



# EU DISABILITY LAW AND THE UN CONVENTION ON THE RIGHTS OF PERSONS WITH DISABILITIES

## Substantive Rules on Disability Issues in the Construction/Planning/Housing Sector

**Monika Anna Klenovec**

*Architect, Lecturer at the Technical University of Vienna  
design for all – Zentrum für barrierefreie Lebensräume e.V.*

# Monika Anna Klenovec

- Architect DI, access consultant, expert
- University lecturer for universal design – TU Vienna in architecture & facility management (1996)
- Founder and chairperson of *design for all* – *Zentrum für barrierefreie Lebensräume* (since 2006)
- Delegate to ANEC WG “*design for all*” (European voice of consumers in standardisation) and
- Delegate to UIA WP “*Architecture for All*” (since 2003)
- Vice-Chair of UN NGO Committee on Ageing – Vienna (2007-2011 chairperson), delegated by ZONTA International
- Mandate 420 *Accessibility requirements for public procurement in the built environment* – project manager in phase I of PT A
- Austrian Standards Institute 1989 – 2003/2013: Construction standardisation management (building construction, accessible design, heat/acoustic/fire insulation, prefab housing) / Vice-Chair

# Topics ...

- Introduction: diversity & demographic change
- Political implementation (EU + UN + national)
- UN Convention – uses / “universal design” definition / minimum requirements + standards
- Mandate 420 “*Accessibility requirements for public procurement in the built environment*” – results of phase I
- Strategic implementation of the UN Convention in the construction sector – Austria as an example

# We are all different / diverse ...



- Size
- Strength
- Reduced mobility
- Reduced sensory abilities (vision, hearing)
- Speed/dexterity
- Mental faculties
- Age
- Gender
- Language
- Culture ...





This is “us” over the entire life cycle!



# Design for all ...

Diversity is normal.

→ And our planning must be based  
on this diversity over the entire life cycle!

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# Design for all / accessible ...

In inclusive and accessible cities, streets, parks, public transport, buildings and homes, all people – whether young or old – can live comfortably and safely!

Products and the Internet must also be made accessible for all!

Inclusive and accessible environments help significantly to implement these human rights for all ... and to prevent discrimination!



United Nations Secretary-General Ban Ki-moon:  
*“Let us make the dream of **a society of all ages and diversities** a reality”*  
(1 October 2008 – International Day of Older Persons)



# Not “only” wheelchair users



# Concepts:

## Accessible / Designed for persons with disabilities?

- **Accessible:** applies to institutions that can be used by as many persons as possible (85%) = “design for all” approach
- **Designed for persons with disabilities:** applies to a certain user with specific mobility and sensory requirements (disability), including in specific institutions (nursing homes, rehabilitation centres, etc.); may be based on Austrian standard B 1601 or other specific requirements

# “Design for All” definition

Buildings, products and services designed for all should be:

1. accessible,
  2. safe,
  3. perceptible,
  4. simple, effortless and intuitive to use,
  5. flexible and easy to adapt, as well as
  6. usable over the entire life cycle,
  7. *energy efficient,*
  8. *healthy for residents and environmentally sustainable.*
- = foresighted, future-proof and sustainable!**

(1 – 6 = definition of “universal design”!)

# UNCRPD – Provisions applying to construction

**ratified / legally binding / national action plans**

(12)

## **Preamble**

*(g) ... the importance of mainstreaming disability issues as an integral **part of relevant strategies of sustainable development.***

*(h) ... discrimination against any person on the basis of disability is a violation of the inherent dignity and worth of the human person.*

**Article 9 – Accessibility**

**Article 10 – Right to life and the effective enjoyment by persons with disabilities on an equal basis with others**

**Article 30 – Participation in cultural life, recreation, leisure and sport**

# United Nations

## Madrid Weltaktionsplan für ältere Menschen

**United Nations Secretary-General Ban Ki-moon\*):**

**“Let us all redouble our efforts to realize the rights of older persons, and make the dream of a society for all ages a reality.**

**National policies must be improved substantially!”**

***“Let us make the dream of a society of all ages and diversities a reality”***

***See priority area III: Supportive enabling environments***

**\*) Message on 1 October 2008 – 10th Anniversary of the International Day of Older Persons**

# EU Disability Strategy 2010 – 2020

## Provisions relevant to construction

- **Implementation of the UNCRPD** in Europe (including Optional Protocol, monitoring, national action plans ...)
- **Protection of workers / workplace**
- **Transport sector:** implementation of free mobility for all in transport-related built facilities (railway stations ...) with **TSI PRM (strict legal requirements & technical specifications for Member States)**
- **Services:** transport (air, bus, rail directives), service facilities, consumer sector,
- **Communication:** ICT, Web accessibility, terminals etc.
- **Public procurement rules:** based on EU Directive 2004/18
  - Award of public works contracts, public supply contracts and public service contracts (based on technical specifications with *design for all* approach)
  - Thresholds: € 5,000,000 and € 400,000 (services)
- **Accessibility Act – ante portas**

# EU Disability Strategy 2010 – 2020

## Provisions relevant to construction

- **Construction Products Regulation** (new: 2011-04-24) replaced CPD for the essential characteristics/test methods of **construction products** in accordance with “basic requirements for construction works” 1 - 7  
(Member States continue to be responsible for requirements to be met by **buildings!**)
  1. Mechanical resistance and stability
  2. Safety in case of fire
  3. Hygiene, health and the environment
  4. Safety and accessibility in use
  5. Protection against noise
  6. Energy economy and heat retention
  7. Sustainable use of natural resources
- **Standardisation mandates (CEN/CLC/ETSI):**
  - Standardisation mandate 420 “*Accessibility requirements for public procurement in the built environment*”, phase I (joint report), before start of phase II; <http://www.cen.eu/cen/Sectors/Sectors/Accessibility/Construction/Pages/Allpresentations.aspx>
  - Standardisation mandate 473 “*Design for all in all aspects of standardisation*”

# Mandate 420 “Accessibility requirements for public procurement in the built environment”

- Phase I (see Joint Report at [www.cen.eu](http://www.cen.eu))
  - PT A: Inventory and feasibility of European and international standards, building codes, technical regulations and guidance documents for accessibility and recommendations for phase II (*73 percent inventory data collection, 98 percent country reports*)
  - PT B: Analysis of existing testing and conformity schemes and recommendations for phase II
- Phase II
  - CEN standard for functional accessibility requirements etc.
  - CEN standard describing the technical details (based on ISO 21542)
  - CEN standard for a conformity system
  - Toolkit providing guidance for public procurers



# Mandate 420 – Phase I Joint Report

## Analysis (1)

- User needs:** insufficient guidance for people with cognitive impairments, as well as for children and older persons, limited guidance for people with hearing impairments, almost no guidance for people with allergies (indoor climate, coverings, furniture etc.)

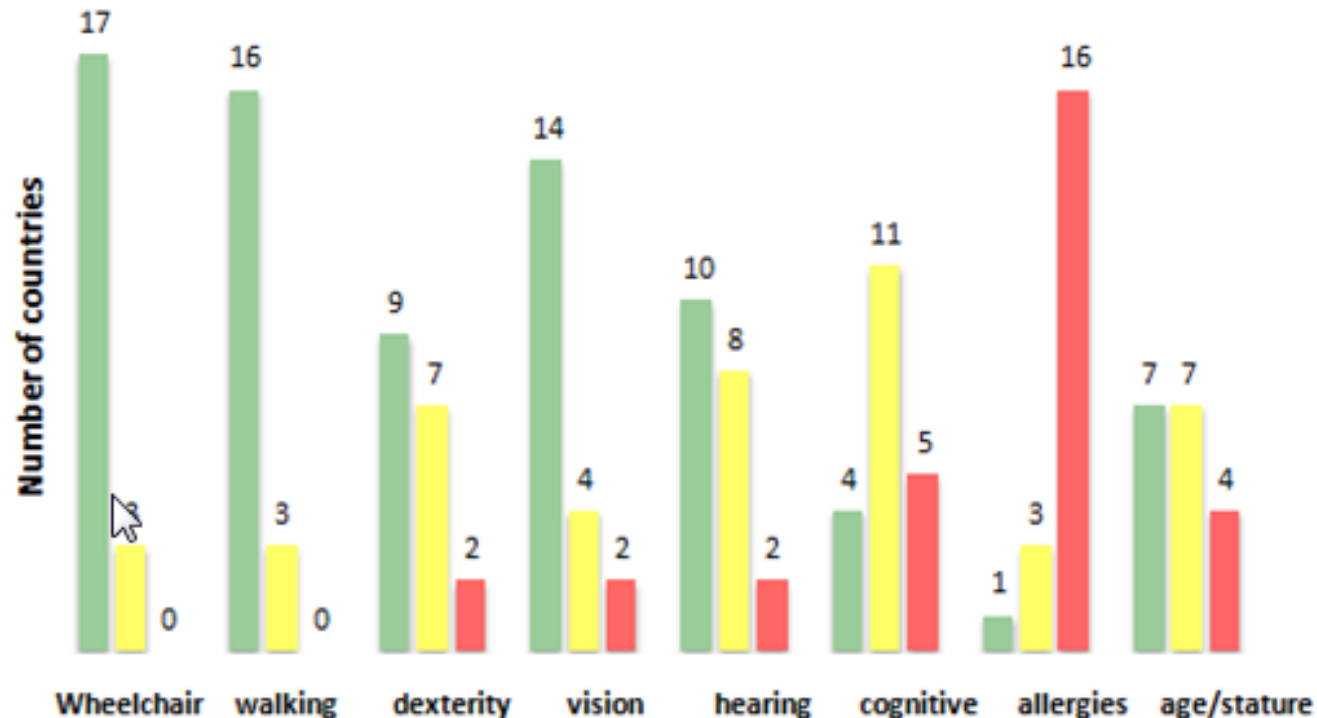


Figure 4 - Coverage of user needs in European countries

# Mandate 420 – Phase I Joint Report

## Analysis (2)

- 15 countries have **building regulations only** (no references to standards)
- 14 countries have **building regulations** which refer to guidance documents
- 7 countries (A, D, IR, SI, UK, N, CH) have **building regulations which refer to ‘accessibility’ standards** (however in very different ways; often only general reference)
- 1 country (DK) has accessibility standard without reference to the building code

Correlation between Building Regulation and Standards in Europe	Austria	Belgium	Bulgaria	Croatia	Cyprus	Czech Rep.	Denmark	Estonia	Finland	France	Germany	Greece	Hungary	Iceland	Ireland	Italy	Latvia	Lithuania	Luxembourg	Malta	Netherlands	Poland	Portugal	Romania	Slovakia	Slovenia	Spain	Sweden	UK	Liechtenstein	Norway	Switzerland	total sum	
Type 1 Building regulation with standards referred to in the regulation	R										R				R										R						R	7		
Type 2 Building regulation with guidance documents referred to in the regulation																																14		
Type 3 Building regulation without standards referred to in the regulations																																	15	
National accessibility standard available without reference to legislation																																	1	
Different regional building regulation in regions, countries and communities with different references																																		5

- Building regulation only
- Regulation with guidance
- Standard only partly applied R

# Mandate 420 – Phase I Joint Report

## Analysis (3)

- Usually no requirements for outdoor areas
- Lack of training courses for the implementation of DU criteria in the field of technical construction
- Lack of detailed regulations / toolkits for public procurers with regard to the “design for all” approach in the underlying technical specifications; often there is:
  - no awareness of the benefits for all,
  - no knowledge of the obligation by law (UNCPRD etc.),
  - no knowledge of minimum technical requirements, inclusion and accessibility (within the context of sustainability) as an integral part of the public procurement process
- Lack of conformity schemes to check the design of buildings for accessibility until their completion – rarely checked by building authorities! See CEBC reports ...
- In most Member States, **design for all – designing residential buildings for people in all stages of life** – is not practised as a planning concept for an ageing population and for persons with disabilities; the implementation of adaptable homes, life-time homes, etc., for instance, is still far from sufficient; there are still too many “special design” homes!
- Prejudices suggest that accessible homes are too expensive (cf. ETH Zürich study: 0.3 – 3 percent of total construction cost if integrated from the outset! see [www.hindernisfrei-bauen.ch](http://www.hindernisfrei-bauen.ch)) – conversion can be expensive!

# Mandate 420 – Phase I Joint Report

## CEBC Reports & Build-For-All Manual

- CEBC (Consortium of European Building Control) Report: ***“Access for all in Europe”***, 2007 – 2011, a consortium of European building control authorities
  - Good overview of basic technical requirements, with broad agreement in Member States, updated data in Joint Report (2011)  
[http://www.cebc.eu/index.php?option=com\\_content&view=category&layout=blog&id=1&Itemid=2](http://www.cebc.eu/index.php?option=com_content&view=category&layout=blog&id=1&Itemid=2)
- CEBC Report: ***“Study into self-confirmation in building control in Europe”*** (2010)
- CEBC Report: ***“Value of building control”*** (2012)
- ***Build-for-All Manual***, promoting accessibility for all in the built environment and public procurement, see <http://www.build-for-all.net/>

# ELA EEA ELCA EFESME EPSA EDF AGE ANEC

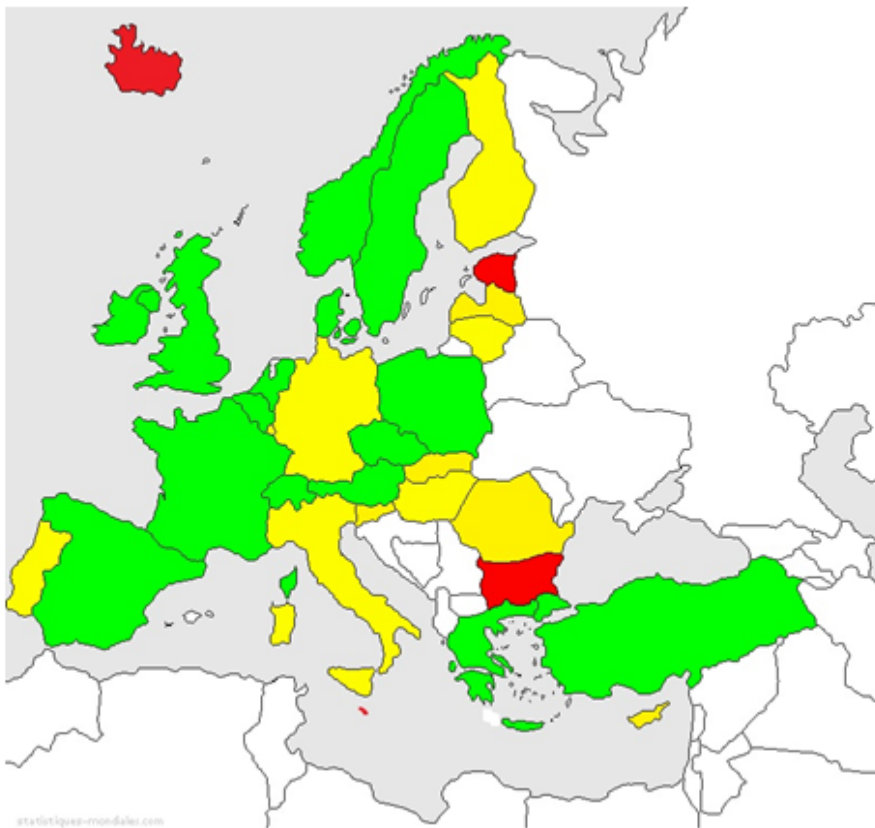
## Accessibility survey of the built environment legislation in Europe

- EN standards (EN 81-70, 81-40, 81-42 etc. ) for accessible lifts: in new buildings and in full renovation

### LEGEND FOR READING THE MAP



	<p><b>DARK GREEN</b></p> <p>National/regional legislation on accessibility of the disabled            Obligation of lift in public buildings of more than 1 level            Obligation of lift in residential buildings of more than 2 levels or            Reservation of space for later installation of lift            Public procurement suppl. to directives for access of disabled</p>
	<p><b>LIGHT GREEN</b></p> <p>National/regional legislation on accessibility of the disabled            Obligation of lift in public buildings of more than 1 level            Obligation or lift in residential buildings of more than 4 levels            No reservation of space for later installation of lift            No public procurement supplement on disabled access</p>
	<p><b>YELLOW</b></p> <p>National/regional legislation on accessibility of the disabled            Obligation of lift in some public buildings (traffic)            Obligation of lift in residential buildings of more than 5 levels            No reservation of space            No public procurement obligations for accessibility</p>
	<p><b>RED</b></p> <p>No specific legislation            No obligation of any sort for public or residential buildings            No answer received</p>

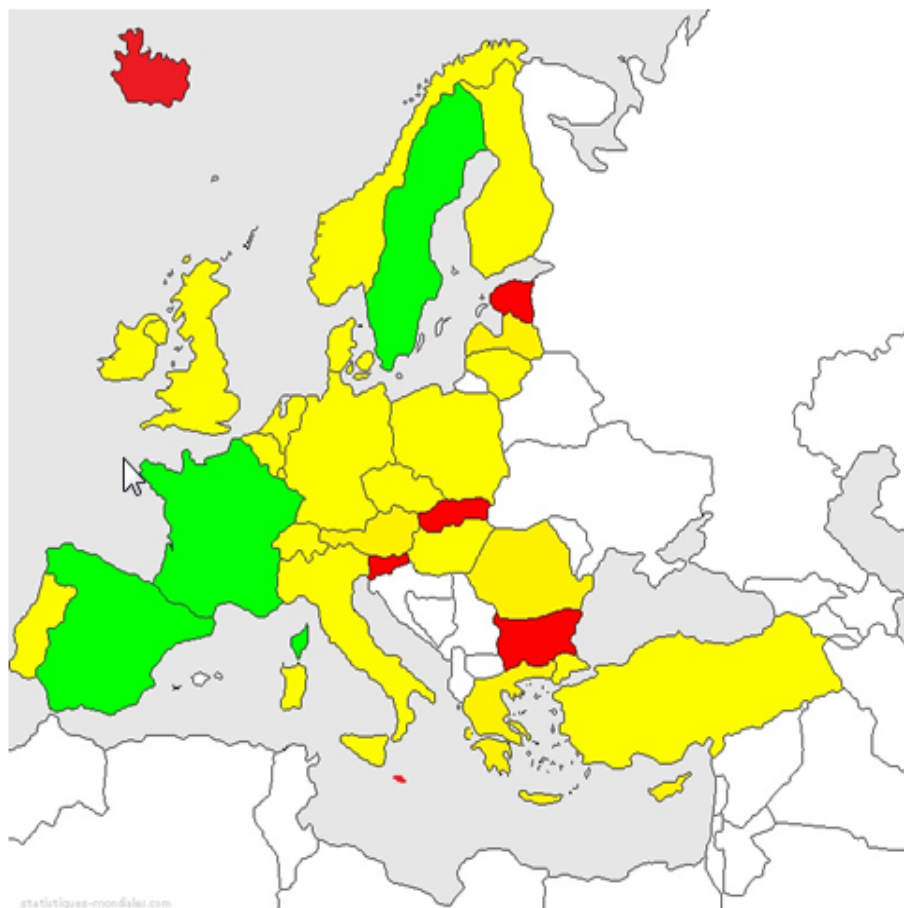


# ELA EEA ELCA EFESME EPSA EDF AGE ANEC

## Accessibility survey of the built environment legislation in Europe

- Accessible lift standards (EN ) in existing buildings

### LEGEND FOR READING THE MAP



	<p><b>DARK GREEN</b></p> <p>Full legislation for all existing buildings. National/regional legislation on accessibility of the disabled Obligation of lift in public buildings of more than 1 level Obligation of lift in residential buildings of more than 2 levels or Reservation of space for later installation of lift Public procurement suppl. to directives for access of disabled</p>
	<p><b>LIGHT GREEN</b></p> <p>Applying EN81-80. Legislation for residential buildings National/regional legislation on accessibility of the disabled Obligation of lift in public buildings of more than 1 level Obligation or lift in residential buildings of more than 4 levels No reservation of space for later installation of lift No public procurement supplement on disabled access</p>
	<p><b>YELLOW</b></p> <p>National/regional legislation on accessibility of the disabled Obligation of lift in some public buildings (traffic) Obligation of lift in residential buildings of more than 5 levels No reservation of space No public procurement obligations for accessibility</p>
	<p><b>RED</b></p> <p>No specific legislation No obligation of any sort for public or residential buildings No answer received</p>

# Mandate 420 – Phase I Joint Report

## Summary and recommendations for phase II

- Disseminating / introducing good practices as an important additional measure
  - Supporting/introducing DU/DFA training courses in the construction sector
  - Using public funds available for the conversion of existing buildings or the design of new buildings to improve accessibility (detached and semi-detached houses, terrace houses)
  - Introducing awards, prizes, competitions, etc. (see Schindler award “Access for all”, “Design for People” in Vorarlberg/Austria)
  - Providing information, raising awareness und giving advice
  - Strategies for implementation on a larger scale (cities for all and programme designed to assess tourist attractions, accessible pedestrian routes to historic environments, buildings etc.
  - Accessibility as part of sustainability!
- **Introducing Accessibility Statement**
- Defining and monitoring accessibility criteria at the beginning of the planning process (consultant/advisor) up to the building’s completion as proof (website)

# Mandate 420 – Phase I Joint Report

## Summary and recommendations for phase II

- Accessibility and safety in use for all are two key elements of sustainability = third pillar
- Developing an **EN standard with functional UD/DFA requirements**
- Developing an **EN standard with detailed technical requirements**, based on ISO 21542 (largely identical, with additions to fill gaps)
- Developing a **conformity scheme/certification scheme**, with a voluntary *accessibility statement*
- **Tools and procedures – toolkit** – to support public procurers in the implementation of accessible buildings
- Proposals of **effective measures in the event of non-compliance**
- Review is recommended whenever public funds are used
- **Improving education** and training for students and professionals



# 'Best practice' example: Implementation of design-for-all construction/conversion of buildings in the Austrian Building Code



# Why now?

- Design requirements for persons with disabilities have to be taken into account in all walks of life (see UNCRPD ...)
- More and more people live to a very old age ... (United Nations International Plan of Action on Ageing)
  - and have special needs with regard to the built environment, products and services
  - While on holiday, we also want to feel comfortable and be in a pleasant environment
  - We want to live independently and be mobile
  - We want to feel safe
- Baby-boomers are growing old
- Silver market
- Economic stimuli – enormous market potential

# The political implementation in Austria

## Design for all is required under the ...

- Equal Opportunities for Persons with Disabilities Act 2006
  - new buildings as of 1 January 2006
  - existing buildings up to 31 December 2015
- Procurement Act 2006 = EU Public Procurement Directive
- Building regulations, construction ordinances of Austria's 9 federal states
- Austrian provisions applying to federal buildings

# OIB harmonisation concept (1)

Austrian Institute of Construction Engineering: [www.oib.or.at](http://www.oib.or.at)

- Guided by “new approach”  
(= new concept in the field of **technical harmonisation and standardisation**, based on the six essential requirements of the former Construction Products Directive (including accessible design!))
  1. Targeted construction requirements  
(statutory provisions)
  2. OIB Guidelines 1 to 6 (contain detailed technical provisions with references to relevant standards)

# OIB harmonisation concept (2)

## 6 Essential Requirements

1. Mechanical strength and stability
2. Safety in the event of fire
3. Hygiene, health and the environment
4. Safety and accessibility in use
5. Protection against noise
6. Energy economy and heat retention

# OIB harmonisation concept

## Targeted design requirements

### 4. Safety and accessibility in use

#### 4.1 General requirements with regard to safety in use:

*Construction works must be designed and executed so as to avoid accidents which could endanger the life and health of people, such as accidents caused by slipping, tripping, falling or collisions.*

*Depending on the intended use, particular attention should be paid to children, older persons and persons with disabilities.*

#### 4.2 Development

#### 4.3 Protection against accidents caused by slipping and tripping

#### 4.4 Protection against accidents caused by falling

#### 4.5 Protection against accidents caused by collisions and by falling objects

#### 4.6 Protection against burns

#### 4.7 Lightning protection

# OIB harmonisation concept

## Targeted design requirements

### 4. Safety and accessibility in use

#### 4.8 Accessible design of buildings

4.8.1 What buildings (list of various uses)

4.8.2 Minimum requirements for

- Main entrance
- Vertical and horizontal connecting paths
- Doors
- Sanitary spaces

# OIB harmonisation concept

## Targeted design requirements

### 4. Safety and accessibility in use

4.8.1 The following buildings must be designed and executed in such a way that the **parts of the buildings that are designed for visitors and customers are also accessible, without danger and as far as possible without outside help, for children, older persons and persons with disabilities:**

1. Buildings for public purposes (e.g. public authorities, agencies),
2. Buildings for educational purposes (e.g. nursery schools, primary and secondary schools, universities, community colleges)
3. Retail businesses for the sale of daily consumer goods
4. Banks, financial institutions
5. Health and social facilities
6. Surgeries and pharmacies
7. Public toilets and
8. Other buildings which are generally accessible and designed for at least 50 visitors or customers



# OIB Guideline 4

## Safety and accessibility in use

### 2 Vertical access

- Ramps not steeper than 6 % in accessible buildings
- Lifts (110 cm x 140 cm) in buildings **with three storeys or more** and
- **No lifts in buildings with a maximum of three dwellings and in terrace houses!**
- As of an escape route level of 22 metres at least one lift of 110 cm x 2,10 cm; as of a level of 32 metres at least two lifts with this cabin size
- Straight flights of stairs, landing 150 cm deep

### 3 Horizontal access

- Protection against accidents caused by slipping and tripping: surfaces designed to avoid slipping and tripping!
- Corridors with clear passage of at least 1.20 metres
- Stair width at least 120 cm
- Single steps in corridors are not admissible! Sills inside max. 2 (outside 3) cm
- Doors with clear passage of  $\geq 80$  cm , laterally 50 cm
- All-glass doors / glass doors (frame width  $< 10$  cm, B 1600) must be marked

# OIB Guideline 4

## Safety and accessibility in use

### **8. Additional requirements with regard to the accessible design of buildings**

- 8.1 Accessible residential buildings
- 8.2 Adaptable residential construction
- 8.3 Accessible non-residential buildings
- 8.4 Facilitation of accessibility in existing buildings

### **9. Special buildings**

Clause 8 (accessibility) does not apply to mountain shelters in remote locations!

# OIB Guideline 4

## Safety and accessibility in use

### 8 Additional requirements for accessible buildings

#### 8.1 Accessible residential buildings

- 3.3 Ramps (outside of buildings)
- 4.2 Accessible parking spaces for cars of persons with disabilities
- 5.1 Entrances and doors
- 5.2 Horizontal connections (corridors, gangways and vestibules)
  - 5.3.1 Stairs
  - 5.3.2 Ramps in buildings
  - 5.3.3.1 Design requirements for passenger lifts
  - 5.5.2 Design requirements for accessible restrooms
  - 5.5.3 Accessible restrooms – Minimum room sizes
- 5.6 Generally accessible utility rooms in residential buildings
- 5.7 Open areas (balcony, terrace, loggia, etc.)
- 8.4 Accessible sanitary rooms with the exception of 8.4.11 (higher standard)

# OIB Guideline 4

## Safety and accessibility in use

### 8 Additional requirements for accessible buildings

#### 8.2 Adaptable housing construction

In derogation from the following clauses of Austrian standard B 1600

- 5.3.1 Stairs
- 5.5.2 Design requirements for accessible restrooms
- 5.5.3 Accessible restrooms – minimum room sizes and
- 8.4. Accessible sanitary rooms

adaptable housing construction are subject to Clause 6.1  
Adaptable housing construction of Austrian standard B 1600

# OIB Guideline 4

## Safety and accessibility in use

### 8 Additional requirements for accessible buildings

#### 8.3 Accessible non-residential buildings

Accessible non-residential buildings are subject to Clause 8.1 of OIB Guideline 4 and, in addition, to the following clauses of Austrian standard B 1600:

- 5.8 Arrangement of wheelchair spaces in conference rooms and facilities for cultural, recreational and sports activities
- 5.9 Changing rooms, showers and baths
- 9 Marking

## OIB Guideline 4

# Safety and accessibility in use

## 8 Additional requirements for accessible buildings

Depending on the size and the intended use of buildings, accessible building shall also include:

- Accessible toilets in general toilet areas (at least one accessible toilet, preferably near ladies' toilet ... or unisex)
- Access areas equipped with tactile, visual and acoustic guidance systems!

## OIB Guideline 4

# Safety and accessibility in use

## 8 Additional requirements for accessible buildings

### 8.4 Facilitation of accessibility in existing buildings:

Based on Annex B of Austrian standard B 1600, the following facilitation may be admissible for **technical reasons**:

- **B.3 Outdoor ramps** (up to 10 %, width 100 cm to 2 metres, ○ 120 cm)
- **B.5 Entrances and doors** (accessible side entrance & marking, histor. double-leaf doors: non-active leaf opened by handle or automatic)
- **B.6 Indoor ramps** (up to 10 %, length ≤ 10 m, ○ 120 cm, ...)
- **B.7 Clear passage** (narrowing of passage by platform lift max. 30 cm)
- **B.8 Single steps** (marked, handrail on both sides, tactile marking, etc.)
- **B.9 Lifts** (in groups of lifts at least 1 accessible lift of 110 cm/140 cm and cabin size of at least 100cm/125 cm)
- **B.10 Vertical platform lifts** (at least 110 cm/140 cm) or **with inclined travel path** (at least 80 cm/100 cm, minimum nominal loads)
- **B.11 Provision of accessible restrooms** (at least near ladies' toilets)

# In Austria, **accessible design** is based on Austrian standards, guidelines and data sheets ...

- **Austrian Standard B 1600** Accessible Design – Planning principles (no comparable German standard)
- **Austrian Standard B 1601** Special buildings for disabled and old persons – Planning principles
- **Austrian Standard V 2102-1** Technical aids for visually impaired and blind persons – Tactile ground surface indicators
- **Austrian Standard EN 81-70** ... Lifts ... – Accessibility for persons, including persons with disabilities
- **Austrian Standard A 3012** Visual guidance system for public information – guidance by means of arrows, graphical symbols, text, light and colour
- **Technical information sheets** by *Netzwerk der österreichischen Beratungsstellen für barrierefreies Planen und Bauen*: [www.oeaar.or.at](http://www.oeaar.or.at)
  - Accessible toilet facilities
  - Children's playgrounds for all
  - Inclined lifts and lifting platforms
  - Lifts
- **Manual Barriere:FREI!** by *design for all* for BMASK (Austrian stand B 1600:2011) order from BMASK or download: <http://ebookbrowse.com/bmask-handbuch-barrierefrei-2011-pdf-d239432394>



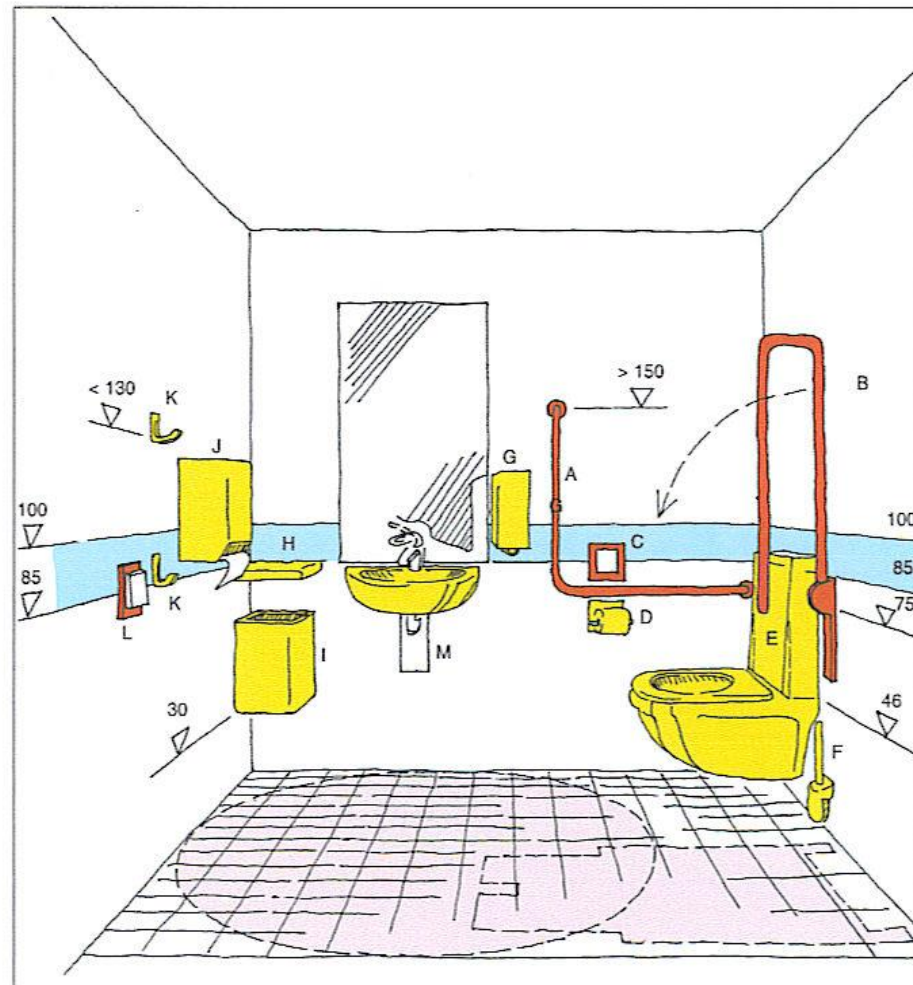
# Accessible restroom

Information leaflet published by *Netzwerk für barrierefreies Bauen*

- A Winkelgriff
- B Stützklappgriff
- C Spülerauslöser
- D Papierhalter
- E Vormauerung bzw. Spülkasten
- F WC-Bürste
- G Seifenspender
- H Ablagebrett
- I Abfallbehälter
- J Handtuchspender
- K Kleiderhaken
- L Lichtschalter
- M Unterputzsifon

- Greifbereich
- Bewegungsfläche

Maße in Zentimeter



- A Angle bar
- B Foldable grab rail
- C Flusher actuator
- D Toilet paper holder
- E Recess or flushing cistern
- F Toilet brush
- G Soap dispenser
- H Shelf
- I Waste bin
- J Towel dispenser
- K Coat hook
- L Light switch
- M Flush-mounted trap

Gripping range  
Manoeuvring space

Measurements in centimetres

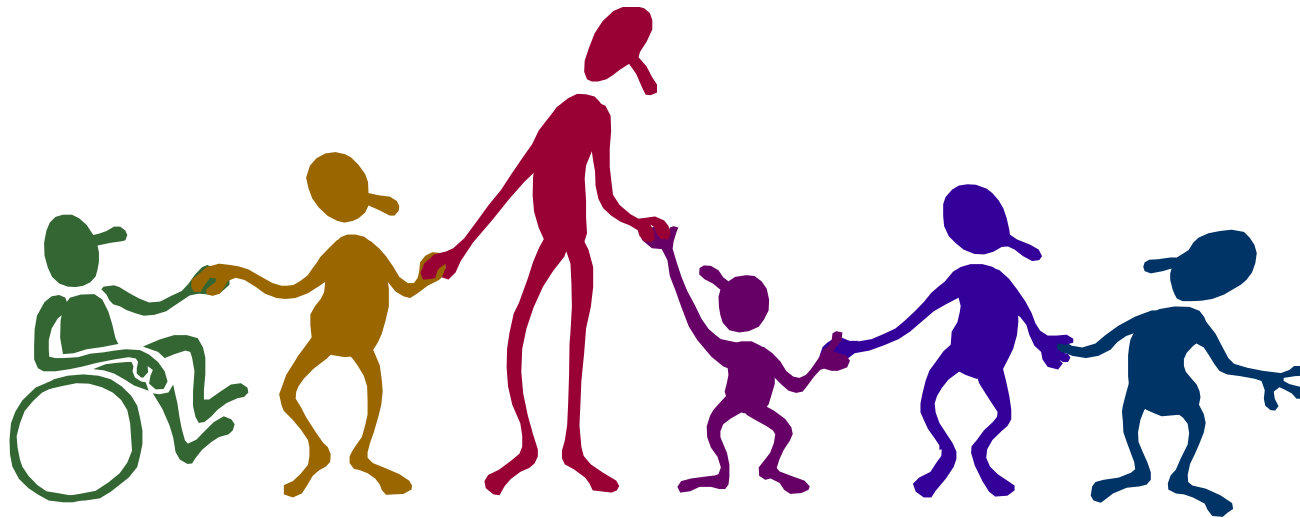


# Accessibility Manual **BARRIERE:FREI!**

Published by *design for all* on behalf of the Austrian Ministry of Labour, Social Affairs and Consumer Protection (BMASK)  
Based on the current edition of the Austrian standard  
B 1600: 2011-04

# Thank you for your attention!

## Design for All / Universal Design / Accessible for All



Contact:

Monika Anna Klenovec, architect DI [klenovec@designforall.at](mailto:klenovec@designforall.at) [www.designforall.at](http://www.designforall.at)