

When designers meet older people

John Clarkson



UNIVERSITY OF CAMBRIDGE

When designers meet older people



2

Engineering Design Centre

When designers meet older people

A little history

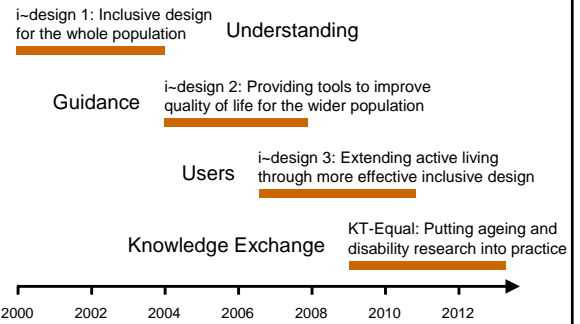
- Business case for inclusive design
- Tools for inclusive design
- The future



3

Engineering Design Centre

A little history



4

Engineering Design Centre

When designers meet older people

- A little history
- Business case for inclusive design
- Tools for inclusive design
- The future



5

Engineering Design Centre

Good design – a response to need

- A coffee pot for use on airlines
- Highly functional
- Highly usable



6

Engineering Design Centre

Good design – a response to diversity

- An injector for daily use by all ages
- Highly functional
- Highly desirable



7

Engineering Design Centre

Good design adds value

- Research by the Design Council



8

Engineering Design Centre

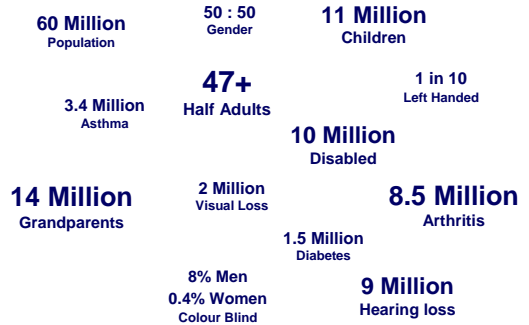
Understanding people



9

Engineering Design Centre

Understanding people

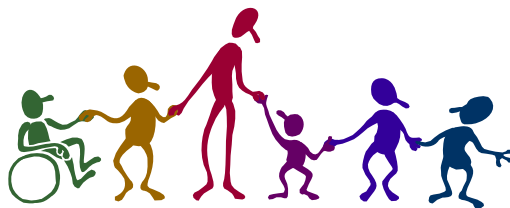


10

Engineering Design Centre

Understanding people

It is *normal* to be *different*

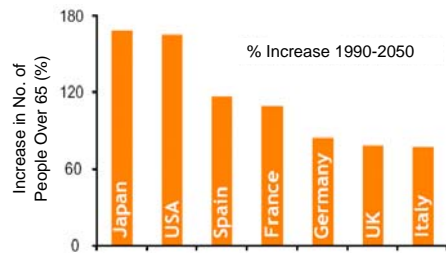


11

Engineering Design Centre

Population change

- Most populations are ageing rapidly

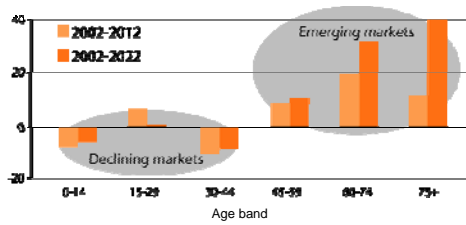


12

Engineering Design Centre

Population change

- Even today, half the UK adult population are aged 47 or over

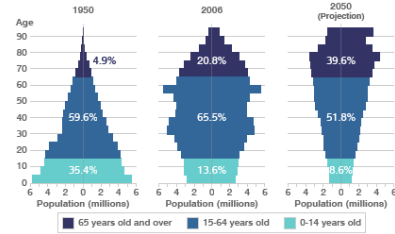


13

Engineering Design Centre

Population change

- The changing shape of Japan's population pyramid

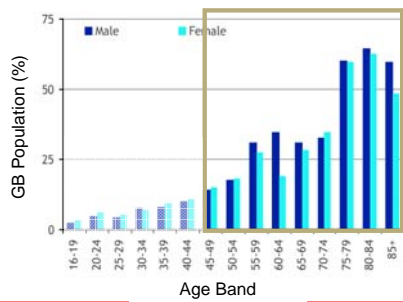


14

Engineering Design Centre

Population change

- Variation of capability



15

Engineering Design Centre

Does it really matter?

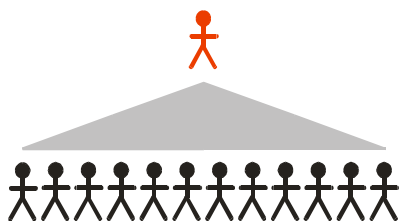


16

Engineering Design Centre

Does it really matter?

- In 1950 the PSR was 12:1



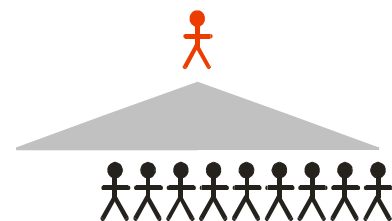
Potential Support Ratio (PSR) is the ratio of the number of 15-64 year olds who could support one person 65+

17

Engineering Design Centre

Does it really matter?

- In 2000 the PSR was 9:1

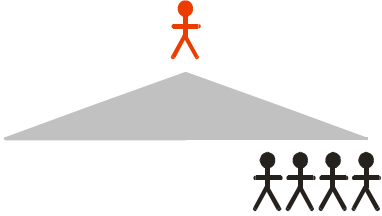


18

Engineering Design Centre

Does it really matter?

- In 2050 the PSR will be 4:1



19

Engineering Design Centre

Does it really matter?

- In 2050 for the developed world it will be 2:1



20

Engineering Design Centre

Independent living goes from being an aspiration to an imperative

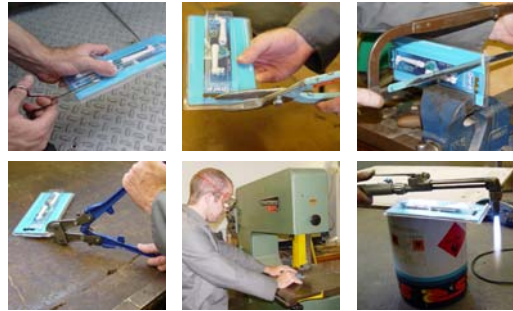
Does it really matter?



21

Engineering Design Centre

Does it really matter?



22

Engineering Design Centre

Things have got complex

- Featuritis
- In Microsoft Word 1.0 there were about 100 features, Word 2003 has over 1500
- 9 out of 10 features that customers wanted added to Office were already in the program – "They simply don't know it's there"



23

Engineering Design Centre

Things have got complex

- Simplicity on its own is not enough
- Products must first be accessible

PHILIPS
sense and simplicity



24

Engineering Design Centre

Things have got complex

- Minimal use of graphics
- More than 25,000 new customers generated

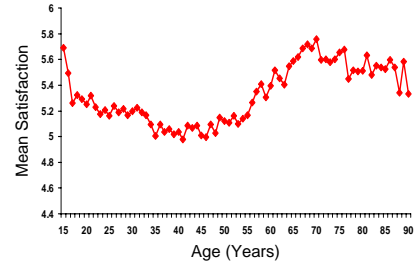


25

Engineering Design Centre

It's not all bad news!

- Satisfaction with life index



26

Engineering Design Centre

Inclusive design

- The design of mainstream products and/or services that are accessible to, and usable by, as many people as reasonably possible ...

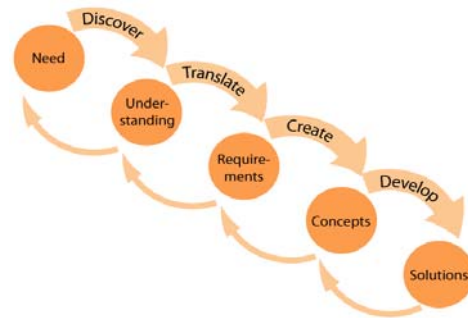


... without the need for special adaptation or specialised design

27

Engineering Design Centre

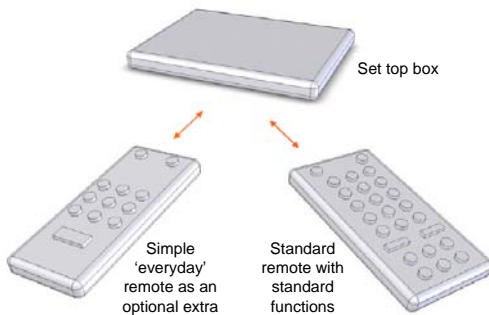
Inclusive design



28

Engineering Design Centre

Inclusive design



29

Engineering Design Centre

Inclusive design

Inclusive design = better design



30

Engineering Design Centre

When designers meet older people

- A little history
- Business case for inclusive design
- Tools for inclusive design
- The future



31

Engineering Design Centre

Real users



32

Engineering Design Centre

Real users

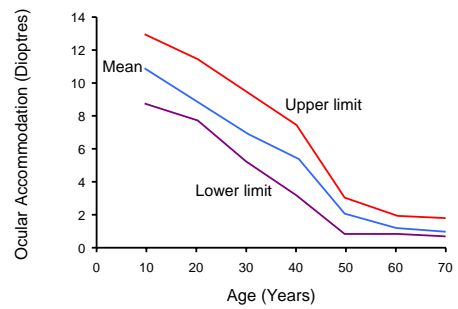
- Vision
- Hearing
- Thinking
- Communication
- Locomotion
- Reach & stretch
- Dexterity



33

Engineering Design Centre

Vision



34

Engineering Design Centre

Vision



35

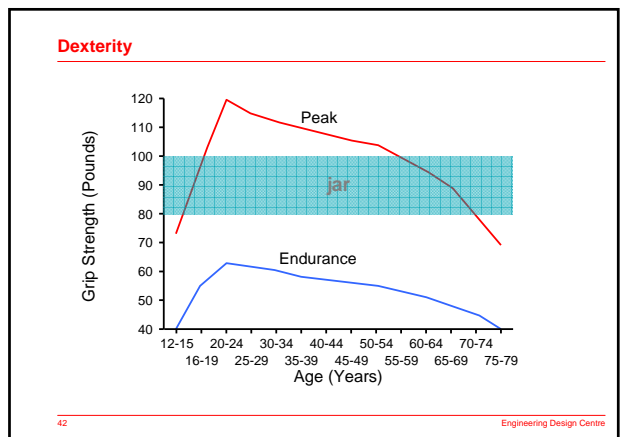
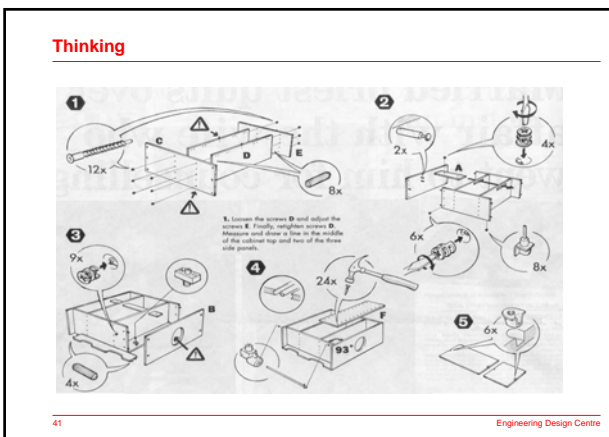
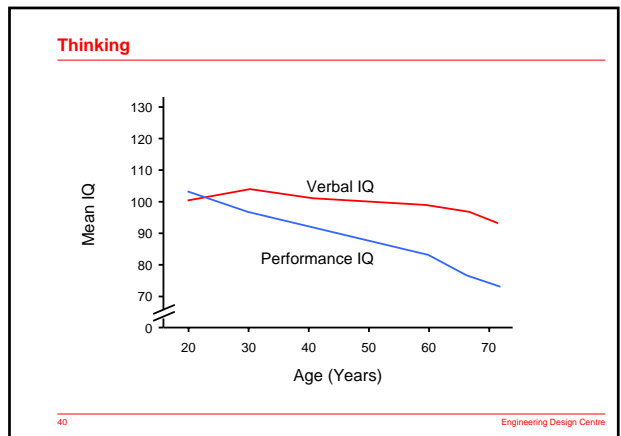
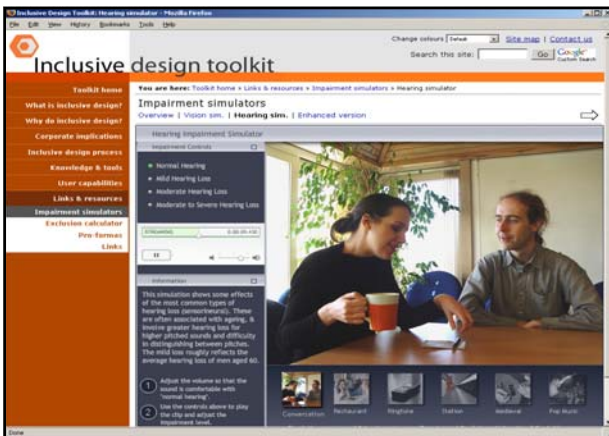
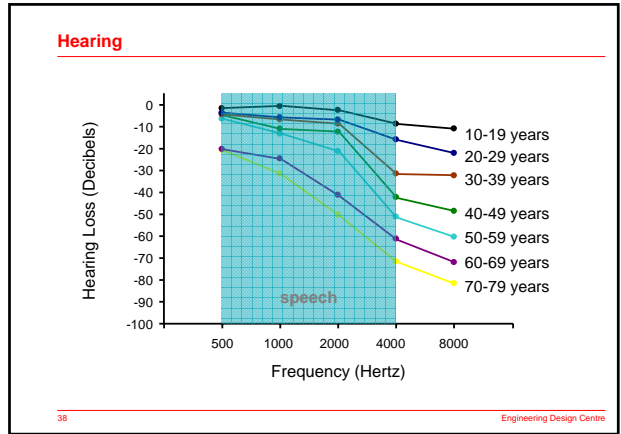
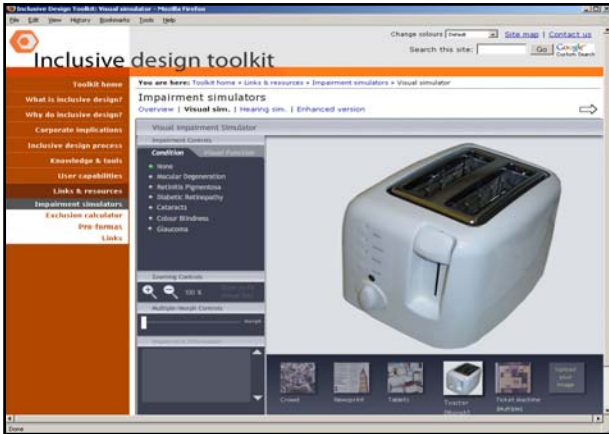
Engineering Design Centre

Vision

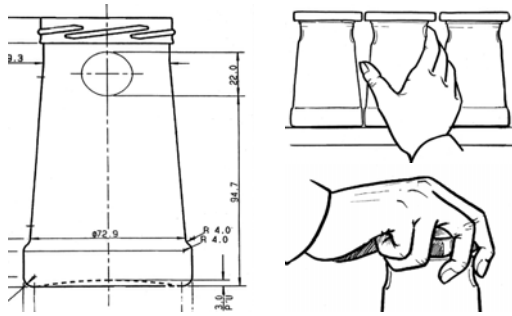


36

Engineering Design Centre



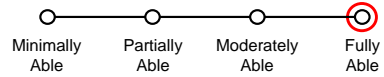
Dexterity



43

Engineering Design Centre

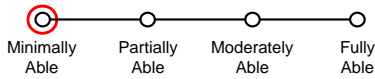
Able-bodied users



44

Engineering Design Centre

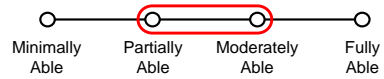
Extreme users



45

Engineering Design Centre

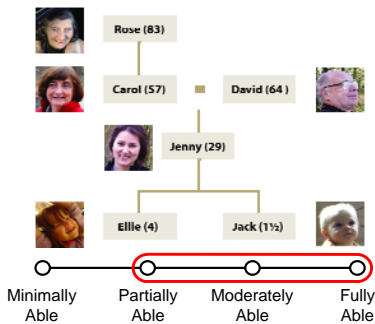
Boundary users



46

Engineering Design Centre

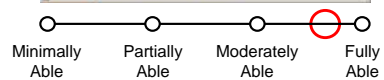
Personas



47

Engineering Design Centre

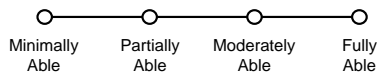
Personas



48

Engineering Design Centre

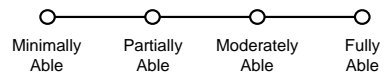
Vision simulator



49

Engineering Design Centre

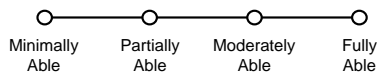
Reach and stretch simulator



50

Engineering Design Centre

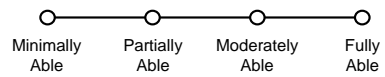
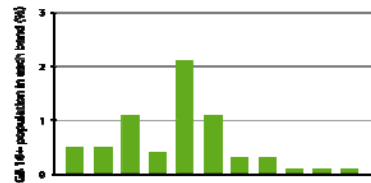
Dexterity simulator



51

Engineering Design Centre

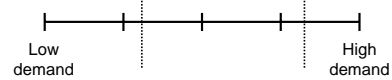
Capability data



52

Engineering Design Centre

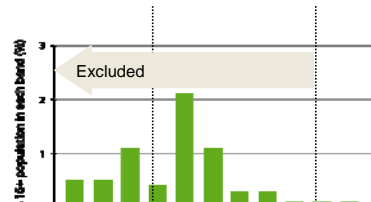
Demand assessment



53

Engineering Design Centre

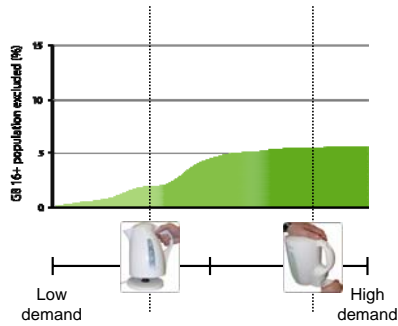
Demand assessment



54

Engineering Design Centre

Demand assessment

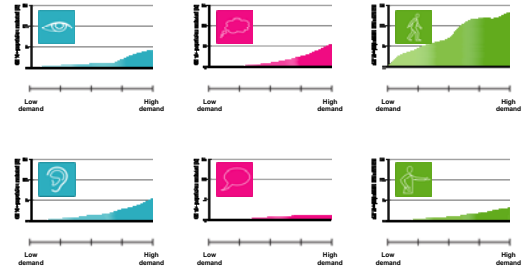


55

Engineering Design Centre

Demand assessment

- Exclusion data for GB population



56

Engineering Design Centre

Demand assessment



Low demand High demand

57

Engineering Design Centre

Case studies

- Current product (~4.0m adults excluded in GB)



58

Engineering Design Centre

Case studies

- Proposed Concept (~2.1m adults excluded in GB)



59

Engineering Design Centre

Books



60

Engineering Design Centre

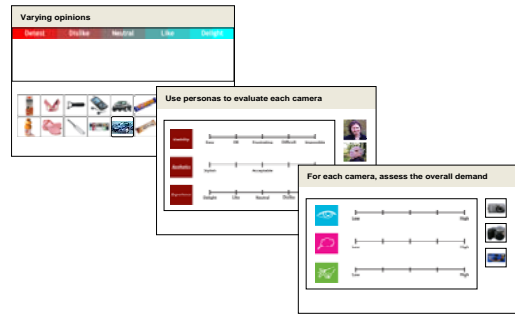
Website



61

Engineering Design Centre

Interactive training



62

Engineering Design Centre

Conferences



63

Engineering Design Centre

When designers meet older people

- A little history
- Business case for inclusive design
- Tools for inclusive design
- The future

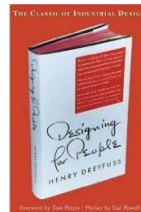


64

Engineering Design Centre

People, not users

- 1950s *Designing for people*
- 1970s *Designing for the disabled*
- 2004 *Designing for people*



65

Engineering Design Centre

People, not users

- Coming soon ...

designingwith
people.org



66

Engineering Design Centre

People, not users



67

Engineering Design Centre

Information, not data



68

Engineering Design Centre

Information, not data



69

Engineering Design Centre

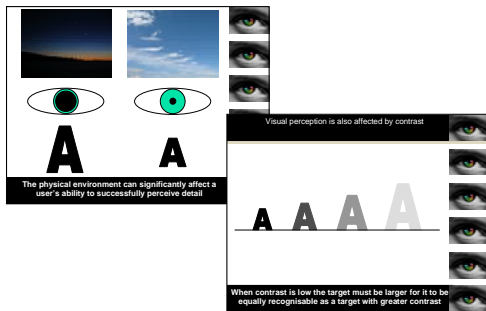
Information, not data



70

Engineering Design Centre

Information, not data



71

Engineering Design Centre

Better design, not Inclusive design

It is normal to be *different*



72

Engineering Design Centre

Better design, *not* Inclusive design

Inclusive design = better design



73

Engineering Design Centre

Innovation, *not* accommodation

Better design = good business



74

Engineering Design Centre

Innovation, *not* accommodation

Better design = good business



75

Engineering Design Centre

Inclusive work



76

Engineering Design Centre

Inclusive health



77

Engineering Design Centre

Inclusive education



78

Engineering Design Centre

Inclusive design



79

Engineering Design Centre

Inclusive design

- Policy makers with a focus on people
- Businesses with a will to innovate
- Designers with the ability to innovate
- Educators with the resources to inspire
- Customers with the desire to purchase



80

Engineering Design Centre

When designers meet older people



81

Engineering Design Centre