



2.17 United Kingdom

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2.17.1 Method

Given the very short timescale of this study (one month) the inventory has been carried out exclusively by postal questionnaire using questions adapted from some suggestions supplied by Rehab-Nor. On 14th January 1998, 220 personally-addressed, reply-paid questionnaires were distributed to contacts known to be working in the field of assistive technology. This was by no means an exhaustive list but may be considered a fairly representative sample across the various players in the field in the UK. A copy of this report was offered to those who requested it. The letter and questionnaire are shown in Appendix 1.

The replies came from four main groups of activity:

- academic,
- health service,
- commerce, and
- end-user or end-user organisation (including charities).

2.17.2 Contacts

A list of the 90 contacts who replied by the deadline (26 January 1998) or soon after and the are presented in Appendix 2. This response rate of 41% in such a short time may be considered satisfactory.

2.17.3 Results

Total response	90 (41% of all contacted)
Academic	20 (43% of academic group contacted)
Commercial	15 (33% of commercial group contacted)
Service	47 (43% of service group contacted)
User/Charity	8 (40% of charity group contacted)



Observations

The number of responses from Users/Charities is small and so caution should be exercised in apportioning any significance to any but the most blatant trends reported in this sector. A few null returns were received. Many of the non-respondents may not have returned their forms because they do not conduct research now.

70% Academics, 67% Commerce, 72% Service, and 88% of the users who replied requested a copy of this report, which indicates substantial but not overwhelming interest in the aims of FORTUNE.

2.17.4 Recruitment – How are End-Users recruited to equipment evaluation?

	Academic	Commercial	Service	User / Charity
Through personal contacts	71%	93%	70%	88%
Through user organisations	71%	47%	39%	25%
Through organised user panel	41%	20%	17%	50%

Other, Academic	Other, Commercial	Other, Service	Other, User
Advertising in relevant mags, journals, professional organisations	Via clinical panel	Local & national	Through non-disabled disability professionals
Advertisement in Centre Newsletter & Poster in Centre	Through routine & specific clinical contacts	Referral to service	
Through highlighted notes on job adverts	Through NHS evaluation process	assessment following referral	
Through the multi-disciplinary team (internally)	Contacts with wheelchair centres	Via therapists	
Via therapists, doctors, other med practitioners	Via our own physio	in & out patients at RRC & associated Young Disablement Unit (Ritchie Russell House)	
Clinic attendees		Ex Mobility Centre clients	
People used to working with us & who are appropriate & objective		working with children at Chailey, referrals for "one-off" customised solutions	
Through professional contacts		From caseload of clinical engineering service	
Special interest groups, i.e. MNDA [Motor Neuron Disease		Advertising on radio etc.	



Association]		
Local government sponsored organisations		clinical contact
		ad hoc
		Equipment is developed (where necessary) to meet the requirements of a particular client
		Referrals to the service
		Patients attending our centre for prosthetic care
		Through schools & local authorities
		Liaison & collaboration with other establishments, schools etc.
		Via schools, through all service contacts with parents, teachers etc., via customers for smart wheelchairs
		Hospital referrals
		Patient lists at GP/Hospital
		Informal. I do not know of formal routes for recruitment of end users for equipment evaluation, but those who are keen get onto charities or MDA Health Technology Assessment panels.
		Local authority sources, sheet intercept
		Patients attending for routine review
		Clinical trials
		Population served by our hospital/clinics

Observations

Whereas Academics recruit both through User Organisations and Personal Contacts, the other groups rely much more on personal contact.

2.17.5 Training – If Users are trained, how is this achieved?

All percentages below refer to the number of those who replied to this section:

	Academic	Commercial	Service	User / Charity
	11	14	33	4
Type	Academic	Commercial	Service	User / Charity
Informal group teaching	45%	71%	55%	100%
Multimedia presentations	27%	7%	9%	0%
Work with experienced evaluator?	27%	36%	36%	25%
Distance learning / Instruction sheets	18%	29%	36%	25%
Is the learning assessed?	18%	14%	21%	0%
Formal lectures or tutorials	9%	36%	15%	25%
Is the course organised formally?	0%	29%	6%	25%



Observations

All activities use informal group teaching most frequently.

Content	Academic	Commercial	Service	User / Charity
Theoretical background to technology	57%	83%	43%	100%
Case studies	29%	50%	64%	100%
Theoretical background to disability	14%	50%	29%	67%
Research methodology	14%	0%	43%	0%

Observations

Theory of technology is more commonly taught than theory of disability. Academics seem less likely to use case studies.

Full time spent training	Academic	Commercial	Service	User / Charity
up to 2 hours	63%	50%	54%	0%
about one day	38%	50%	38%	67%
several days	25%	25%	31%	33%
more than one week	0%	13%	8%	0%

Observations

Users and their organisations seem to recognise that 2 hours is not enough.

2.17.6 Organisation of User participation

All percentages below refer to the number of those who replied to this section:	Academic	Commercial	Service	User / Charity
	20	14	45	7

	Academic	Commercial	Service	User / Charity
By <i>ad hoc</i> participation	90%	86%	84%	100%
A user panel	35%	36%	22%	29%
A project group	35%	0%	16%	14%
A steering committee	20%	0%	11%	0%
A reference group	10%	14%	9%	29%
A working group	5%	21%	16%	0%

Observations

Everyone admits to ad-hocery. About a quarter of all activity groups make use of user panels. The academics also use project groups, but the distinction between these and user panels may not be clear.



2.17.7 *Phases of projects in which User participation takes place.*

All percentages below refer to the number of those who replied to this section:

	Academic 20	Commercial 15	Service 47	User / Charity 7
	Academic	Commercial	Service	User / Charity
Needs assessment	75%	80%	62%	86%
Overall evaluation	70%	80%	66%	57%
Usability testing	65%	73%	68%	100%
Functional specification	65%	47%	57%	71%
Design and construction	50%	7%	30%	14%
Needs and activity analysis	50%	40%	32%	43%
Product analysis	50%	53%	43%	43%
Basic R & D	40%	27%	36%	43%
Service delivery	40%	27%	30%	43%
Product environment analysis	30%	7%	21%	29%
Testing: - technical, safety & function	30%	27%	30%	43%
Market analysis	20%	20%	23%	0%
Standardisation	15%	7%	4%	0%
Production	0%	7%	6%	0%

Observations

User participation takes place throughout many phases of product development but is little used in production (understandable), nor, more surprisingly, in market analysis or standardisation. The respondents may not have uniformly understood the distinctions of some of these phases, which accounts for the significant overall response in most phases.



2.17.8 *Methods and approaches*

All percentages below refer to the number of those who replied to this section:

	Academic 20	Commercial 15	Service 47	User / Charity 8
	Academic	Commercial	Service	User / Charity
User trials	75%	87%	74%	75%
Direct observations of end users	75%	80%	68%	75%
Interviews	75%	53%	64%	63%
Creativity processes, such as brainstorming sessions	70%	33%	30%	38%
Field trials	55%	67%	53%	25%
Group discussions	60%	47%	26%	38%
Market surveys	35%	40%	19%	13%
Task analysis	40%	20%	21%	25%
Usability studies	25%	27%	13%	25%
Activity diaries	20%	40%	17%	13%
User panels	20%	20%	9%	13%
Service delivery process identifications	20%	20%	13%	13%
Reference panel sessions	20%	20%	4%	0%

Observations

Activity diaries, User panels, Service delivery process identifications, and Reference panel sessions are generally little used, although the commercial sector does use Activity diaries. It is interesting to note the wide variety of methods used. User trials, Direct observation and Interviews are the clear favourites with all but commerce, who favour Field trials.

2.17.9 *Other remarks*

The following is a collection of comments returned with the questionnaire.

I am not clear how the above answers will yield anything meaningful for future work!

We use a variety of the above depending on project.

Service delivery not so much from user-perspective.



We use a design methodology that involves users at all stages of design & development (see Orpwood 1990, JMed Eng Tech 2-10) with the aim of evolving solutions to user interface aspects.

I have answered to reflect work carried out in the past, we are not currently participating in any Rehab. Projects.

My comments are based on our experiences in the USER project - rather than how we design. HUSAT follows a user centred design approach

Community links with university enable two-way information flow, via internet and involvement in student learning.

A) ... operates formal system for service engineers to report theirs & users comments on installed systems, This feedback is used when R&D redesign products

*B) Other user involvement in R&D is when ... & NHS trial equipment with users
Our end-users are more often vehicle drivers & attendants rather than the wheelchair passengers in their care.*

As our users are profoundly handicapped, it is usually the carer or the specifier who is involved in evaluation.

No hard and fast rules, but use users for testing new products and always ask for feedback on change of equipment. This is fed-back to producer as appropriate.

Our client group are children & young adults and often the whole family or parents are involved as above

In my experience many EU-funded projects just pay lip service to user evaluation. The best way to make sure users are really involved is to award funding to projects which involve or are based in organisation with service or coy remits as well as research

Sorry there are not many boxes I can fill. Most of our feedback from the end user tends to be in the form of ad-hoc user satisfaction surveys



I do not believe there are adequately developed routes for end user participation in this work in many areas, in UK.

End user participation is usually more akin to artificial limbs. Wheelchair and special seating tend to be proprietary items

Most of the methods are used, the ones ticked are those that are more formally used. Training is not normally relevant.

Product evaluation - we use members of the hospital retirement fellowship & some patient. New product/R&D we use selected patient.

This form and questions are not very relevant to the delivery and end user interactions with equipment in the area of environmental control equipment.

Child/parents central to process of identifying need, usually involved in one offs or modification of standard Tech. Due to complexity of children seen.

Our users are occasionally involved in user trials of new products. They are very much involved in service delivery & projects such as EPIOC[electrically powered indoor-outdoor chairs] /Voucher. This is the limit of users involvement in our Service.

Users have very little genuine control over any part of the process, hence so many costly white elephants

Methods vary greatly depending on the type of technology. Simple items such as switches clearly require a less sophisticated approach than complex integrated systems such as the Smart Wheelchair.

In recent years, all new developments have been as a direct result of specific user needs. The Microtechnology Services within ... are entirely user directed.



2.17.10 Replies received

Academic -related

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