INTUX PROJECT

Digital Validation and Co-creation Workshop Report

Project partners:

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1. Introduction

In the document, the workshop titled "Digital validation and co-creation of good practices in user testing" is focused on finding "best practices", accompanied questions are listed and responses to those questions are provided. The responses are based on close-ended questions, where a descriptive analysis is given, as well as open-ended questions, providing suggested changes to the original good practices list as well as adding new good practices.

The workshop intentionally sought to include a diverse audience with varied backgrounds and experiences to ensure a comprehensive and inclusive assessment of the identified best practices. Participants were carefully selected to represent a wide range of expertise, including professionals from different domains, academia, and practitioners from various levels of experience and students. This diverse composition of the audience was crucial for collecting rich feedback on the best practices under consideration.

The workshop organisers recognized the value of incorporating diverse perspectives as it enhances the validity and reliability of the evaluation process. By including participants with different backgrounds, the workshop fostered an environment that encouraged the sharing of unique insights and experiences. This diversity also helped identify any potential biases or limitations in the assessed best practices, as the varied perspectives could highlight areas that may have been overlooked or underrepresented.

Moreover, the participation of individuals with varying levels of experience in usability testing added depth and richness to the discussions. Participants with extensive experience could contribute practical insights and real-world challenges, while those with academic backgrounds could bring a theoretical perspective and innovative ideas. The combination of these diverse perspectives allowed for a comprehensive assessment that considered multiple viewpoints, ultimately resulting in more robust and reliable conclusions.

The workshop went beyond the boundaries of audience diversity by actively involving users both with and without disabilities. Recognizing the importance of inclusive design and accessibility in software testing, the organisers made a deliberate effort to include users with disabilities as the target group. Their unique knowledge and experience were highly valued as they provided invaluable insights into the effectiveness of the identified best practices from their specific perspective.

Furthermore, the participation of users without disabilities complemented the discussions and assessments. Their perspectives offered a broader understanding of the usability and general user experience, allowing for a holistic evaluation of the identified best practices. By facilitating interaction and collaboration between users with and without disabilities, the workshop created an environment where diverse insights were shared, fostering empathy, and understanding among participants.

In summary, the workshop prioritised the inclusion of both users with and without disabilities to gather their respective knowledge and experiences. By involving the target user group and acknowledging their valuable perspectives, the workshop ensured that the

assessment of best practices was informed by the needs and considerations of users with disabilities, ultimately promoting more inclusive and user-centred software development.

2. The workshop protocol

At the workshop, 15 best practices (BP) were presented, which were divided into three groups as shown in Figure 1. Each BP was presented in terms of content, followed by an open discussion, and finally, the participants anonymously answered closed-ended questions.

The workshop began by presenting the 15 identified best practices, which were categorised into three groups (see Figure 1): "Good practices before testing," "Good practices during testing," and "Good practices after testing." The participants were encouraged to actively engage in group discussions to explore the nuances and benefits of each practice. Facilitators guided the conversations and encouraged participants to share their experiences and insights related to the best practices.

1. Good practices before testing	2. Good practices during testing	3. Good practices after testing
1.1. Explanation of user testing goals to participants 1.2 Collect consent from participants 1.3 Training for participants 1.4 Clear instructions 1.5 Using accessibility standards	2.1 User testing from home 2.2 The possibility of an escort 2.3 Use of own personal equipment 2.4 Repeating tasks 2.5 Enough time 2.6 Taking breaks 2.7 Supervision of professionals 2.8 Comfortable surroundings	3.1 Compensation 3.2 Support after testing

Figure 1 Best practices included in the workshop

The workshop aimed to assess and evaluate a set of identified best practices in the context of software testing. The workshop was structured to facilitate a thorough discussion among the participants regarding these practices. The attendees were provided with a questionnaire that consisted of items rated on a 5-point Likert scale (see Table 1). The questionnaire focused on evaluating the effectiveness and applicability of each best practice.

The Likert scale allowed participants to rate the practices on a spectrum ranging from "strongly disagree" to "strongly agree." This approach ensured that individual opinions were captured, providing a comprehensive assessment of the practices' effectiveness. The workshop concluded with a collective review of the questionnaire results, emphasising the

areas where consensus was reached and identifying any divergent viewpoints that required further exploration.

Overall, the workshop provided a structured and collaborative environment for participants to assess and discuss the identified best practices. The combination of group discussions and individual assessments through the questionnaire enabled a comprehensive evaluation. By involving a diverse range of perspectives, the workshop aimed to gather valuable insights to inform decision-making and improve software testing practices in the future.

Below is the content that was presented at the workshop including closed-ended questions. All the closed-ended questions had the same outline as presented in the following table:

Table 1 Closed-ended questions for best practice x.y.

	Totally disagree 1	Disagree 2	Neutral 3	Agree 4	Totally agree 5
BPx.y is important for a **positive participation** in testing.					
BPx.y will **increase the stress** of participants with disabilities.					
BPx.y will make it **easier** for participants with disabilities to **complete the tasks**.					
BPx.y will make participants with disabilities **uncomfortable** before the testing.					
BPx.y will make participants with disabilities more likely **willing to participate** in user testing.					
BPx.y will make participants with disabilities feel **less motivated** when doing the tasks.					

BP1.1 Provide digitally accessible explanations of user testing goals to participants

What to do:

Provide information in an accessible format about user testing activities before starting the test.

Motivation:

Having this information will increase assurance, self-confidence, self-efficiency, and motivation.

Tips:

- Prepare a short document to explain what user testing is about.
- Include information about what you expect from participants.
- Point out that the users describe their own experience of the website.
- Make sure the document is accessible.

BP1.2 Collect consent from participants

What to do:

Obtain the user's ethical approval and informed consent.

Motivation:

Written consent enables fair, transparent, and accurate research, minimising harm.

Tips:

- Prepare accessible documents to explain users' rights and the ethics of conducting research.
- Use easy-to-read information with picture support about informed consent.
- Inform participants of their rights.
- Further explanation about the typical sentence "I consent to the terms of this study".
- Obtain a signature of ethical approval and informed consent.

BP1.3 Training for participants

What to do:

Provide the opportunity for training the participants before they start with user testing.

Motivation:

The training will increase self-confidence, self-efficiency and motivation and reduce stress.

Tips:

- Prepare short training with some similar activities from the usability testing.

- Take into account variability within groups with similar or the same disability.
- Invite the participants to engage in short training.
- Give them enough time to get comfortable before they start training.

BP1.4 Clear instructions

What to do:

Provide clear and concise instructions.

Motivation:

Clear and concise instruction will increase the success rate of testing.

Tips:

- Prepare a document with clear and concise instructions and avoid the technical language.
- Use inclusive language and avoid negative phrases and generalisations.
- Provide clear instructions about the installation or configuration of the user-testing tool, including explanatory images when required.
- Explain personalization features, for instance, allowing the preferred contrast, colour, text size, etc., to be set or allowing images, shortcuts, etc., to be removed.

BP 1.5 Using accessibility standards

What to do:

Ensure that all documents are accessible and standards-compliant to ensure compatibility with assistive technologies.

Motivation:

Accessible documents will increase the effectiveness of testing and increase accessibility for all participants.

Tips:

- Prepare task descriptions, instructions, questionnaires, and other user testing activities based on standards in order to ensure their compatibility with the assistive technologies.
- Prepare an accessible document.

BP 2.1 User testing from home

What to do:

Give the option for participants to perform usability activities in their homes.

Motivation:

The home environment will reduce stress, increase the participants' well-being and relaxation, and avoid costs.

Tips:

- Prepare user testing in such a way that it is possible for participants to carry it out in their home environment.

BP2.2 The possibility of a caregiver

What to do:

Allow participants to be accompanied by their caregivers, friends or family members.

Motivation:

This will increase their safety, better comfort, self-confidence and self-efficiency.

Tips:

- Prepare user testing in such a way that it is possible for participants to be accompanied by their caregivers, friends or family members (e.g. enough space in the room, appropriate term, etc.)

BP 2.3 Use of own personal equipment

What to do:

Allow participants to use their own personal equipment if that is what they prefer.

Motivation:

This will increase self-confidence, self-efficiency, and motivation because the participants are more accustomed to their own hardware and software or other equipment.

Tips:

- Prepare user testing in such a way that it is possible for participants to use their own hardware and software or other equipment.

BP2.4 Repeating tasks

What to do:

Give the possibility to repeat each test for participants during the user testing activities.

Motivation:

This will increase positive user experience, motivation and reduce stress.

Tips:

- Prepare user testing in such a way that it is possible for participants to repeat each task at least three times and to repeat the entire user testing process.

BP2.5 Enough time

What to do:

Provide enough time for performing user testing activities.

Motivation:

Allow participants to get a good feeling with minimal stress, motivate them, and give them enough time for preparation without rushing to perform the activities.

Tips:

- Give the participants unlimited testing sessions.

BP2.6 Taking breaks

What to do:

Provide breaks between user testing activities.

Motivation:

Breaks between user testing activities allow a longer concentration of participants.

Tips:

- Divide the long experimental sessions into shorter sessions to avoid tiring the user.

BP2.7 Supervision of professionals

What to do:

Include expert supervision in user testing activities.

Motivation:

Increases the likelihood that testing is carried out by requirements and good practice.

Tips:

- Individuals with experience and extensive knowledge in this area should be included during user testing activities.

BP2.8 Comfortable surroundings

What to do:

Provide comfortable surroundings and accessible infrastructure.

Motivation:

Easier access to the premises, better feeling in the room, and uncongested, which in turn has an impact on concentration and better test performance.

Tips:

- Provide practical information about the location and set-up as.
- Provide comfortable surroundings for user testing participants, and stimulus proof environment (depending on the user testing activities).
- Provide appropriate light and soft music if appropriate.
- Provide accessible infrastructure, clean testing environment (no obstacles on the ground), accessible toilets, elevators.

BP 3.1 Compensation

What to do:

Provide the compensation to attend the user testing for participants.

Motivation:

Increases the assurance of participation in testing and the seriousness of participation.

Tips:

- After the user testing activities, participants should be compensated money, rewards and travel costs.

BP3.2 Support after testing

What to do:

Provide participants a possibility to be driven and/or accompanied to their homes if user testing activities have to be performed outside their homes.

Motivation:

Support after testing will increase the positive user experience, reduce stress and increase relaxation and concentration during the testing.

Tips:

- Arrange transport for participants.

3. Results of the workshop

3.1. WORKSHOP PARTICIPANTS

The workshop was performed in three countries:

1. Spain, online, included 32 participants
   a. 19 males, 13 females

b. 6 people with disabilities, 26 without

c. 7 usability experts

2. Slovenia, onsite, included 12 participants

a. 7 males, 5 females

b. 10 people with disabilities, 2 without

c. 1 usability expert

3. Latvia, onsite, included 7 participants

a. 1 male, 6 females

b. 7 people with disability, 0 without

c. 0 usability experts

All together, the workshops in Latvia, Spain and Slovenia included 51 participants.

3.2. QUANTITATIVE DATA

The score was calculated with the following method - each sentence form the Closed-ended questions set received a value from 0 to 4 in case of positive questions:

- In case participants chose "Strongly disagree", value 0 was given

- In case participants chose "Disagree", value 1 was given

- In case participants chose "Neutral", value 2 was given

- In case participants chose "Agree", value 3 was given

- In case participants chose "Strongly agree", value 4 was given

In case of negative questions, the values were reversed:

- In case participants chose "Strongly disagree", value 4 was given

- In case participants chose "Disagree", value 3 was given

- In case participants chose "Neutral", value 2 was given

- In case participants chose "Agree", value 1 was given

- In case participants chose "Strongly agree", value 0 was given

The average value was calculated as presented in the example (see Table 2):

Calculation for **BP1.1 is important for a positive participation in testing** is the following:

Score: (2*0 + 0*1 + 5*2 + 12*3 + 31*4)/50 = 3.4

Calculation for **BP1.1 will increase the stress of participants with disabilities,** which is a NEGATIVE question, is the following:

Score: (2*4 + 0*3 + 5*2 + 12*1 + 31*0)/50 = 2.92

Calculation for **BP1.1 will make it easier for participants with disabilities to complete the tasks** is the following:

Score: (19*0 + 17*1 + 9*2 + 1*3 + 4*4)/50 = 3.06

Calculation for **BP1.1 will make participants with disabilities uncomfortable before the testing,** which is a NEGATIVE question, is the following:

Score: (19*4 + 16*3 + 10*2 + 2*1 + 3*0)/50 = 2.92

Calculation for **BP1.1 will make participants with disabilities more likely willing to participate in user testing** is the following:

Score: (2*0 + 1*1 + 10*2 + 18*3 + 19*4)/50 = 3.02

Calculation for **BP1.1 will make participants with disabilities feel less motivated when doing the tasks,** which is a NEGATIVE question, is the following:

Score: (21*4 + 14*3 + 6*2 + 7*1 + 2*0)/50 = 2.9

Table 2 Demonstration of score calculation

BP1.1 Explanation of user testing goals to participants	Strongly disagree	Disagree	Neutral	Agree	Strongly agree		Total replies	Score (0-4) - average	
	1	2	3	4	5				
BP1.1 is important for a positive participation in testing.	2	0	5	12	31		50	3.40	
BP1.1 will increase the stress of participants with disabilities.	19	17	9	1	4		50	2.92	
BP1.1 will make it easier for participants with disabilities to complete the tasks.	2	3	5	20	20		50	3.06	
BP1.1 will make participants with disabilities uncomfortable before the testing.	19	16	10	2	3		50	2.92	
BP1.1 will make participants with disabilities more likely willing to participate in user testing.	2	1	10	18	19		50	3.02	
BP1.1 will make participants with disabilities feel less motivated when doing the tasks.	21	14	6	7	2		50	2.90	
								18.22	**Over 24**
								75.92	**Over 100**

As 6 statements with max value 4 could potentially receive value 24, the score is translated to the scale for 1 to 100. For our example, the calculation is the following:

BP1.1 Explanation of user testing goals to participants SCORE (from 0 to 24):

(3,4 + 2,92 + 3,06 + 2,92 + 3,02 + 2,9) = 18,22

BP1.1 Explanation of user testing goals to participants SCORE (from 0 to 100):

100* 18,22/24 = 75,92

BP1.1 Explanation of user testing goals to participants

Table 3 Qualitative data of participations' opinions for BP1.1

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP1.1 is important for positive participation in testing.	2	0	5	12	31	3.40
BP1.1 will increase the stress of participants with disabilities.	19	17	9	1	4	2.92
BP1.1 will make it easier for participants with disabilities to complete the tasks.	2	3	5	20	20	3.06
BP1.1 will make participants with disabilities uncomfortable before the testing.	19	16	10	2	3	2.92
BP1.1 will make participants with disabilities more likely willing to participate in user testing.	2	1	10	18	19	3.02
BP1.1 will make participants with disabilities feel less motivated when doing the tasks.	21	14	6	7	2	2.90

The average score for all countries is 75.92. The average scores for each country separately are:

- Latvia 57.74
- Slovenia 84.38
- Spain 76.75
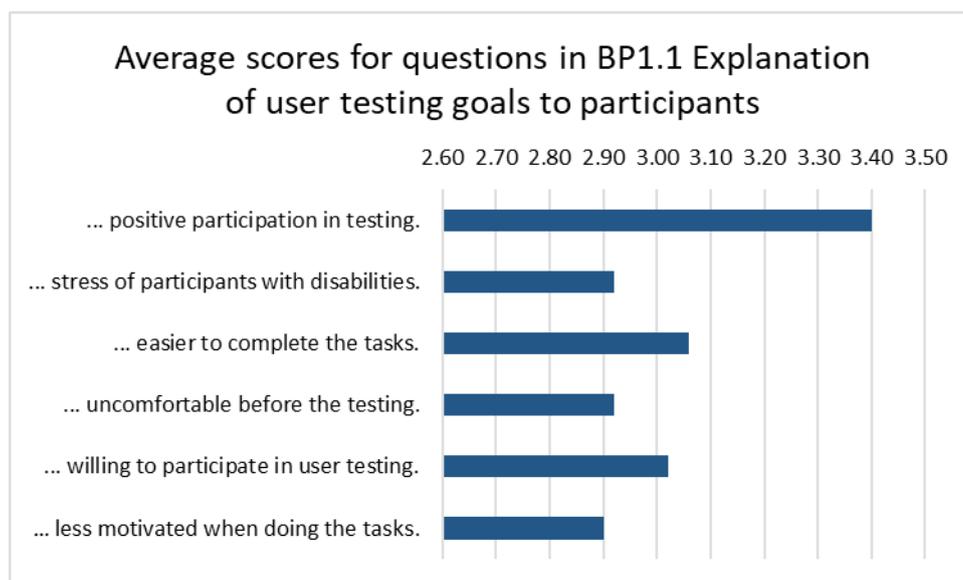
Figure 2 BP1.1 Explanation of user testing goals to participant's results

BP1.2 Collect consent from participants

Table 4 Qualitative data of participations' opinions for BP1.2

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP1.2 is important for positive participation in testing.	5	6	7	10	18	2.65
BP1.2 will increase the stress of participants with disabilities.	13	12	17	4	0	2.74
BP1.2 will make it easier for participants with disabilities to complete the tasks.	11	6	14	8	6	1.82
BP1.2 will make participants with disabilities uncomfortable before the testing.	8	13	21	4	0	2.54
BP1.2 will make participants with disabilities more likely willing to participate in user testing.	6	3	19	12	6	2.20
BP1.2 will make participants with disabilities feel less motivated when doing the tasks.	16	12	11	4	2	2.80

The average score for all countries is 61.47. The average scores for each country separately are:

● Latvia 62.90
● Slovenia 63.19
● Spain 60.15
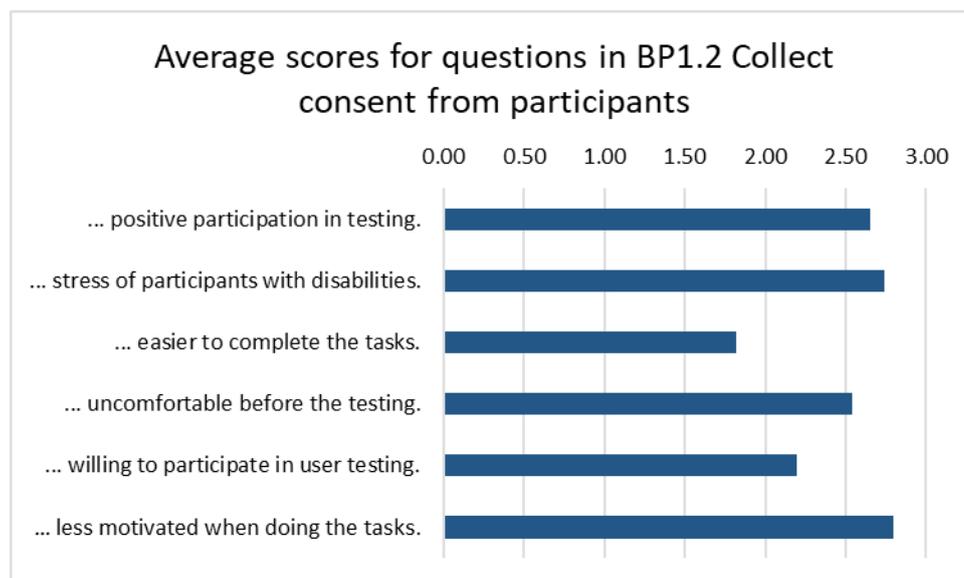
Figure 3 BP1.2 Collect consent from participant's results

BP1.3 Training for participants

Table 5 Qualitative data of participations' opinions for BP1.3

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP1.3 is important for a positive participation in testing.	2	4	9	16	16	2.85
BP1.3 will increase the stress of participants with disabilities.	15	16	14	1	1	2.91
BP1.3 will make it easier for participants with disabilities to complete the tasks.	1	0	9	17	20	3.17
BP1.3 will make participants with disabilities uncomfortable before the testing.	15	11	17	3	1	2.77
BP1.3 will make participants with disabilities more likely willing to participate in user testing.	4	2	10	17	14	2.74
BP1.3 will make participants with disabilities feel less motivated when doing the tasks.	14	11	15	4	2	2.67

The average score for all countries is 71.34. The average scores for each country separately are:

- Latvia 67.06
- Slovenia 67.19
- Spain 74.26
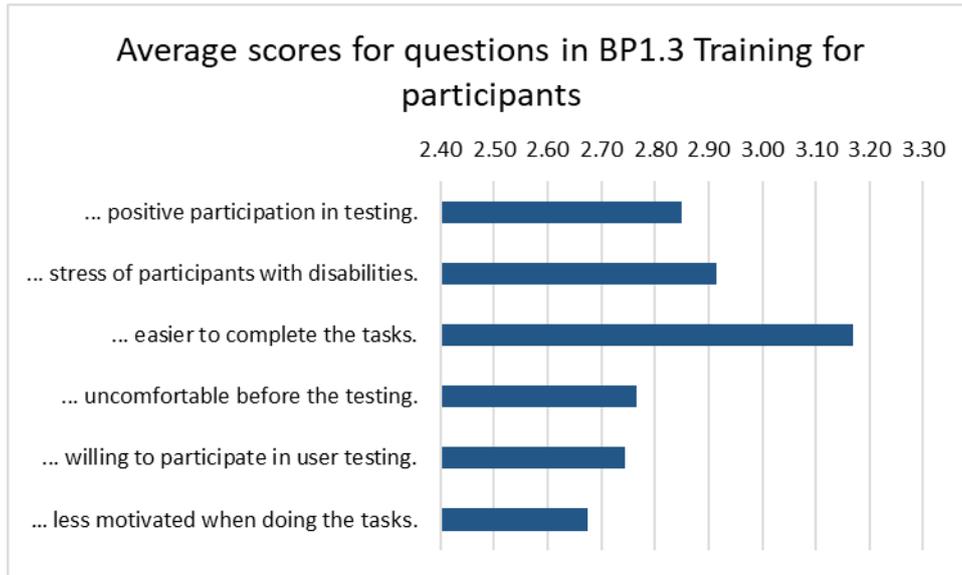
Figure 4 BP1.3 Training for participants results

BP1.4 Clear instructions

Table 6 Qualitative data of participations' opinions for BP1.4

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP1.4 is important for a positive participation in testing.	2	0	5	8	31	3.43
BP1.4 will increase the stress of participants with disabilities.	25	11	8	0	2	3.24
BP1.4 will make it easier for participants with disabilities to complete the tasks.	2	0	5	16	23	3.26
BP1.4 will make participants with disabilities uncomfortable before the testing.	22	13	2	2	7	2.89
BP1.4 will make participants with disabilities more likely willing to participate in user testing.	2	1	7	15	21	3.13
BP1.4 will make participants with disabilities feel less motivated when doing the tasks.	19	15	4	3	4	2.93

The average score for all countries is 78.71. The average scores for each country separately are:

- Latvia 61.31
- Slovenia 81.60

● Spain 81.99
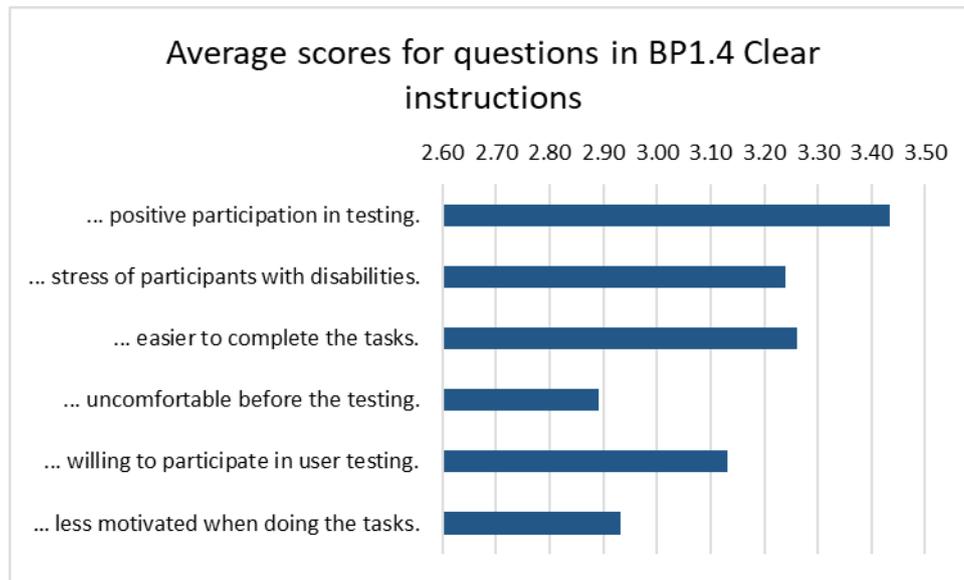
Figure 5 BP1.4 Clear instructions results

BP1.5 Using accessibility standards

Table 7 Qualitative data of participations' opinions for BP1.5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP1.5 is important for a positive participation in testing.	2	1	4	11	28	3.35
BP1.5 will increase the stress of participants with disabilities.	28	8	6	2	2	3.26
BP1.5 will make it easier for participants with disabilities to complete the tasks.	2	0	4	11	29	3.41
BP1.5 will make participants with disabilities uncomfortable before the testing.	24	7	7	5	3	2.96
BP1.5 will make participants with disabilities more likely willing to participate in user testing.	2	1	6	8	29	3.33
BP1.5 will make participants with disabilities feel less motivated when doing the tasks.	26	7	6	3	3	3.11

The average score for all countries is 80.90. The average scores for each country separately are:

- Latvia 57.74
- Slovenia 80.21
- Spain 87.29
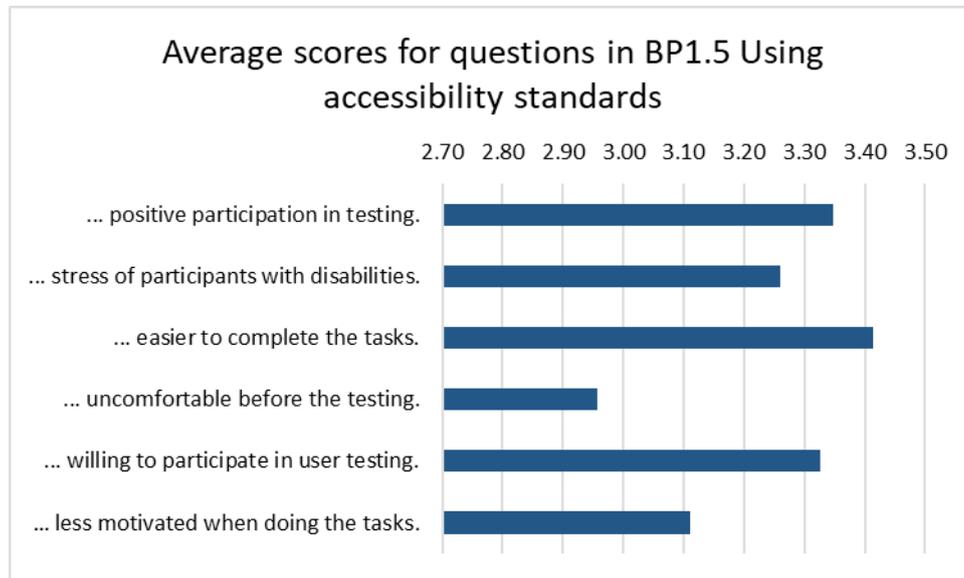
Figure 6 BP1.5 Using accessibility standards

BP2.1 User testing from home

Table 8 Qualitative data of participations' opinions for BP2.1

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	2	1	21	12	9	2.56
BP2.1 will increase the stress of participants with disabilities.	15	12	13	3	2	2.78
BP2.1 will make it easier for participants with disabilities to complete the tasks.	2	3	18	14	8	2.51
BP2.1 will make participants with disabilities uncomfortable before the testing.	15	14	12	3	1	2.87
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	2	2	14	15	12	2.73

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	14	8	18	3	1	2.70

The average score for all countries is 67.29. The average scores for each country separately are:

- Latvia 67.86
- Slovenia 70.14
- Spain 65.81
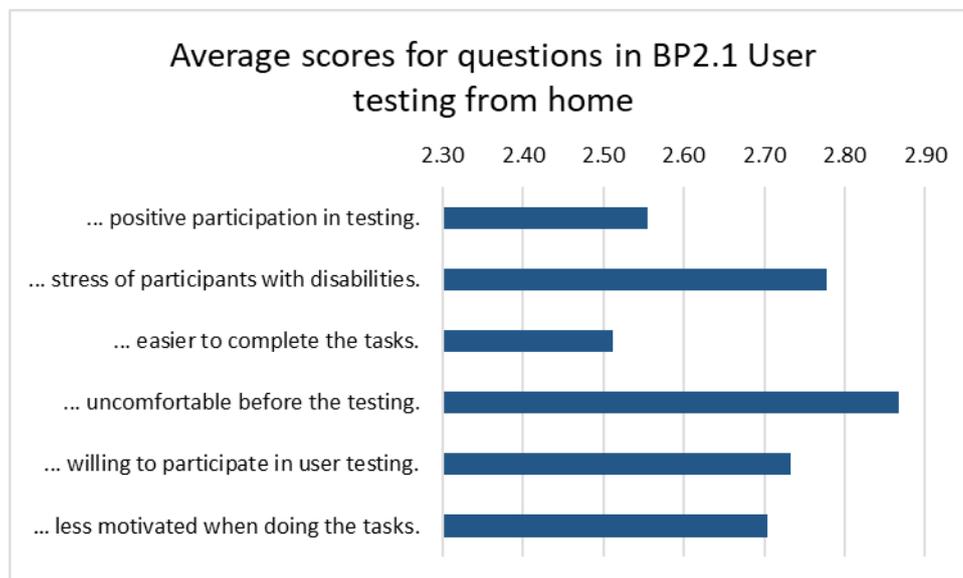
Figure 7 BP2.1 User testing from home results

BP2.2 Possibility of an escort (or assistant)

Table 9 Qualitative data of participations' opinions for BP2.2

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	3	1	9	10	22	3.04
BP2.1 will increase the stress of participants with disabilities.	25	12	4	2	1	3.32
BP2.1 will make it easier for participants with disabilities to complete the tasks.	3	1	6	17	17	3.00

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 will make participants with disabilities uncomfortable before the testing.	19	15	4	2	4	2.98
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	2	4	4	13	21	3.07
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	17	15	5	4	2	2.95

The average score for all countries is 76.51. The average scores for each country separately are:

- Latvia 68.45
- Slovenia 79.96
- Spain 77.26
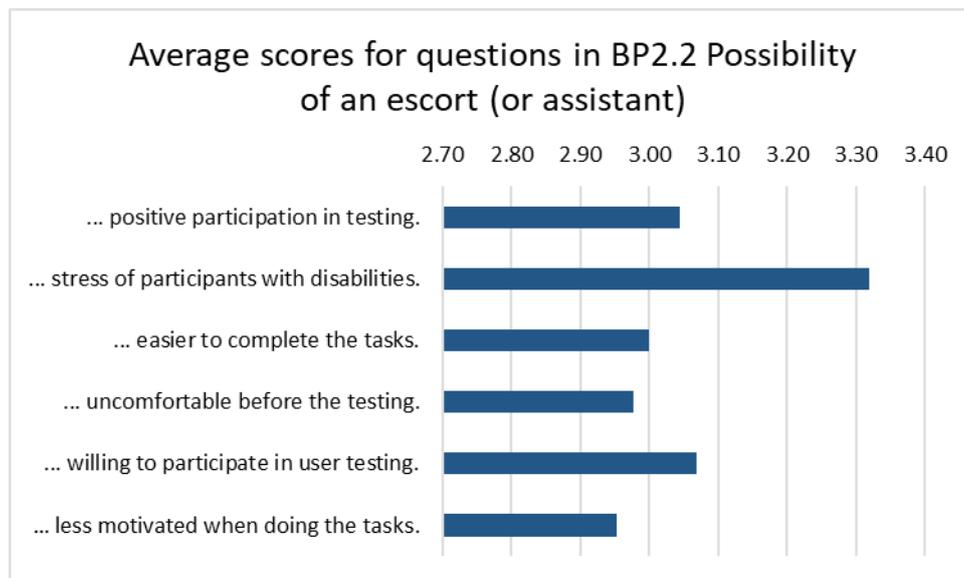
Figure 8 BP2.2 Possibility of an escort (or assistant) results

BP2.3 Use of own personal equipment

Table 10 Qualitative data of participations' opinions for BP2.3

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	0	2	7	12	24	3.29
BP2.1 will increase the stress of participants with disabilities.	23	16	3	3	0	3.31
BP2.1 will make it easier for participants with disabilities to complete the tasks.	0	2	3	17	23	3.36
BP2.1 will make participants with disabilities uncomfortable before the testing.	20	14	5	4	2	3.02
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	0	3	5	14	23	3.27
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	21	11	4	4	3	3.00

The average score for all countries is 80.19. The average scores for each country separately are:

- Latvia 66.07
- Slovenia 79.51
- Spain 84.42
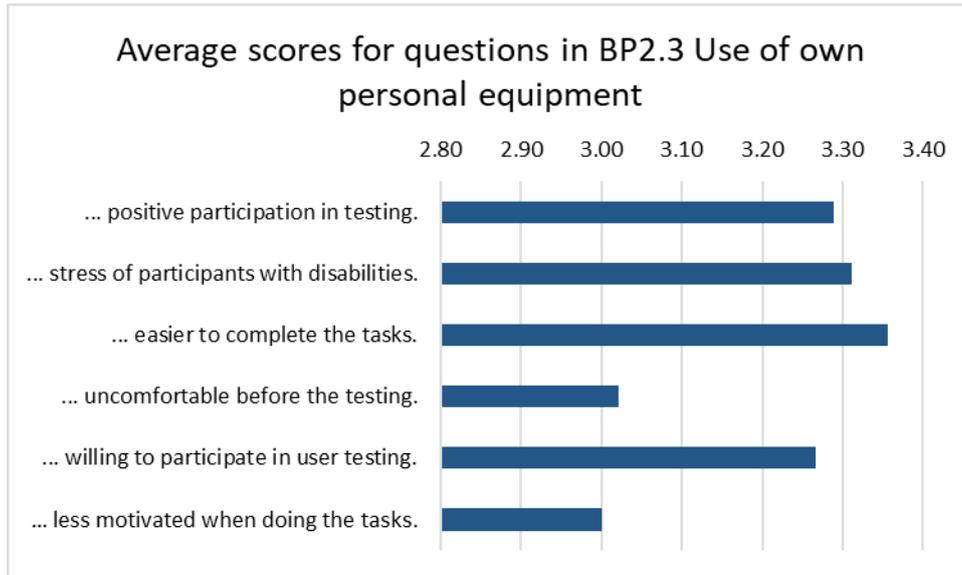
Figure 9 BP2.3 Use of own personal equipment results

BP2.4 Repeating tasks

Table 11 Qualitative data of participations' opinions for BP2.4

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	5	9	16	11	3	1.95
BP2.1 will increase the stress of participants with disabilities.	11	13	15	4	1	2.66
BP2.1 will make it easier for participants with disabilities to complete the tasks.	3	5	11	19	6	2.45
BP2.1 will make participants with disabilities uncomfortable before the testing.	14	17	7	3	2	2.88
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	7	13	8	11	4	1.81
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	11	12	12	4	3	2.57

The average score for all countries is 59.74. The average scores for each country separately are:

- Latvia 57.14
- Slovenia 60.39

- Spain 60.27
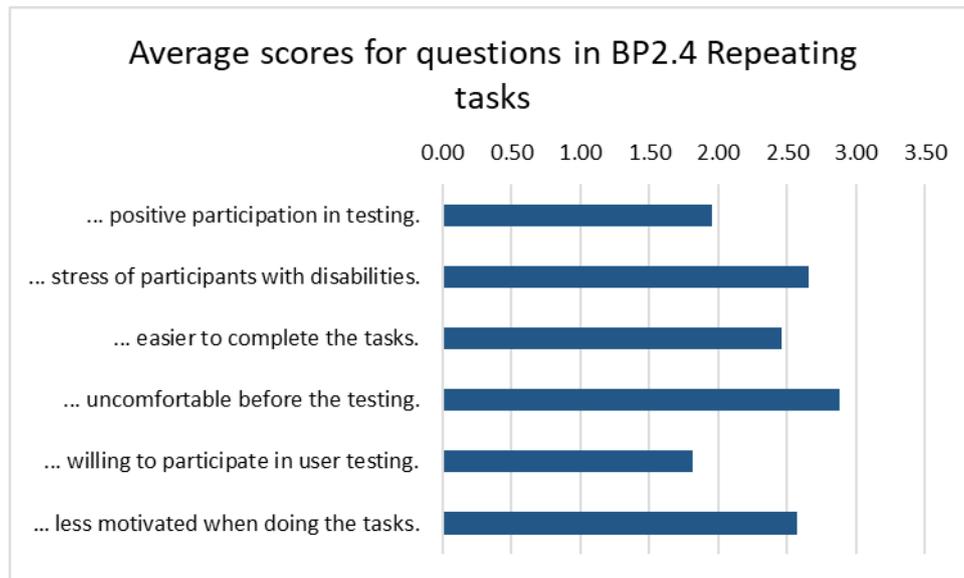
Figure 10 BP2.4 Repeating tasks results

BP2.5 Enough time

Table 12 Qualitative data of participations' opinions for BP2.5

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	2	0	2	12	26	3.43
BP2.1 will increase the stress of participants with disabilities.	27	9	1	3	2	3.33
BP2.1 will make it easier for participants with disabilities to complete the tasks.	1	2	3	13	23	3.31
BP2.1 will make participants with disabilities uncomfortable before the testing.	21	9	2	3	6	2.88
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	3	1	5	11	21	3.12
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	22	7	5	2	4	3.03

The average score for all countries is 79.57. The average scores for each country separately are:

- Latvia 62.50

- Slovenia 81.85
- Spain 83.75
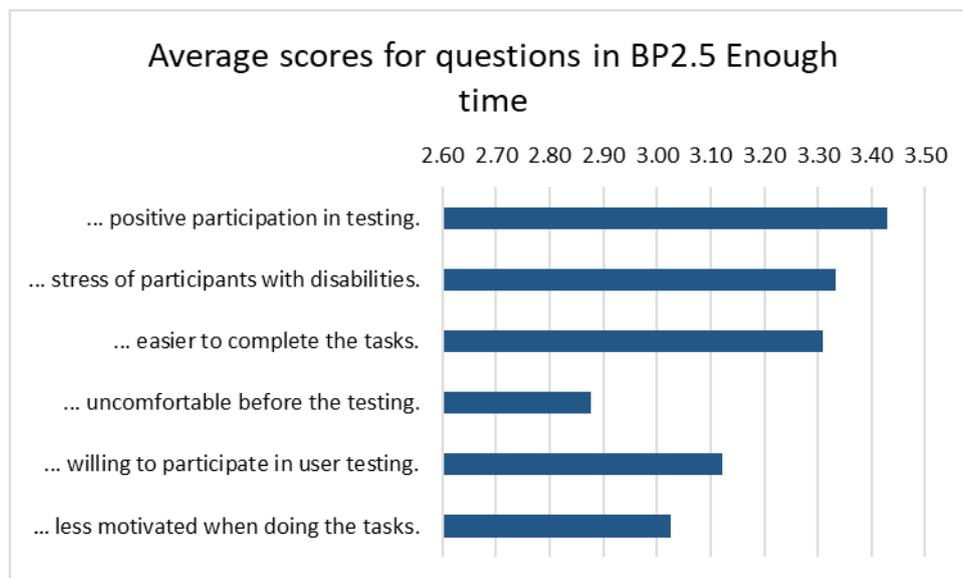
Figure 11 BP2.5 Enough time results

BP2.6 Taking breaks

Table 13 Qualitative data of participations' opinions for BP2.6

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	2	0	3	12	25	3.38
BP2.1 will increase the stress of participants with disabilities.	25	12	2	0	3	3.33
BP2.1 will make it easier for participants with disabilities to complete the tasks.	3	3	11	13	12	2.67
BP2.1 will make participants with disabilities uncomfortable before the testing.	19	11	5	2	5	2.88
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	1	2	9	12	18	3.05
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	15	14	7	1	3	2.93

The average score for all countries is 75.98. The average scores for each country separately are:

- Latvia 62.50
- Slovenia 78.63
- Spain 78.81
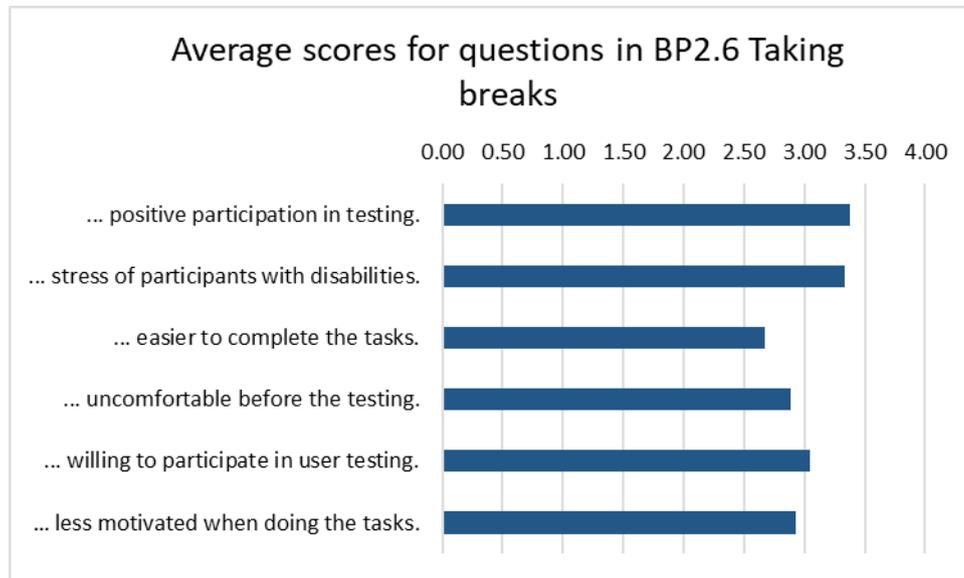
Figure 12 BP2.6 Taking breaks results

BP2.7 Supervision of professionals

Table 14 Qualitative data of participations' opinions for BP2.7

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	2	2	8	15	14	2.90
BP2.1 will increase the stress of participants with disabilities.	14	8	9	8	2	2.59
BP2.1 will make it easier for participants with disabilities to complete the tasks.	2	7	10	11	11	2.54
BP2.1 will make participants with disabilities uncomfortable before the testing.	11	4	10	12	3	2.20
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	3	7	14	7	9	2.30
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	13	8	10	3	5	2.54

The average score for all countries is 62.76. The average scores for each country separately are:

- Latvia 64.88
- Slovenia 51.42
- Spain 68.15
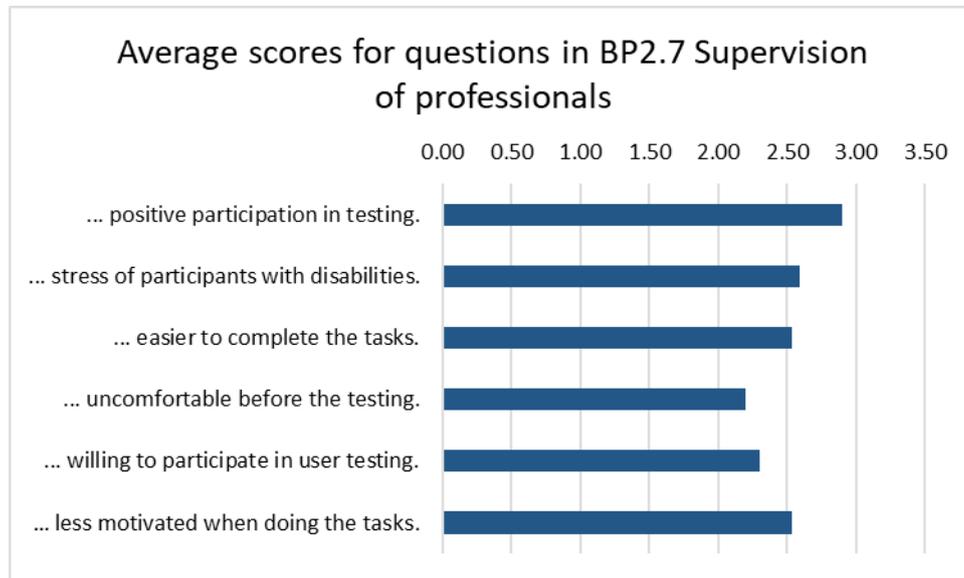
Figure 13 BP2.7 Supervision of professionals results

BP2.8 Comfortable surroundings

Table 15 Qualitative data of participations' opinions for BP2.8

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	1	0	0	8	31	3.70
BP2.1 will increase the stress of participants with disabilities.	29	7	1	1	1	3.59
BP2.1 will make it easier for participants with disabilities to complete the tasks.	1	3	4	10	21	3.21
BP2.1 will make participants with disabilities uncomfortable before the testing.	22	7	3	4	3	3.05
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	1	0	8	5	25	3.36

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	23	7	4	3	2	3.18

The average score for all countries is 83.69. The average scores for each country separately are:

- Latvia 61.31
- Slovenia 92.93
- Spain 86.31
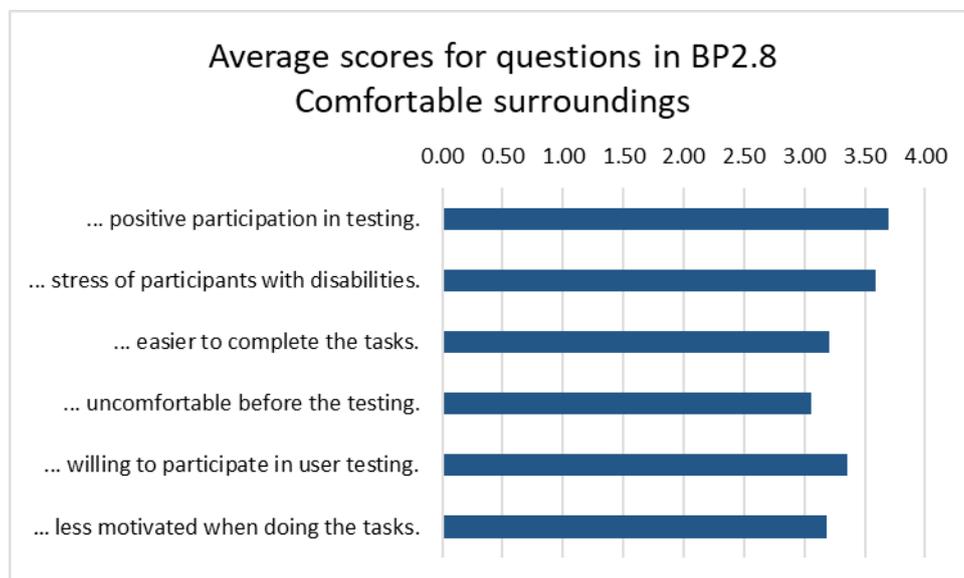
Figure 14 BP2.8 Comfortable surroundings results

BP3.1 Compensation

Table 16 Qualitative data of participations' opinions for BP3.1

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	1	0	12	11	18	3.07
BP2.1 will increase the stress of participants with disabilities.	25	10	6	0	1	3.38
BP2.1 will make it easier for participants with disabilities to complete the tasks.	11	5	15	4	7	1.79

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 will make participants with disabilities uncomfortable before the testing.	20	15	5	1	1	3.24
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	4	0	3	13	21	3.15
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	25	10	3	1	2	3.34

The average score for all countries is 74.85. The average scores for each country separately are:

- Latvia 58.33
- Slovenia 77.71
- Spain 78.44
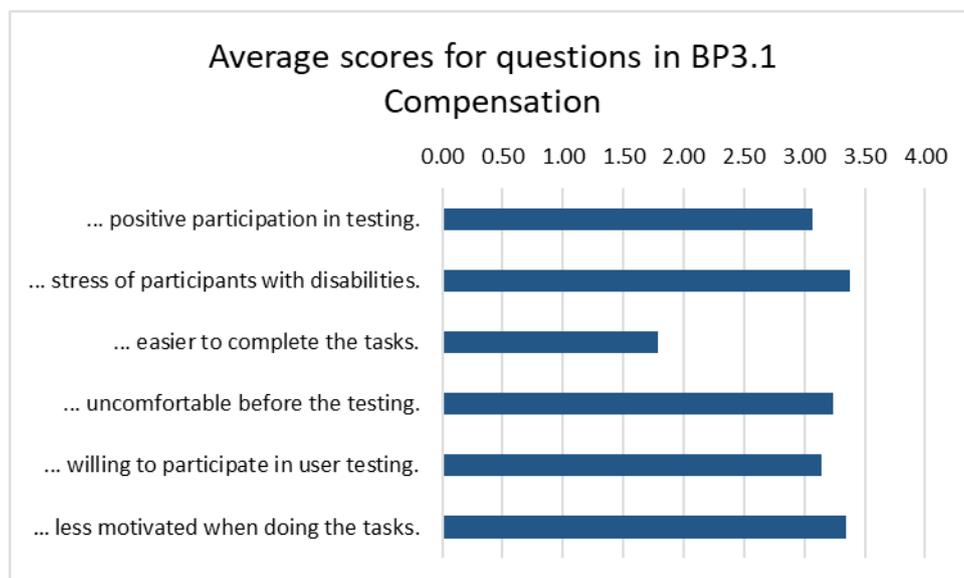
Figure 15 BP3.1 Compensation result

BP3.2 Support after testing

Table 17 Qualitative data of participations' opinions for BP3.2

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Average score [0-4]
BP2.1 is important for a positive participation in testing.	1	1	10	11	18	3.07
BP2.1 will increase the stress of participants with disabilities.	28	9	3	0	1	3.54
BP2.1 will make it easier for participants with disabilities to complete the tasks.	5	1	15	7	13	2.54
BP2.1 will make participants with disabilities uncomfortable before the testing.	23	12	1	3	2	3.24
BP2.1 will make participants with disabilities more likely willing to participate in user testing.	1	0	7	17	15	3.13
BP2.1 will make participants with disabilities feel less motivated when doing the tasks.	23	11	2	2	2	3.28

The average score for all countries is 78.29. The average scores for each country separately are:

- Latvia 64.29
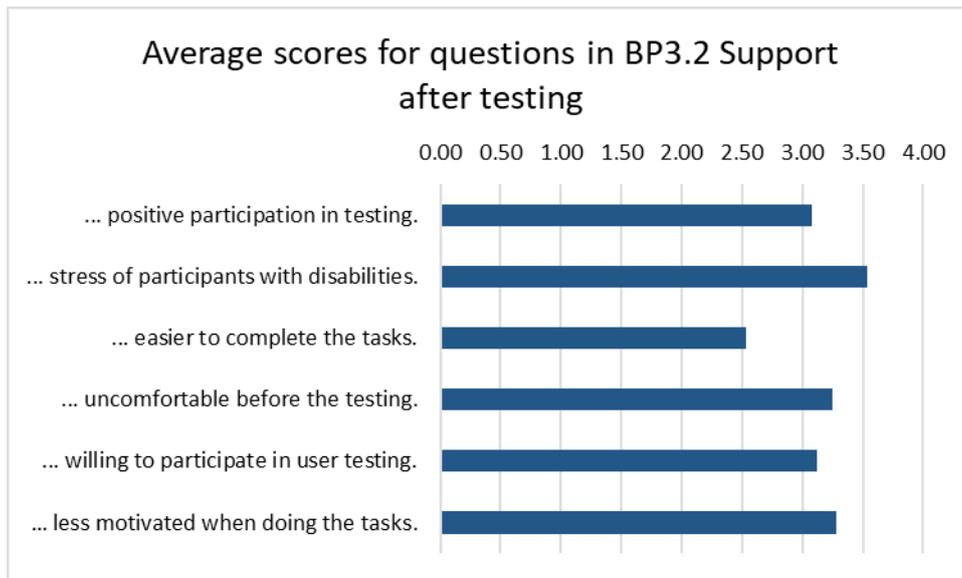- Slovenia 76.10
- Spain 83.90

Figure 16 BP3.2 Support after testing results

3.3. QUALITATIVE DATA

The qualitative data were collected from comments of Spanish and Slovenian participants, available in tables (Table 18 and Table 19). Based on the opinions and suggestions, existing good practices were renamed and new good practices were added. Each suggestion is oriented in a positive manner, while bad practices are described as negative practices.

Table 18 Comments on best practice from Spain

Good Practice ID	Comments on best practice
1.1	Include video in addition to written documents.
1.1	Change name to "Provide **accessible** information on…".
1.1	If the information provided is complex it can make participants reject to participate.
1.1	Write in non-technical language.
1.2	Allow for verbal consent (for cases with intellectual disabilities, for example).
1.2	Make sure the format of the consent is easy to sign. For example, "square box" (with tactile perceivability) to help blind users locate the place to sign.
1.3	This good practice would depend on the type of system. In some cases, it would not be beneficial as it would not replicate the situation where future users must use the system without prior training.
1.3	The writing of the good practice needs to clarify whether it is guided or autonomous training.
1.3	There is a risk of changing the way of thinking of the users (guiding them too much) and thus modifying their behaviour while doing the real test. The "realism" of the test could be diminished.
1.4	Add images to the instructions to increase understandability.
1.4	Write the instructions in a way that motivates the participants to "perform well" in the test.
1.4	Adapt the instructions to the specific disabilities of the participants, if convenient for the task and the system to be evaluated.

Good Practice ID	Comments on best practice
1.4	Provide the instructions in different modalities (written, spoken) depending on the disability of the participant.
1.5	General agreement about the importance of this good practice.
New (before the test)	Making sure that there is a diversity of disabilities while recruiting participants for the test.
New (before the test)	For testers: get familiarised with the assistive products that will be used in the test (screen readers, voice control, scanning mode + switches…).
New (before the test)	Make sure the system/prototype is compatible with the assistive products that will be used in the test. This is especially relevant if the testers will be using recording software, as it usually has compatibility issues with assistive products.
General suggestion (before the test)	In all the prepared material (especially prior information on testing 1.1, training 1.3, instructions 1.4) make sure to not discriminate by pointing out the disability of the participant.
New (before the test)	Before starting the test, make sure that the participants can ask for breaks, can decide not to answer questions, and can even decide to stop the test and leave (could be named "freedom of participation").
New (before the test)	Co-creation of the test: include persons with disabilities in the team that prepares the usability test.
2.1	Needs clarification if the researchers have to be in the participant's house, or if the good practice is about remote testing. The first is preferable.
2.1	For some users it is not good to be at home as they might not feel at ease (lack of space, renovation at home…). It is important to let the participant decide.
2.2	Add non-human assistance (such as guide dogs for blind people).
2.2	Need to make clear that the person coming with the test participant should not help the participant to do the tasks.
2.2	In some cases, it is in fact recommended not to let the participant being accompanied, to make sure they provide neutral replies.
2.2	Include specific instructions for the person accompanying the test participant, so that they know what is expected from them.
2.2	For some disabilities it is critical: for example, deaf-blind people need an interpreter to communicate with others.
2.3	Add a warning that in some cases it can add complexity to the test, because the assistive products of the participant might be unknown to the testers or might be incompatible with the system/prototype to be tested.
2.3	Add a tip to "ask users about the equipment they will use" to be prepared.
2.3	The participant should have the option to decide to use their equipment or the equipment provided by the testers.
2.3	Take into account that not all operating systems are equal. For instance, in smartphones, iOS has better accessibility features. This could have an impact on the test.
2.3	This good practice is important for users that might not know how to set up assistive products that are not theirs.
2.4	Slightly change the tasks between repetitions to avoid "being boring".

Good Practice ID	Comments on best practice
2.4	There were several questions about how to analyse the data if participants were repeating the task (for instance, "discard the first execution, and calculate the average of the other executions of each task"). Guidance is needed.
2.4	This repetition of tasks is useful because it could help testers get information about the learnability of the system.
2.5	Agreement about the importance of this good practice: not limiting the maximum time to do the tasks in the test.
2.5	Make it clear that the system/prototype to be tested should have flexibility in time limits (timeouts, animations…).
2.5	Be careful as it might happen that some participants take too much time (several hours) to do the tasks.
2.6	General agreement about the importance of this good practice.
2.7	It is essential to include experts in the disabilities of the participants, to provide support in how to prepare and perform the test.
2.7	It is essential that these professionals have experience in the use of assistive products.
2.8	It depends on the system to be tested. In some cases the system is expected to be used in spaces with noise, lack of comfort (public transport)…
2.8	It is important to make sure that all the paths to get to the testing facility are physically accessible, not only the testing space.
2.8	There were some suggestions to use background music (or "brown noise") that can help some users to be more concentrated in their tasks. Of course, based on participants' preferences.
2.8	Be careful with spaces that are too big and can create echo that can disorient blind participants.
3.1	General agreement about compensation being necessary.
3.1	In some cases, it is not possible to compensate the person (because of their lack of autonomy). In such cases the compensation could be made to the organisation (for instance, to the residence where the person lives).
3.1	Make sure that the compensation is adequate to the participants. For instance, students might prefer having a certificate of participation (that could be used for university credits) rather than monetary compensation. Let the participants decide.
3.2	Agreement that transportation after the test is good for the participants to be relaxed during the testing.
General suggestion (for all good practices)	Not all good practices are applicable to all cases. Include applicability conditions (when it can be applied) to each good practice.

Table 19 Comments on best practice from Slovenia

Good Practice ID	Comments on best practice
1.1.	Important information for participants
1.2	More than an organisational problem. If the risk is high or if any damage occurs, (insurance) is essential. If not, it's bureaucracy.

Good Practice ID	Comments on best practice
1.3	Education yes in cases, when the participants take time to organise themselves in a new environment, but not much more, because then we already influence them too much and do not get the right results. As we have already taken them through the task, they can overlook mistakes and we don't get realistic results. Distorted learning curve. By preparing similar tasks, we can already influence the results. We need to make sure that all participants have the same information. We can provide this with a video, but the problem with accessibility arises - it is not necessary that such a video will be accessible for all groups.
1.5	It is difficult to ensure all 50 accessibility criteria. We strive - less is more. Accessibility must be checked before testing. Adjustments must be consistent with the needs of the target group being tested.
2.1	The problem of ensuring equality of process, there is no control environment. For more complex tests, life is better, the rest can be done at home. Where there is no material product, testing from home can be done (eg a website). If it is tested from home, we still need to ensure the equality of the process. If we test from home, we use appropriate tools for control and monitoring. If we live, there is more motivation, responsibility and fewer distracting elements and better results than if we test from home.
2.2	The escort must not affect the testing process or can help in agreement with testers, to the level an assistant usually helps the participant. There should not be too many people in the testing environment, maybe only one personal assistant.
2.3	Depending on the complexity, it is more natural to crack on home equipment and the results can also be better. Ensure equality of process for all.
2.3	Ensure equality of flow
2.4.	It depends on what we are testing. If it is a process - learning, then we have a problem of comparison, because the conditions are not the same. Doubt due to the evaluation of the results. It can be used as an emergency exit. It depends on the task - some of them must not be repeated.
2.5	With the pre-test, a time frame is set and a time limit is set on top of that
2.5	No one may leave the testing early if several people are being tested at the same time. More time is better than less, as less time can be extra stress.
2.6	It is necessary to include limitations in the time frame - deaf and hard of hearing people tire earlier due to greater cognitive effort
2.6	Division into separate entities. Pauses are absolutely necessary for the deaf, as the deaf and hard of hearing require 4x more concentration. Breaks are necessary, as some have a lower concentration.
2.7	Having someone watching you is extra uncomfortable and causes extra stress. Even before testing, we establish a friendly relationship. He is an observer, not an evaluator.
2.7	In the beginning, it is important to establish a friendly relationship, familiarity. Attendance is required in a controlled environment.
3.1	This is imperative. We have to watch the amounts.
3.1	Absolutely necessary.
3.2.	It's nice to relieve the participant, the feeling of inclusion increases.

3.2.1. Integrated comments to good practices and new suggested good practices (BEFORE)

BP1.1 Explanation of user testing goals to participants

- Provide written documentation as well as video support.
- Change the name to Provide accessible information on testing goals.
- Use simple and non-technical language.
- Important information for participants.

BP1.2 Collect consent from participants

- For simplification reasons, allow verbal consent.
- Make sure the format of the consent is easy to sign.
- More of an organisational problem than anything else.
- If the risk is high or if any damage occurs, (insurance) is essential. Otherwise, it's just bureaucracy.
- To divide into 3 good practices:
  - Prearrange everything necessary with the ethical committee. (NEW BP1.12 Collect consent from the ethical committee).
  - Obtain consent forms from participants (BP1.2).
  - Arrange insurance for equipment/personnel included in the consent statement (NEW BP1.13 insurance for equipment/personnel.

BP1.3 Training for participants

- Beneficial only in some cases.
- Understanding the risk of modifying user behaviour while doing the real test.
- Education, yes, so that the test taker organises himself in a new environment, but no more, because then we already influence him and do not get the right results. We have already taken him through the task, so he can overlook mistakes and we don't get realistic results.
- Distorted learning curve.
- By preparing similar tasks, we can already influence the results.
- We need to ensure that all participants have the same information. This can be achieved through a video, but this can be an issue - it is not guaranteed that such a video will be accessible to all groups.
- We take this good practice with caution. Only if applicable to specific situations.

BP1.4 Clear instructions to perform the tasks

- Add images to the instructions to increase understandability.
- Write the instructions in a way that motivates the participants to "perform well" in the test.
- Provide the instructions in different modalities (written, spoken) depending on the disability of the participant.
- It is often not the case that instructions are understandable to users, although they are clearly or simply put. Then, it is good to check with the participants if they really understand the instructions as we intended them to do.

- It is necessary to provide clear instructions for the task, but not how to perform it.
- We should extend the name of the Good practice: clear instructions for performing the tasks (task – or what we do).
- We must ensure that the instruction is no longer than the time planned to perform the task.

BP1.5 Using accessibility standards

- General agreement about the importance of this good practice.
- It is hard to ensure all 50 accessibility criteria. We strive - less is more.
- The accessibility must be checked before testing.
- Adaptations must be in line with the needs of the target group being tested.

NEW BP1.6 Diversity of disabilities

- Diversity of disabilities while recruiting participants for the test.

NEW BP1.7 Familiarization with assistive products

- Testers get familiarised with the assistive products that will be used in the test.

NEW BP1.8 Compatibility of testing system/prototype with assistive products

- Make sure the system/prototype is compatible with the assistive products that will be used in the test.
- This is especially relevant if the testers will be using recording software, as it usually has compatibility issues with assistive products.

NEW BP1.9 Zero discrimination tolerance

- Do not discriminate by pointing out the disability of the participant.

NEW BP1.10 Participants have all the freedom they need

- Before starting the test, make sure that the participants can ask for breaks, can decide not to answer questions and can even decide to stop the test and leave.

NEW BP1.11 Co-creation of tests

- Participants can co-create tests.

NEW BP1.12 Collect consent from the ethical committee

- Prearrange everything necessary with the ethical committee.

NEW BP1.13 Insurance for equipment/personnel

- Arrange insurance for equipment/personnel included in the consent statement.

3.2.2. Integrated comments to good practices and new suggested good practices (DURING)

BP2.1 User testing from home

- Needs clarification if the researchers have to be in the participant's house, or if the good practice is about remote testing. The first is preferable.
- For some users it is not good to be at home as they might not feel at ease (lack of space, renovation at home…). It is important to let the participant decide.
- The problem of ensuring procedural equality, there is no control environment.
- More complex testing is better performed live, the other can be done remotely.
- If a physical product is not being tested, testing can be conducted remotely from home (e.g. a website).
- If testing is performed from home, we still need to ensure procedural equality. When testing from home, we use appropriate tools for control and monitoring.
- Live testing provides greater motivation, accountability, fewer distractions, and better results compared to testing from home.

BP2.2 Possibility of an escort (or assistant)

- Suggestion to add non-human assistance (such as guide dogs for blind people)
- Need to make clear that the person coming with the test participant should not help the participant to do the tasks
- In some cases, it is in fact recommended not to let the participant be accompanied, to make sure they provide neutral replies.
- Include specific instructions for the person accompanying the test participant, so that they know what is expected from them.
- For some disabilities it is critical: for example, deaf-blind people need an interpreter to communicate with others.
- The escort or assistant must not affect the testing process, only what the assistant usually helps the participant (this should be agreed with the assistant).
- There should not be too many people accompanying the user tester, perhaps only the presence of a personal assistant.
- Add to the good practice the possibility of being accompanied by a personal assistant, whereby the assistant must not influence the results.

BP2.3 Use of own personal equipment

- Add a warning that in some cases it can add complexity to the test, because the assistive products of the participant might be unknown to the testers or might be incompatible with the system/prototype to be tested.
- Suggestion to add a tip to "ask users about the equipment they will use" to be prepared.
- The participant should have the option to decide to use their equipment or the equipment provided by the testers.
- Take into account that not all operating systems are equal. For instance, in smartphones, iOS has better accessibility features. This could have an impact on the test.

- This good practice is important for users that might not know how to set up assistive products that are not theirs.
- Depending on the complexity, however, testing on personal equipment can feel more familiar and may yield better results.
- Ensure equal procedures for everyone.

BP2.4 Repeating tasks

- Suggestion to slightly change the tasks between repetitions to avoid "being boring"
- There were several questions about how to analyse the data if participants were repeating the task (for instance, "discard the first execution, and calculate the average of the other executions of each task"). Guidance is needed
- This repetition of tasks is useful because it could help testers get information about the learnability of the system.
- It depends on what we are testing. If it is a process of learning, then we have a problem with comparison because the conditions are not the same.
- Doubts regarding result evaluation.
- Can be used as an emergency exit.
- Depending on the task - some of them should not be repeated.
- Define which tasks make sense to repeat.

BP2.5 Enough time

- Agreement about the importance of this good practice: not limiting the maximum time to do the tasks in the test.
- Suggestion to make it clear that the system/prototype to be tested should have flexibility in time limits (timeouts, animations…).
- Be careful as it might happen that some participants take too much time (several hours) to do the tasks
- No one may leave the test prematurely if several people are being tested at the same time.
- It is better to have more time than less, as less time can cause additional stress.
- The time is determined in the pre-test.

BP2.6 Taking breaks

- General agreement about the importance of this good practice.
- Division of the testing process into separate units.
- Pauses are absolutely necessary for the deaf, as the deaf and hard of hearing need 4x more effort for concentration.
- Breaks are necessary, as some have a lower capacity of focus.

BP2.7 Supervision of professionals

- It is essential to include experts in the disabilities of the participants, to provide support in how to prepare and perform the test.
- It is essential that these professionals have experience in the use of assistive products.

- Being observed by someone can be uncomfortable and cause additional stress.
- Building a friendly relationship before testing.
- The observer's role is to observe, not evaluate.

BP2.8 Comfortable surroundings

- It depends on the system to be tested. In some cases the system is expected to be used in spaces with noise, lack of comfort (public transport), etc.
- It is important to make sure that all the paths to get to the testing facility are physically accessible, not only the testing space.
- There were some suggestions to use background music (or "brown noise") that can help some users to be more concentrated in their tasks. Of course, based on participants' preferences.
- Be careful with spaces that are too big and can create an echo that can disorient blind participants.

3.2.3. Integrated comments to good practices and new suggested good practices (AFTER)

BP3.1 Compensation

- General agreement about compensation is necessary.
- In some cases, it is not possible to compensate the person (because of their lack of autonomy). In such case, compensation could be made to the organisation (for instance, to the residence where the person lives).
- Make sure that the compensation is adequate to the participants. For instance, students might prefer having a certificate of participation (that could be used for university credits) rather than monetary compensation. Let the participants decide.
- This best practice is necessary.
- We need to pay attention to the amounts.

BP3.2 Support after testing

- Agreement that transportation after the test is good for the participants to be relaxed during the testing.
- It's nice to relieve participants, it increases the feeling of inclusion.

A common comment was that not all good practices are applicable to all cases. Include applicability conditions (when it can be applied) to each good practice.

3.4. SUMMARY OF RESULTS

In the following chapter results of the workshop are summarized.

Profiles of participants are visible in Figure 17, suggesting that most of the participants were actually persons with disabilities. The gender of the participants is visible in Figure 18.
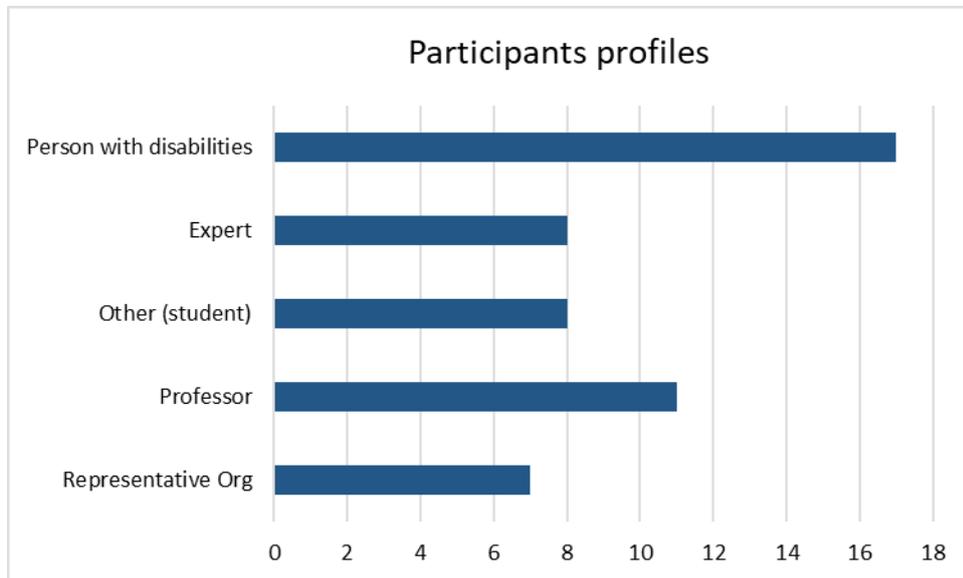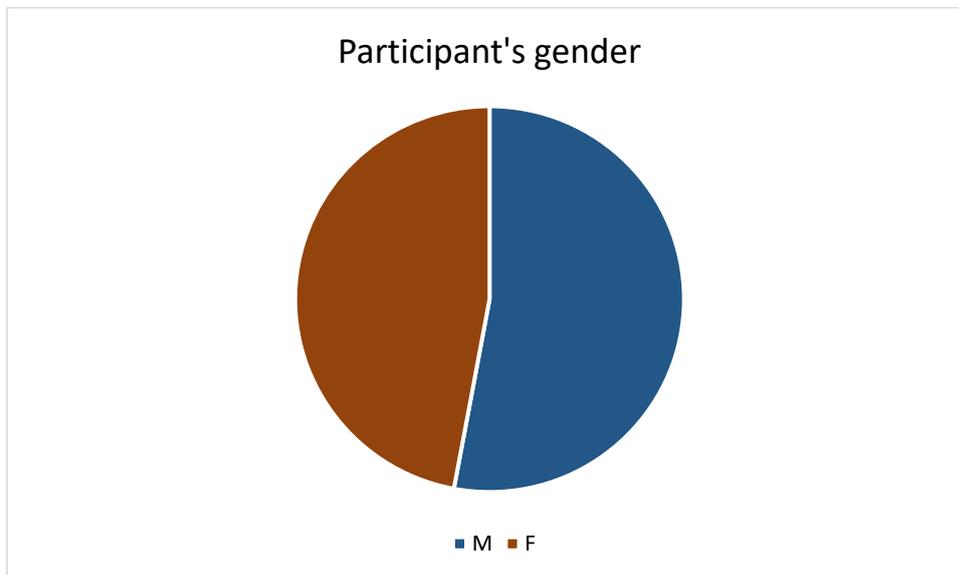

Figure 17 Profiles of participants

Figure 18 Participant's gender

Table 20 and Figure 19 presents and compares the results of good practices score in all three participating countries.

Table 20 Summary of results

|	LATVIA	SLOVENIA	SPAIN	AVERAGE
BP1.1 Explanation of user testing goals to participants	57.74	84.38	76.75	75.92
BP1.2 Collect consent from participants	62.90	63.19	60.50	61.47
BP1.3 Training for participants	67.06	67.19	74.26	71.34
BP1.4 Clear instructions	61.31	81.60	81.99	78.71
BP1.5 Using accessibility standards	57.74	80.21	87.29	80.90
BP2.1 User testing from home	67.86	70.14	65.81	67.29
BP2.2 Possibility of an escort (or assistant)	68.45	79.96	77.26	76.51
BP2.3 Use of own personal equipment	66.07	79.51	84.42	80.19
BP2.4 Repeating tasks	57.14	60.39	60.27	59.74
BP2.5 Enough time	62.50	81.85	83.75	79.57
BP2.6 Taking breaks	62.50	78.63	78.81	75.98
BP2.7 Supervision of professionals	64.88	51.42	68.15	62.76
BP2.8 Comfortable surroundings	61.31	92.93	86.31	83.69
BP3.1 Compensation	58.33	77.71	78.44	74.85
BP3.2 Support after testing	64.29	76.10	83.90	78.29
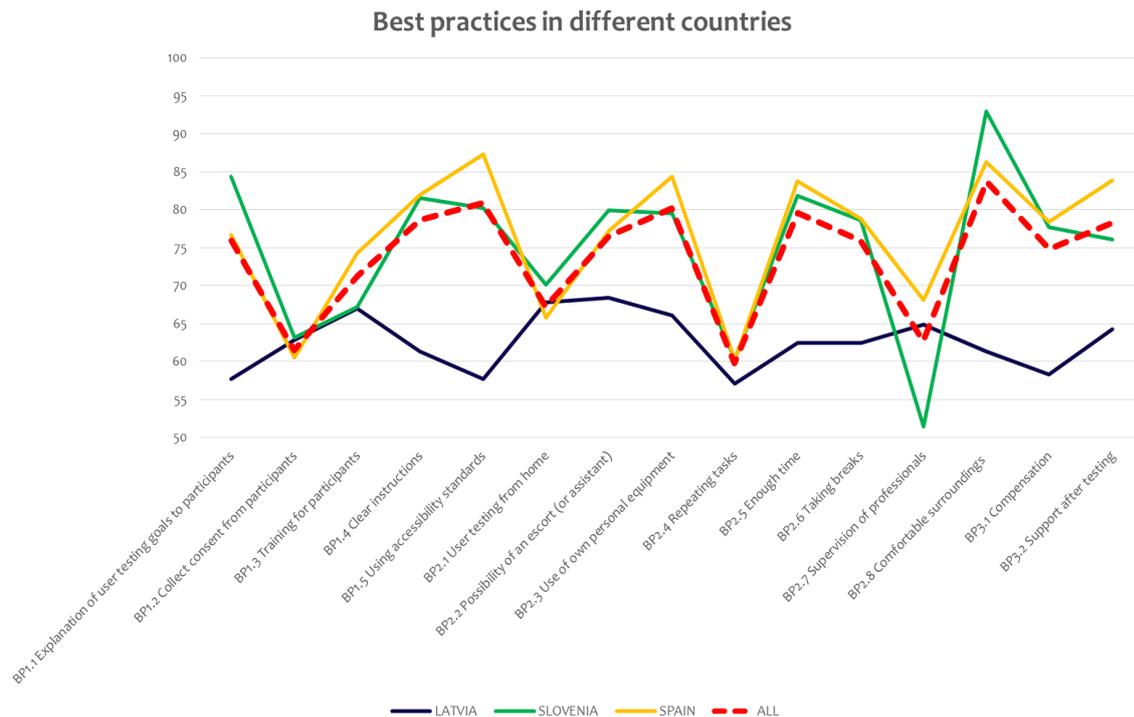
Figure 19 Scores for best practices by different countries

Table 21 Good practices from most to least important based on participants' opinion

	ALL
BP2.8 Comfortable surroundings	83.69
BP1.5 Using accessibility standards	80.90
BP2.3 Use of own personal equipment	80.19
BP2.5 Enough time	79.57
BP1.4 Clear instructions	78.71
BP3.2 Support after testing	78.29
BP2.2 Possibility of an escort (or assistant)	76.51
BP2.6 Taking breaks	75.98
BP1.1 Explanation of user testing goals to participants	75.92
BP3.1 Compensation	74.85
BP1.3 Training for participants	71.34
BP2.1 User testing from home	67.29
BP2.7 Supervision of professionals	62.76
BP1.2 Collect consent from participants	61.47
BP2.4 Repeating tasks	59.74

All validated practices' scores are presented in Table 21, organizing them from most important to least important according to participants at the workshops.

In Figure 20, 21, 22 and 23 average scores for different participant's characteristics is provided.

Figure 20 presents the average scores given by different participants from 0 to 4, where the experts gave the highest score (3.84), followed by professors (3.33), representatives from organizations (3.32) and finally persons with disabilities (3.13).
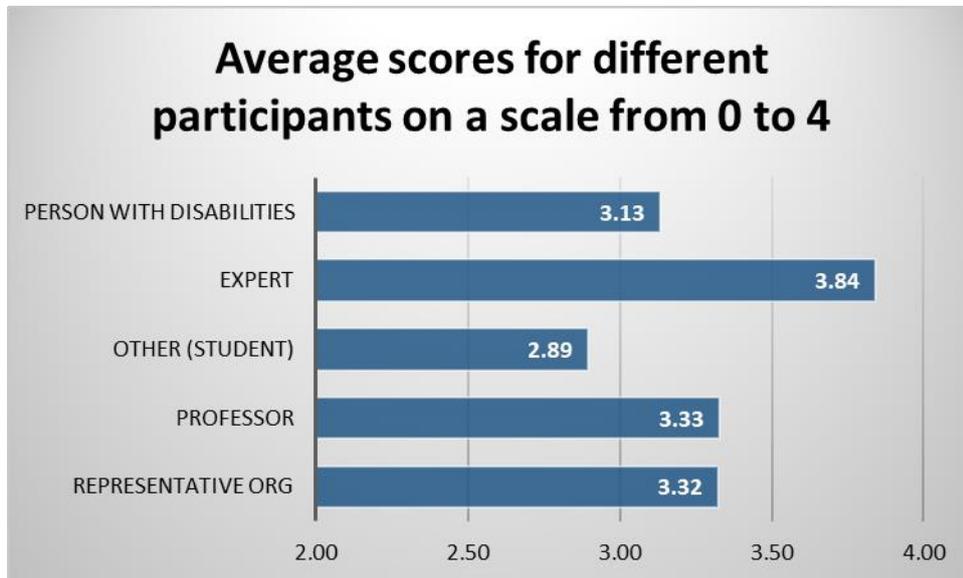

Figure 20 Average scores for different participants

Figure 21 presents the average score based on gender on a scale from 0 to 4. Female participants provided a higher score (3.36) compared to male participants (3.30).
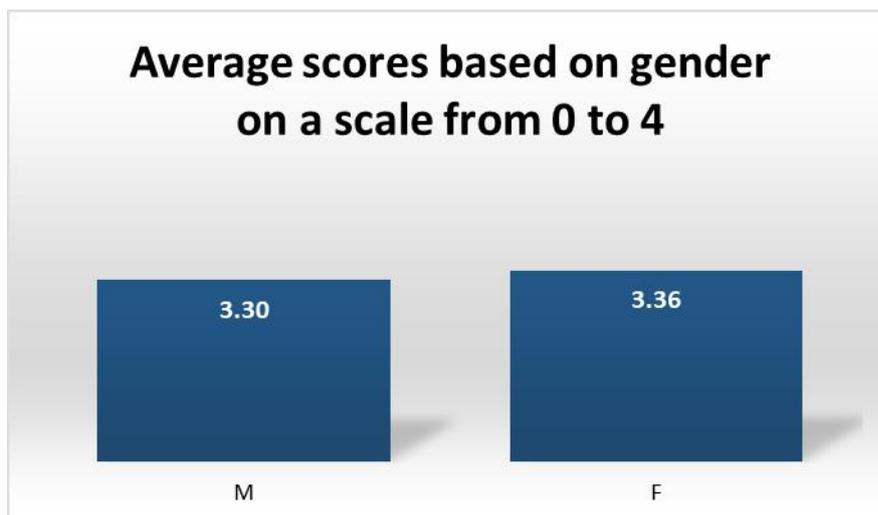

Figure 21 Average scores based on gender of participants

Figure 22 presents the average scores for different age groups on a scale from 0 to 4, where the age group from 45-60 provided the highest score (3.47), followed by the age group 18 - 25 (3.37). Participants in the age group from 36 to 45 provided one of the lower scores

(3.29), similarly to the age group 61 or older (3.27). The lowest score was given by representatives in the age group 26 to 35 (3.23).
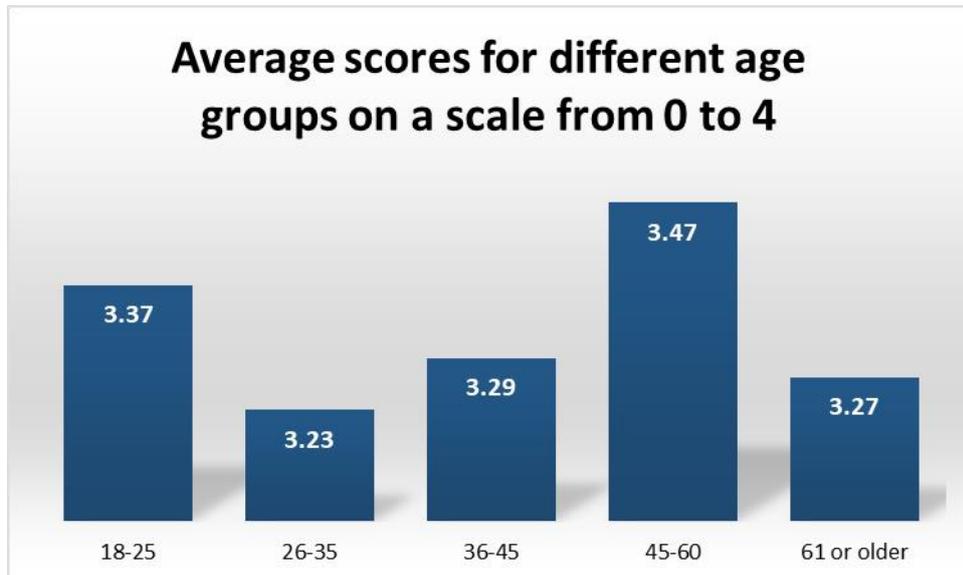

Figure 22 Average scores for different age groups

Figure 23 presents average scores based on different countries on a scale from 0 to 4. Average score in Slovenia was the highest (3.49), followed by the score in Spain (3.33) and Latvia (3.00).
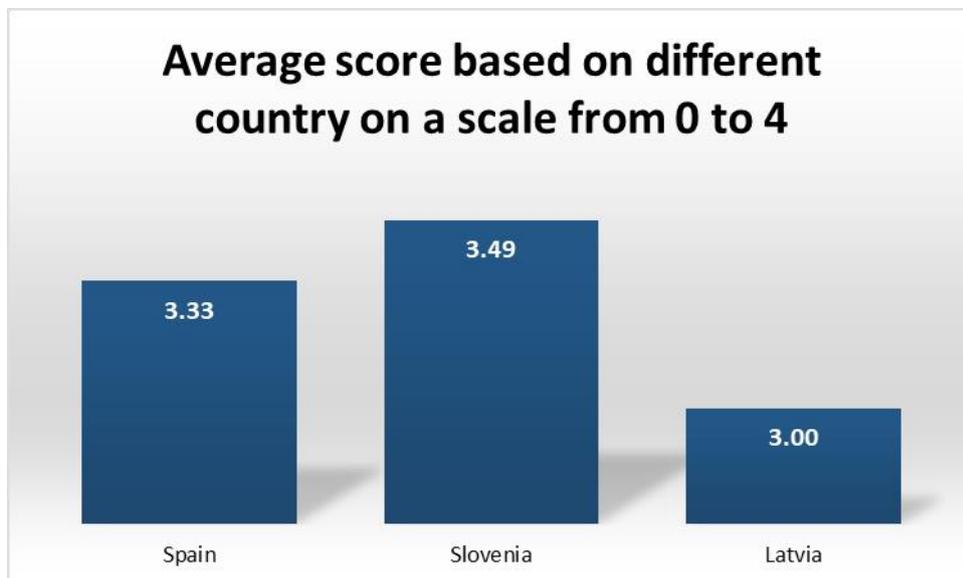

Figure 23 Average score based on different country on a scale from 0 to 4

As the validation process revealed new good practices and reorganized the concept of existing good practices, a modified list of best practices is presented in Table 22.

Table 22 Modified list of best practices (listed from most favourable by participants of the workshop, followed by new suggestions)

BEFORE	DURING	AFTER
BP1.5 Using accessibility standards		
BP1.4 Clear instructions **to perform the tasks**		
BP1.1 Explanation of user testing goals to participants		
BP1.3 Training for participants	BP2.8 Comfortable surroundings	
BP1.2 Collect consent from participants	BP2.3 Use of own personal equipment	
BP1.6 Diversity of disabilities	BP2.5 Enough time	
BP1.7 Familiarization with assistive products	BP2.2 Possibility of a **caregiver** (or assistant)	BP3.2 Support after testing
BP1.8 Compatibility of testing product with assistive products	BP2.6 Taking breaks	BP3.1 Compensation
	BP2.1 User testing from home	
BP1.9 Zero discrimination tolerance	BP2.7 Supervision of professionals	
BP1.10 Participants have all the freedom they need	BP2.4 Repeating tasks	
BP1.11 Co-creation of tests		
BP1.12 Collect consent from the ethical committee		
BP1.13 Insurance for equipment/personnel		

4. DISCUSSION

The workshop included 51 participants from 3 countries, which actively participated with comments and suggestions. The workshop included 17 people with disabilities, 7 representatives of organisations for people with disabilities, 11 professors, 8 students and 8 experts in usability. Several participants were experts and professors or people with disabilities at the same time.

After presenting the best practices, the attendants provided very useful feedback that will allow us to refine and improve the best practices and extend them by including the suggestion of 8 new best practices. In addition, a general comment stated is that some of the best practices are not always applicable so a mechanism to identify whether to use them or not should also be provided.

In relation to existing best practices, 9 of them were identified as very important during the usability tests with persons with disabilities, as attendants agreed with them obtaining a score over 75. The other six best practices were also identified as important, with a score over 59.