observations
    5. Interviews
    6. Task analysis
    7. Group discussions
    8. Reference panel sessions

9. User trials
10. Field trials
11. User panels
12. Usability studies
13. Service delivery process identifications

2.11.3 Some comments

As can be seen from the table on the next page, most of the users are recruited through personel contacts. In 9 cases they are recruited through organised panels, while only a few are recruited through user organisations.

None of the users have been through any training in connections with their participation in the projects.

Most of the users take part as ad hoc participants, or in some cases as members of user panels.

According to the table, users participate in the initial stages of the projects in several cases, including needs assessment, needs and activities analysis, product analysis, and also in basic research oriented work. In addition, in many cases users are involved in overall testing of solutions.

The most frequent methods of approach being used include: Direct observations, interviews, task analysis, group discussions, and user trials.

Inventory of experiences and methods of end user participation in R&D in the Netherlands								
Titel of the project	**projecttype**	**users**	**type of organisation**	**1**	**2**	**3**	**4**	**5**
Aladin	development software	3	R&D	3	no	ad hoc	9	11
Signps	development	25	R&D	2	no	5	1,5,7,9	2,5,6,8,12
PEOgebruik	inventory usage	50	R&D	1	no			4,5
Caption life	development service	3	R&D	3	no	6	5,9	4,5
D-quest	fieldstudy	50	R&D	3	no	6	9	5
EATS	dev. instruments	200	R&D	3	no	6	9	5
Fasde	prod.development	40	R&D	3	no	5	9	9
Manus	prod.development	1	R&D	3	no	6	3,4,9	5,9
MOPAS	prod./service dev.	5	R&D/company	3	no	6	9	5
Safe 21	prod/service dev.	60	R&D/company	3	no	6	1,3,9	10
Sphinx	prod.development	15	R&D/company	3	no	5	3,9	4,5
Test	standardisation	20	R&D	3	no	6	9,14	9,11
Stairlift	prod.evaluation	20	R&D/company	3	no	5	3,9	4,5
Stairhelp	prod.evaluation	40	R&D/company	1	no	6	3,9	5,1
Umpti	prod.development	8	R&D	3	no	6	1,3,9	9
Testing usage bicycles	development		R&D/company	4	no	6	2,7	6,9
Redesign shoppingcar	development		R&D/company	4	no	6	2,1	4,5,6,9
Medication aid	development		R&D/company	3	no	6	1,6	5,8,9
Comfort bed	development		R&D/company	4	no	6	6	9
Internetpuzzles	development		R&D/company	2	no	5	1	2,8,7
Operating unit computerbased securitysystems	development		R&D/company		no	5,6	2,6	6,7,9
Operating unit coffeemachine	development		R&D/company	2	no	5	3	4,7
Design for all tap	development		R&D/company	2,3	no	4,6	6,7	7,9
Ironwork	development		R&D/company	2,3,4	no	5,6	1	4,6,7
Intersurfing through CD-i and tv	inventory usage		R&D/company	1,2,3	no	4,5	11	4,5,6,7,9,11
Electronic doorlock	development		R&D/company	2,3,4	no	5,6	2,3,6	4,7,9
Redesign of user interface 'webscooter'	inventory usage		R&D/company		no		11	11
Railway ticketmachine	inventory usage		R&D/company	3	no	6	11	6,5,8
Operating unit smartphone	development		R&D/company	2	no	5	2,5	2,4,6,7
Comfortable living for the elderly	development		R&D/company		no		5,6	9
The use of pc's by the elderly	development		Organisation for end-users	1,2	no	5	7,9	9,11
Virtualshoppingcentre	development		R&D/company				1,2,3,4,5,6,7	
Senior feedbackgroup for telematic developments	inventory usage	29	R&D/company	4	no	5	9	11
E-mail with vision and sound	development		R&D/company		no		3,6	5,9
Design of a passive social alarm system	development		R&D/company	2,4	no	5	2,4	5,7
Bijlmer-pilot	development		R&D/company	2,4	no	5	3,6	7,9
Feasibility study "Zilveren Gids"	inventory usage	25	Organisation for end-users	1,3	no	5	1	7
Wheelchair Seatings	inventory usage	10	Organisation for end-users	4		6	10,11	5
Wheelchair Roxx	development		R&D/company	1,3	no	6	1,2,6,7	4,5,9

Some national contacts

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KBOH

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Woerden

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