Universal Design –
International Perspectives –
Germany

Achieving full participation through Universal Design
Dublin, October 1st, 2009
Christian Bühler
User diversity
User diversity

• Better products for more users
• Services for all citizens
• Solutions for people
Continuum of Solutions

Assistive Technology → Universal Design

Rehabilitation Technology ← Accessibility
Universal Design (UD) – Definition of UN-Convention (2006)

“Universal design” means the design of

- products, environments, programmes and services
- to be usable by all people, to the greatest extent possible,
- without the need for adaptation or specialized design.

“Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed“.
Universal Design (DfA) principal strategies (EU)

- Design of (IST) products, services and applications which are demonstrably suitable for most of the potential users without any modifications.
- Design of products which are easily adaptable to different users (e.g. by incorporating adaptable or customisable user interfaces).
- Design of products which have standardised interfaces, capable of being accessed by specialised user interaction devices.
## Universal Design (DfA) Situation: Myths or Truth

| + | Concept available since 80ties |
| + | Politicians like the idea |
| + | Support from the disability field |
| + | Ambient Intelligence as new opportunity |
| - | Market penetration still low |
| - | Different understandings/ Misconceptions |
| - | Conflicting design requirements |
| - | Conflicting design cultures |
| - | Conflicting industry procedures |
| - | Missing information |
| - | Lack of education |
Levels of Universal Design (DfA) Management
A special article covering universal design (UD) was printed in the May 2003 issue of the FUJITSU Magazine circulated throughout Japan. Around that time, ……, people started paying attention to universal design and environmental issues **from the viewpoint of corporate management.**
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Classical Example: Ramps for all

Universal Design in Municipalities

Entrance of the office for youth affairs, Dortmund City
Hand Rails (example of technical specifications)
Overview and Orientation Map for All

Universal Design in public environments

Tactile Map, Citypalais Duisburg
EDeAN – European Design for all eAccessibility Network

• Universal Design in ICT
• 160 members in Europe
• National Contacts in most EU member states
• White papers, Conferences, Networking (SIGs), Resource Centre

http://www.edean.org
http://www.dfaei.org

1. October 2009
1st European Forum on Participation and Technology

**EU-PaTe**

October 15.+16. 2009
at REHACARE in Düsseldorf

**Topic:**
The UN Convention on the Rights of Persons with Disabilities and the use of assistive technology and universal design

Register at: www.EU-PaTe.eu
Elevators for all

Universal Design in Public Buildings

Elevator in the Conference and Advice Centre „Der kleine Prinz“ in Duisburg

Operation tableau of an elevator, Philharmonie Essen
BIENE AWARD (2003 – 2009)

Best websites competition
Bus-Cap

Access for all

Attention field

Guide strip
Distance > 45 cm
Lead Strip > 30 cm
Border line
Slope < 6%
Guide strip
Mobility through information – Example Frankfurt
Mobility through Information – Example Frankfurt

Barrierefreies Reisen

Blickachsen und Parkspaziergänge
Ungewöhnliche Kunstwerke und ein Spaziergang durch die Altstadt - der RMV-O-Ton begleitet Sie heute durch Bad Homburg.

Herbstliche Weinwanderung im Rheingau
Eine Wanderung in den Weinbergen des Rheingaus ist ein besonderes Vergnügen - Busse und Bahnen bringen Sie unbeschwert hin und zurück.
Awareness, Education and Training

- Education on the idea, the methodology and the benefits of UD already at high school and university level.
- Integration of UD in the curricula of economics, engineering, computer science, architecture, industrial design, rehabilitation science, social science etc. Education for future joint efforts towards UD.
- Policy level encouragement of schools, universities and other educational settings to take up UD in their courses.
- Public support of networking, research, development of teaching material and its provision free of charge.
- Inside the companies awareness raising, further education and training of existing staff and selection of educated employees are the main roads to follow.
Coursework

• **BA Level**
  - Introduction to Universal Design, all students (2-6 h)
  - Universal Design in the Built Environment, architecture, civil engineering (4-8 h)
  - Universal Design in ICT, computer science, electrical engineering (4-6 h)
  - Universal Design in product the product lifecycle, designers, mechanical engineers, graphic designers, economics, …

• **MA Level**
  - Specialised themes like webdesign, user interface engineering, design of public services, health and rehab, education, usw.
First course is run by Middlesex University starting autumn 2009
User Orientation

End Users
  – Average Users
  – Users with special capacities/ abilities (restricted - enhanced)
  – Users in different situations

Other kind of users
  – Industrial designers
  – Decision makers
  – Company stakeholders
  – Marketing People
Relevance of Universal Design

- UD has considerable market potential.
- UD supports participation of all citizens.
- Characteristics of products and services aiming at the support of people with functional restrictions can serve the better usability for all.
- Number of general users is usually much bigger than the number of people with disabilities.
- Universal Design for situative restrictions.
- Universal Design can only be implemented looking at the requirements and abilities of all.
Thank You!

Universal Design – Go for it!

Thank you!

Questions?