

# DIN EN 17478:2022-05 (E)

## Transport Services - Customer communications for passenger transport services - A Universal Design approach

---

<b>Contents</b>		<b>Page</b>
European foreword .....		5
Introduction .....		6
1	Scope .....	7
2	Normative references .....	7
3	Terms and definitions .....	7
4	Applying a Universal Design approach .....	9
4.1	General .....	9
4.2	Understanding Universal Design .....	10
4.3	Realizing an organisational commitment to a Universal Design approach .....	10
4.4	Using the Universal Design Principle and Guidelines .....	10
5	User characteristics, capabilities and preferences .....	11
6	Requirements for communication following a Universal Design approach .....	11
6.1	General .....	11
6.2	Written Communication .....	13
6.3	Verbal communication .....	13
6.4	Digital communication .....	14
6.4.1	General .....	14
6.4.2	Web-based communication .....	14
6.4.3	Non-web electronic documents .....	14
6.4.4	Text and Instant Messaging communications .....	14
6.4.5	Telephone-based systems .....	14
7	Evaluation of the application of a Universal Design approach .....	15
7.1	General .....	15
7.2	Monitoring and measuring .....	15
7.3	Analysis and evaluation .....	16
Annex A (informative) Business aspects of Universal Design .....		17
A.1	The demographic case .....	17
A.2	The legal case .....	17
A.3	The business case .....	17
Annex B (informative) The 7 Principles and 29 Guidelines of Universal Design .....		19
B.1	Principle 1: Equitable Use .....	19
B.2	Principle 2: Flexibility in Use .....	19
B.3	Principle 3: Simple and Intuitive Use .....	19
B.4	Principle 4: Perceptible Information .....	20
B.5	Principle 5: Tolerance for Error .....	20
B.6	Principle 6: Low Physical Effort .....	20
B.7	Principle 7: Size and Space for Approach and Use .....	21
Annex C (informative) User characteristics, capabilities and preferences .....		22

C.1	General .....	22
C.2	Resources about user characteristics and capabilities .....	22
C.3	Expert Knowledge .....	23
C.4	Direct engagement with users .....	23
Annex D (informative) Tables for using the Universal Design Principles and Guidelines in passenger transport services communication design .....		26
Annex E (informative) Tables mapping the Universal Design Principles and Guidelines to the design guidance in Annexes F, G and H .....		30
E.1	General .....	30
E.2	Purpose and structure of the tables .....	30
E.3	Content of the Tables .....	31
E.4	Order of the Tables .....	31
Annex F (informative) Written communication .....		47
F.1	General .....	47
F.2	Written communication content .....	47
F.2.1	Text .....	47
F.2.2	Dates, numbers and percentages .....	47
F.2.3	Graphics .....	48
F.3	Design, layout and formatting .....	48
F.4	Paper and binding .....	49
F.5	Form Design .....	49
F.6	Signage Guidance .....	49
F.6.1	Content .....	49
F.6.2	Design .....	50
F.6.3	Tactile markings .....	50
F.6.4	Positioning .....	50
F.6.5	Colours, images, graphs and visuals .....	50
Annex G (informative) Verbal communication .....		51
G.1	General .....	51
G.2	Personal conversation .....	51
G.3	Auditory announcements .....	52
Annex H (informative) Digital communication .....		53
H.1	General .....	53
H.2	Websites .....	53
H.2.1	General .....	53
H.2.2	Writing for the web .....	53
H.2.3	Design .....	54
H.2.4	Links .....	54
H.2.5	Structure .....	54
H.2.6	Website navigation .....	54
H.2.7	Online forms .....	54
H.2.8	Time-out messages .....	55
H.2.9	Search .....	55
H.2.10	Images and multimedia .....	55
H.3	Mobile web content and apps .....	56
H.4	Emails and newsletters .....	56
H.5	Electronic documents .....	56
H.6	Telephone Based Systems .....	57
H.7	Text and Instant Messaging Communication .....	57
H.8	Social Media Guidance .....	58
Bibliography .....		59