

This table is an addition to the paper “Reliability of the Metric to Evaluate the Ergonomic Principles of Assistive Systems, Based on ISO 92419” by Braun, Nebe and Heimgärtner.  
Here we gather our suggested revisions of the questionnaire.

Category	Questions	Notes	Revised Questions
Acceptance – Perceived Usefulness	1. I think the system is useful to me. 2. I think the system can help me with many things. 3. The system was able to provide the support I needed.	- Question No.1 and No.2 are merged.	1. I think the system is useful to me and can help me with many things. 2. The system was able to provide the support I needed.
Acceptance – Perceived Ease of Use	1. I think I will know quickly how to use the system. 2. I find the system easy to use. 3. I think I can use the system without any help. 4. I think I can use the system when there is someone around to help me. 5. I think I can use the system when I have a good manual.	- Question No.3, No.4 and No.5 are merged. - Question No.1 is deleted.	1. I find the system easy to use. 2. I think I can use the system without any help (from a person, a technical person, or a manual).
Acceptance – Attitude Toward Technology	1. I think it’s a good idea to use the system. 2. The system would make life more interesting. 3. It’s good to make use of the system.	- Question No.1 and No.3 are merged.	1. The system would make life more interesting. 2. It’s good to make use of the system.
Acceptance – Perceived Enjoyment	1. I enjoy the system talking to me. 2. I enjoy doing things with the system. 3. I find the system enjoyable. 4. I find the system fascinating. 5. I find the system boring. (invert)	- Question No.1 the word “talking” is changed to “interacting”. - Question No.2, No.3, No.4 and No.5 are merged.	1. I enjoy the system interacting with me. 2. I find the system enjoyable.
Acceptance – Anxiety	1. If I should use the system, I would be afraid to make mistakes with it. 2. If I should use the system, I would be afraid to break something. 3. I find the system scary. 4. I find the system intimidating.	- Question No.1 and No.2 are merged. - Question No.3 and No.4 are merged.	1. If I should use the system, I would be afraid to make mistakes with it. (inverted) 2. I find the system intimidating. (inverted)
Acceptance – Self-Efficacy	1. I felt very confident using the system. 2. If I should solve a problem with the assistance of the system, I could do that. 3. To achieve a specific goal with the assistance of the system will not be a problem for me. 4. I could do easy adjustments on the system by myself. 5. If the system is doing something wrong, I could find a way to change its behavior.	- Question No.2 and No.3 are deleted. - Question No.5 is moved under category “Controllability”.	1. I felt confident using the system. 2. I could do easy adjustments on the system by myself.
Acceptance – Social Influence	1. I think the people around me would like if I would use the system. 2. I think it would give a good impression if I should use the system. 3. The product is also usable for the people who interact with me.	- Question No.2 is deleted.	1. I think the people around me would like it if I would use the system. 2. The product is also usable for the people who interact with me.
Acceptance – Perceived Sociability	1. I consider the system a pleasant conversational partner. 2. I find the system pleasant to interact with. 3. I feel the system understands me. 4. I think the system is nice.	- Question No.2 is rephrased. - Question No.4 is deleted.	1. I consider the system a pleasant conversational partner. 2. I find the system pleasant because it interacts with me. 3. I feel the system understands me.
Acceptance – Social Presence	1. When interacting with the system I felt like I’m talking to a real person. 2. It sometimes felt as if the system was really looking at me. 3. I can imagine the system to be a living creature. 4. I often think the system is not a real person. 5. Sometimes the system seems to have real feelings.	- Question No.2 is deleted. - Question No.3 and No.4 are merged.	1. When interacting with the system I felt like I’m talking to a real person. 2. I can imagine the system to be a living creature. 3. Sometimes the system seems to have real feelings.

Acceptance – Trust	<ol style="list-style-type: none"> <li>1. I would trust the system if it gave me advice.</li> <li>2. I would follow the advice the system gives me.</li> <li>3. I think this system works reliably to meet my needs.</li> <li>4. This brand is trustworthy.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.3 is deleted.</li> <li>- Question No.4 the word “brand” is replaced by “system”.</li> </ul>	<ol style="list-style-type: none"> <li>1. I would trust the system if it gave me advice.</li> <li>2. I would follow the advice the system gives me.</li> <li>3. This system is trustworthy.</li> </ol>
Acceptance – Impact on Self Esteem	<ol style="list-style-type: none"> <li>1. The system does not draw unwanted attention to me.</li> <li>2. The system does not make me look dependent or weak.</li> </ol>		<ol style="list-style-type: none"> <li>1. The system does not draw unwanted attention to me.</li> <li>2. The system does not make me look dependent or weak.</li> </ol>
Acceptance – Facilitating Conditions	<ol style="list-style-type: none"> <li>1. I have the resources necessary to use the technology.</li> <li>2. I have the knowledge necessary to use the technology.</li> <li>3. The technology is not compatible with other technologies I use.</li> <li>4. A specific person (or group) is available for assistance with difficulties related to the technology I use.</li> </ol>		<ol style="list-style-type: none"> <li>1. I have the resources necessary to use the technology.</li> <li>2. I have the knowledge necessary to use the technology.</li> <li>3. The technology is not compatible with other technologies I use. (inverted)</li> <li>4. A specific person (or group) is available for assistance with difficulties related to the technology I use.</li> </ol>
Acceptance – Intention to Use	<ol style="list-style-type: none"> <li>1. I’m certain to use the system in the future.</li> <li>2. I think that I would like to use this system frequently.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1 and No.2 are rephrased.</li> </ul>	<ol style="list-style-type: none"> <li>1. I’m certain to use the system.</li> <li>2. Whenever I think I would need it, I use the system.</li> </ol>
Safety, Security, and Privacy – Privacy by Design (PbD)	<ol style="list-style-type: none"> <li>1. My privacy preferences were default in the system.</li> <li>2. I could adapt the privacy settings to fit my preferences.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1 is deleted.</li> </ul>	<ol style="list-style-type: none"> <li>1. I could adapt the privacy settings to fit my preferences.</li> </ol>
Safety, Security, and Privacy – Transparency	<ol style="list-style-type: none"> <li>1. I can clearly understand what data of mine is processed.</li> <li>2. I can clearly understand what data of mine is exchanged.</li> <li>3. I can clearly understand what data of mine is stored.</li> <li>4. I can clearly understand the privacy consequences.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1, No.2 and No.3 are merged.</li> <li>- Question No.4 is deleted.</li> </ul>	<ol style="list-style-type: none"> <li>1. I can clearly understand what data of mine is processed.</li> </ol>
Safety, Security, and Privacy – Legal Compliance	<ol style="list-style-type: none"> <li>1. I think my rights and freedom are protected by the system.</li> </ol>		<ol style="list-style-type: none"> <li>1. I think my rights and freedom are protected by the system.</li> </ol>
Safety, Security, and Privacy – Feeling of Safety	<ol style="list-style-type: none"> <li>1. I feel safe using the system.</li> <li>2. The system does not impose a biological hazard to me. (e.g. contact with viruses, bacterias etc.).</li> <li>3. The system does not impose a chemical hazard to me.</li> <li>4. The system does not impose a physical hazard to me (e.g., getting physically hurt).</li> <li>5. The system does not impose a psychosocial hazard to me (e.g., mental stress, social isolation etc.).</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1 is deleted.</li> </ul>	<ol style="list-style-type: none"> <li>1. The system does not impose a biological hazard on me. (e.g. contact with viruses, bacteria etc.).</li> <li>2. The system does not impose a chemical hazard on me.</li> <li>3. The system does not impose a physical hazard to me (e.g., getting physically hurt).</li> <li>4. The system does not impose a psychosocial hazard on me (e.g., mental stress, social isolation etc.).</li> </ol>
Safety, Security, and Privacy – Protecting Others	<ol style="list-style-type: none"> <li>1. The system preserves the privacy of people around me.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1 is deleted.</li> </ul>	-
Safety, Security, and Privacy – Reliability	<ol style="list-style-type: none"> <li>1. The system works reliably.</li> <li>2. A system malfunction is likely.</li> <li>3. The system might make sporadic errors.</li> <li>4. I am confident about the system’s capabilities.</li> <li>5. I don’t fear that the information the system provides me can false.</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.4 is deleted.</li> </ul>	<ol style="list-style-type: none"> <li>1. The system works reliably.</li> <li>2. A system malfunction is likely. (inverted)</li> <li>3. The system might make sporadic errors. (inverted)</li> <li>4. I don’t fear that the information the system provides me can be false.</li> </ol>
Safety, Security, and Privacy – Intimacy preservation	<ol style="list-style-type: none"> <li>1. The system could invade my privacy.</li> <li>2. I am not worried about my confidential information being exchanged by the system.</li> <li>3. I do not feel under constant surveillance while using the system.</li> </ol>		<ol style="list-style-type: none"> <li>1. The system could invade my privacy. (inverted)</li> <li>2. I am not worried about my confidential information being exchanged by the system.</li> </ol>

	<p>4. I feel free to be myself using the system. 5. I am afraid the system could record me without notifying me (by audio or video).</p>		<p>3. I do not feel under constant surveillance while using the system. 4. I feel free to be myself using the system. 5. I am afraid the system could record me without notifying me (by audio or video). (inverted)</p>
Safety, Security, and Privacy – Confide	<p>1. I can decide on which information I want to share. 2. I can decide on whom I want to share my information with. 3. I am asked for consent if I allow my data to be shared to other companies or institutes.</p>	- Question No.1 and No.2 are merged.	<p>1. I can decide on which information I want to share with whom. 2. I am asked for consent if I allow my data to be shared to other companies or institutes.</p>
Optimization of resultant internal load – Physical Demand	<p>1. Completing the task with the system was physically demanding.</p>		<p>1. Completing the task with the system was Physically demanding. (inverted)</p>
Optimization of resultant internal load – Mental Demand	<p>1. Completing the task with the system was mentally demanding.</p>		<p>1. Completing the task with the system was mentally demanding. (inverted)</p>
Optimization of resultant internal load – Temporal Demand	<p>1. Completing the task with the system was hurried or its pace was rushed.</p>		<p>1. Completing the task with the system was hurried or its pace was rushed. (inverted)</p>
Optimization of resultant internal load – Performance	<p>1. I was successful in accomplishing what I was asked to do.</p>		<p>1. I was successful in accomplishing what I was asked to do.</p>
Optimization of resultant internal load – Effort	<p>1. I did not have to work hard to accomplish my level of performance.</p>		<p>1. I did not have to work hard to accomplish my level of performance.</p>
Optimization of resultant internal load – Frustration	<p>1. I was insecure, discouraged, irritated, stressed, or annoyed.</p>		<p>1. I was insecure, discouraged, irritated, stressed, or annoyed. (inverted)</p>
Controllability – Autonomy & Control Balance	<p>1. I did not feel the system was controlling me. 2. I felt in control of what was happening during the whole task. 3. I have the impression I could suddenly lose control. (invert) 4. I have the impression I had full control of the system.</p>	<p>- Question No.2, No.3 and No.4 are merged. - The new question No.3 is relocated from category “Acceptance – Self-Efficacy” to here.</p>	<p>1. I did not feel the system was controlling me. 2. I have the impression I had full control of the system. 3. If the system is doing something wrong, I could find a way to change its behavior.</p>
Adaptability – Adaptability to Context	<p>1. The system can be adapted according to the environment I am in.</p>		<p>1. The system can be adapted according to the environment I am in.</p>
Adaptability – Adaptability to User Models	<p>1. The system is adaptable to my preferences. 2. The system is adaptable to my health condition.</p>		<p>1. The system is adaptable to my preferences. 2. The system is adaptable to my health conditions.</p>
Adaptability – Temporal Adaptability	<p>1. I think the system will only do what I need at that particular moment. 2. I think the system will help me when I consider it to be necessary. 3. The system did not need much time to adapt itself.</p>		<p>1. I think the system will only do what I need at that particular moment. 2. I think the system will help me when I consider it to be necessary. 3. The system did not need much time to adapt itself.</p>
Perceptibility and Identifiability – Communicate Meaning	<p>1. I understand what the system’s outputs mean. 2. I know what to do when the system communicates something. 3. The system’s actions made sense to me. 4. The system used words that made sense to me.</p>	- Question No.1, No.2 and No.4 are merged.	<p>1. I understand what the system’s outputs mean. 2. The system’s actions made sense to me.</p>

Perceptibility and Identifiability – Perceptibility	<ol style="list-style-type: none"> <li>1. I could clearly recognize the system's outputs independent of my perspective.</li> <li>2. I could clearly recognize the system's outputs independent of light conditions.</li> <li>3. I could clearly recognize the system's outputs independent of the external noise.</li> <li>4. I could clearly recognize the system's outputs independent of the external physical disturbance (e.g. vibration from a bumpy road).</li> <li>5. I could clearly read the visual information the system displayed.</li> </ol>		<ol style="list-style-type: none"> <li>1. I could clearly recognize the system's outputs independent of my perspective.</li> <li>2. I could clearly recognize the system's outputs independent of light conditions.</li> <li>3. I could clearly recognize the system's outputs independent of the external noise.</li> <li>4. I could clearly recognize the system's outputs independent of the external physical disturbance (e.g. vibration from a bumpy road).</li> <li>5. I could clearly read the visual information the system displayed.</li> </ol>
Perceptibility and Identifiability – Distraction Avoidance	<ol style="list-style-type: none"> <li>1. The system does not unnecessarily distract me from my main task.</li> <li>2. The system helps me to stay engaged in the task.</li> <li>3. The situation I was in distracted me so that I could not focus on the system's outputs. (inverted)</li> </ol>	<ul style="list-style-type: none"> <li>- Question No.1 is rephrased.</li> <li>- Question No.3 is deleted.</li> </ul>	<ol style="list-style-type: none"> <li>1. The system does not distract me from my task.</li> <li>2. The system helps me to stay engaged in the task.</li> </ol>
Perceptibility and Identifiability – Feedback Intensity	<ol style="list-style-type: none"> <li>1. The system displays so many outputs that I started to ignore them. (inverted)</li> <li>2. The duration of the feedbacks seem too long.</li> <li>3. The feedbacks are too loud to me.</li> <li>4. The feedbacks were annoying to me.</li> </ol>		<ol style="list-style-type: none"> <li>1. The system displays so many outputs that I started to ignore them. (inverted)</li> <li>2. The duration of the feedback seems too long. (inverted)</li> <li>3. The feedback is too loud to me. (inverted)</li> <li>4. The feedback was annoying to me. (inverted)</li> </ol>
Perceptibility and Identifiability – Visual Attention	<ol style="list-style-type: none"> <li>1. It was easy for me to identify the system's visual feedbacks.</li> <li>2. The system displayed outputs in the places where I expected them to be.</li> <li>3. It was easy for me to identify the different components of the controls and displays.</li> </ol>		<ol style="list-style-type: none"> <li>1. It was easy for me to identify the system's visual feedback.</li> <li>2. The system displayed outputs in the places where I expected them to be.</li> <li>3. It was easy for me to identify the different components of the controls and displays.</li> </ol>