

SPARC: Promoting Independence Through New Technology

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Adapting Support to Sustain Autonomy:

Understanding the implications of changing capabilities
for older ICT users

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▶ Aims of the network

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To explore the potential for providing appropriate, just-in-time help and support for older users of (digital) technologies, in particular as their physical and/or cognitive capabilities change.

- ▶ ICTs are becoming increasingly pervasive;
- ▶ ICTs have significant potential to improve the quality of life and independence of older people;
- ▶ Many older people are already regular and enthusiastic users of ICTs; the majority of people over 50 who use computers find them easy to use (Age Concern/Microsoft)...but
- ▶ The UK Government's Digital Inclusion Panel concluded that "there is a real risk that in the medium to long term, significantly more citizens will migrate from being digitally engaged to being unengaged than the other way round, as their capabilities change"

(DIP Report 2004 p. 79)

► Implications of digital exclusion

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- Older people may not be able to benefit from the advantages of being online, e.g.
 - information
 - education
 - e-commerce
 - social contacts
- Older people may be excluded from full participation in society, e.g.
 - e-government, e-democracy



▶ Exploratory survey of digital engagement

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- ▶ To promote participation in our network
- ▶ Devised to find out about older people's level of digital engagement
- ▶ Three sections to the survey:
 - ▶ Use of technology
 - ▶ Priorities and attitudes
 - ▶ Personal information

▶ The sample of the survey

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- ▶ Sample size of 200 older people
- ▶ 72 responded
- ▶ Anyone over 55
- ▶ Living at home, sheltered housing or supported care
- ▶ Any level of current use of digital technologies

Our survey found that:

- ▶ 68% use a computer
- ▶ 16% of these don't use the internet
- ▶ Mainly used at home
- ▶ Most common applications:
 - searching for information
 - emailing family and friends
 - shopping
 - banking

▶ Survey results - use of digital technologies (2)

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- ▶ 96% listen to the radio – 32% listen to digital radio
- ▶ 99% watch television – 67% watch digital television
- ▶ 96% listen to music – 4% use MP3 players
- ▶ 74% use a camera – 49% use a digital camera
- ▶ 100% use the telephone – 82% use a mobile phone

What older people have told us:

- ▶ “...I send emails to my daughter. It’s great – there’s an immediate response...”
- ▶ “...I’m familiar with the computer. You can do so much with it...”
- ▶ “...people show me how to text, but I forget...”
- ▶ “...you get a remote control and what do you press? I’m always afraid of pressing the wrong button and messing it up...”

▶ Profiles – (1)

- Gerry, 83, now widowed, has had a computer since the mid 1990s.
- He attended some training courses at the local college, and has upgraded to a more powerful pc twice and to broadband for internet access.
- He was regular internet user but latterly his main usage was uploading and printing photos from his digital camera.
- He suffers from age-related macular degeneration and over the past few years his eyesight has deteriorated badly.
- He has now given up direct use of the computer. Usually, he gets his son-in-law and daughter to do things on the computer for him.

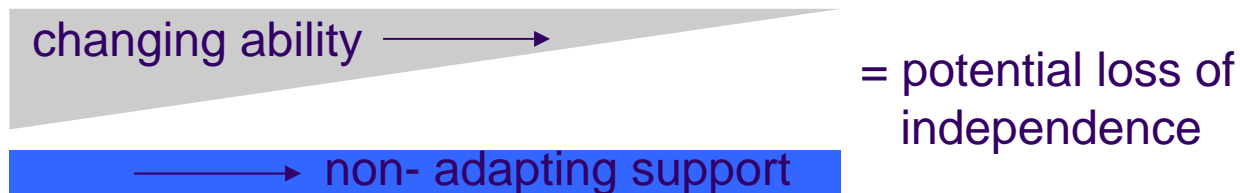
▶ Profiles – (2)

- ▶ Jim has been retired for 10 years, and he attended courses on computing for the first three years of his retirement. He has an old Pentium computer which is very slow and he is reluctant to pay the monthly charge for internet. He now uses the internet at the library in town, because of the quality of the equipment (they have a scanner) and because broadband is available. But ...
- ▶ Jim's wife Megan has difficulty with the digital television. If she presses the wrong button when on her own whilst watching digital TV, she loses TV for the whole evening until John returns.

- ▶ 55+ citizens are highly diverse
- ▶ Research findings indicate the need for differentiation
- ▶ Relevance of digital technologies relies on sound knowledge of needs and characteristics of specific user groups

▶ The relationship between support and independence

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▶ Survey results - priorities & attitudes

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▶ Most important piece of technology?

“Absolutely necessary for correspondence, committee meetings, agenda, information, research.” (Computer)

“Keeping informed on news and current affairs.” (Digital TV)

“It is almost always with me. I like to feel I am in contact with people all the time, especially as I live on my own.” (Mobile phone)

▶ Survey results – priorities & attitudes

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▶ Most annoying / frustrating thing about using these technologies

“Remembering exactly what to do.”

“Getting too complicated for the casual user.”

“When they go wrong.”

“Paying the bill.”

“Stories about viruses, crashes, lack of security.”

“They don’t always do what they are supposed.”

“Everything.”

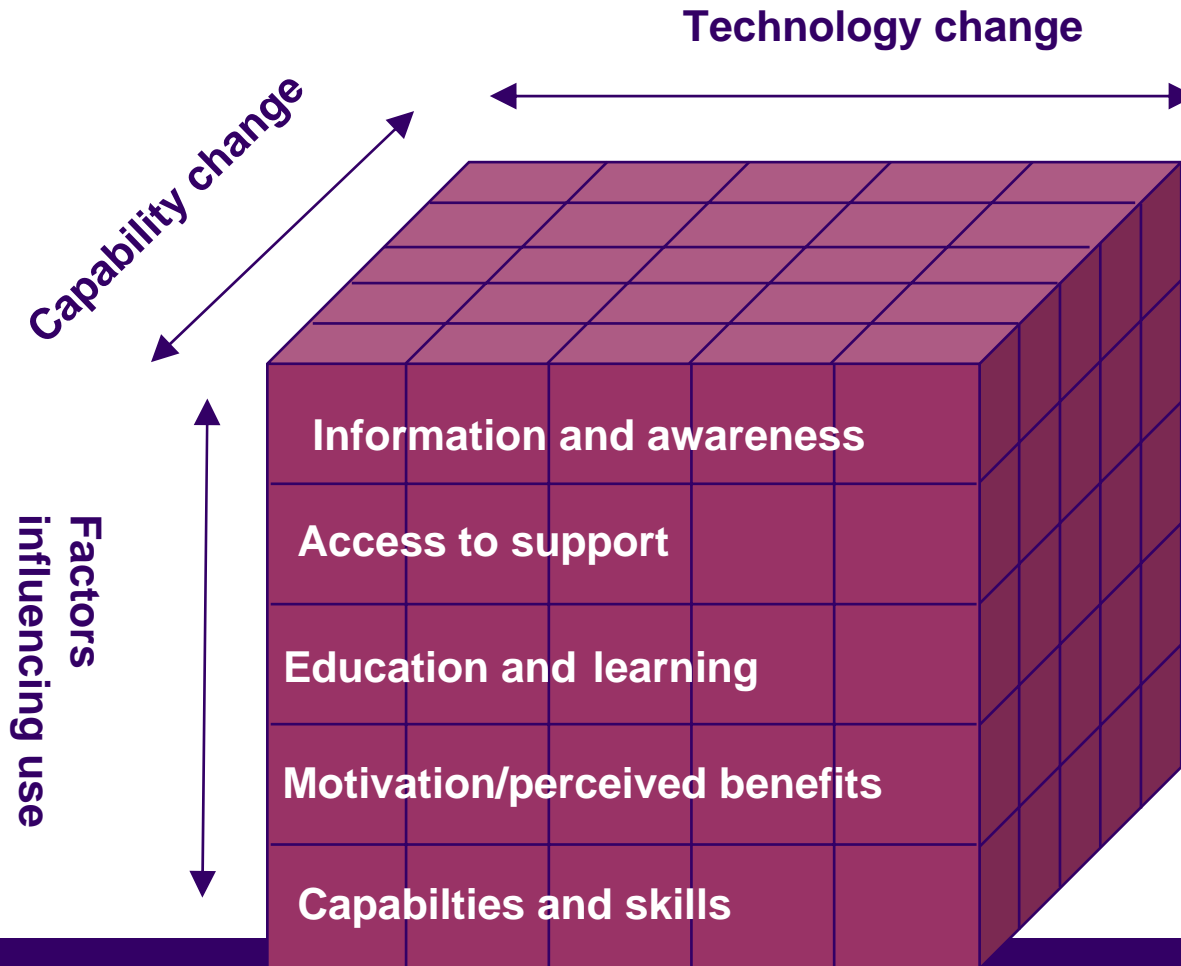
▶ Barriers to sustaining ICT use

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- ▶ Physical difficulties
(Goodman, Syme and Eisma, 2003a)
- ▶ Psychological discomfort, (e.g. confusion, frustration and lack of understanding)
- ▶ Lack of confidence/motivation e.g. feeling of being too old to adapt to new technology
- ▶ Poor accessibility/usability of existing ICTs
- ▶ Lack of appropriate assistive technologies/support mechanisms
- ▶ Lack of awareness and information about aids, support etc.
- ▶ Cost
Etc.

▶ Key factors in sustaining ICT use

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▶ Information needs and awareness

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- ▶ Users require a wide range of information relating to:
 - Practical steps, e.g. “how to”
 - Sources of ongoing assistance and advice
 - Sources of learning and training for ICT use
 - Availability suitability and relevance of assistive technologies, aids etc
 - Costs
 - Equipment
 - Maintenance / network use

- ▶ Some pensioners are being introduced to the Internet via their children/grandchildren (Irving, Sparham and Spicer 2003)
- ▶ More than 40% of older people surveyed learned on a course, while over a quarter (28.6%) had learned at work
- ▶ Almost as many had taught themselves as had been taught by a relative or friend (14.5% and 14.1% respectively) (Goodman, Syme and Eisma 2003)

▶ Motivations and perceived benefits

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- ▶ To remain active and independent
- ▶ To communicate with family and friends using email
- ▶ So that the world does not pass them by
- ▶ To keep in touch with grandchildren/ increased connectivity with remote family members
- ▶ Increased perceptions of social support
- ▶ The ability to feel mentally alert, challenged, useful and to feel 'younger'
- ▶ To seek information, particularly news and health
- ▶ For learning and education

(Loges, William & Joo-Young Jung 2001; Tatnall & Lepa 2003)

▶ Possible solutions

- ▶ Technological aids – adaptive interfaces, avatars/agents, on-screen/online help
- ▶ Information aids – knowing what can be done, how to do it
- ▶ Human aids – providing expert support and advice
- ▶ Building confidence and capacity in older users to develop their skills in using and adapting technology to meet their changing needs, and their skills in understanding their own needs and how they are changing

▶ Example of possible technical solution

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- ▶ Essentiality and proficiency tool [Dhiensa et al., 2005]
- ▶ It produces on the fly different displays of a web page to meet diverse usability and accessibility user needs.
- ▶ Uses: desktop, laptop, mobile phone or PDA devices

- ▶ The pervasiveness of ICTs and associated technologies means that the potential for this research to enhance the quality of life of older people is far-reaching and profound in impacting almost all areas of their experience.

***Sustaining ICT use amongst older people =
sustaining autonomy for the future***