

# Scaffolding guidelines

This table presents all the scaffolding guidelines used during the workshops. It is composed of four columns: Category, guideline ID, scaffolding guidelines, and Academic source. Guidelines are grouped by category.

Not all categories have guidelines. Categories that are empty are marked with “none” in the “Guideline ID column”.

| Category   | Scaffolding guideline ID | Scaffolding guidelines  | Academic source: voice interaction literature or web accessibility |
|--|--------------------------|---|--|
| <b>User control and freedom:</b> users should be provided with mechanisms to control the conversation  | S1                       | Users should be able to start and stop the conversation   | Voice interaction literature                                       |
| <b>User control and freedom:</b> users should be provided with mechanisms to control the conversation  | S2                       | Users should be able to navigate back and forth between steps of a conversation                                 | Voice interaction literature                                       |
| <b>User control and freedom:</b> users should be provided with mechanisms to control the conversation  | S3                       | Provide undo and redo   | Voice interaction literature                                       |
| <b>Error prevention and recovery:</b> the agent should be equipped with strategies to prevent mistakes and recover from them   | S4                       | Submissions are reversible and the agent supports mechanisms to review information                              | Accessibility literature   |
| <b>Error prevention and recovery:</b> the agent should be equipped with strategies to prevent mistakes and recover from them   | S5                       | The agent checks and confirms user inputs before committing an action   | Voice interaction literature                                       |
| <b>Efficient communication and personalization:</b> system prompts should be brief and informative, users should be able to personalize the verbosity of the prompt and other characteristics    | S6                       | Speed, verbosity, and language complexity should be adjustable according to users' preferences                  | Accessibility literature, voice interaction literature             |
| <b>Help and documentation:</b> the system should be equipped with scaffolding intents and documentation to guide users through the interaction   | S7                       | The system should have an help function to help users discover what is possible to do                           | Voice interaction literature                                       |
| <b>Help and documentation:</b> the system should be equipped with scaffolding intents and documentation to guide users through the interaction   | S8                       | There should be a repeat function   | Voice interaction literature                                       |
| <b>Help and documentation:</b> the system should be equipped with scaffolding intents and documentation to guide users through the interaction   | S9                       | There should be mechanisms to recover the navigational context if the user is lost                              | Voice interaction literature                                       |
| <b>Trustworthiness and privacy:</b> The system should convey trustworthiness by ensuring privacy of user data and protect the users’ privacy and security throughout conversational interaction. | S10                      | Security measures should be built throughout a conversational interaction (authorization, authentication, etc.) | Voice interaction literature                                       |
| <b>Trustworthiness and privacy:</b> The system should convey trustworthiness by ensuring privacy of user data and protect the users’ privacy and security throughout conversational interaction. | S11                      | Provide opportunities for user data management. Allow the user to view and manage their personal data           | Voice interaction literature                                       |
| <b>Trustworthiness and privacy:</b> The system should convey trustworthiness by ensuring privacy of user data and protect the users’ privacy and security throughout conversational interaction. | S12                      | The system should not falsely claim to be human.  | Voice interaction literature                                       |

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| <b>Mapping between system and language conventions:</b> the dialogue should respect common conventions in terms of form and linguistic choices | none |  |  |
| <b>Recognition rather than recall:</b> deliver information only when relevant not to overload the user   | none |  |  |
| <b>System status and conversational context:</b> Users should be informed when changes within the system or conversational context happen      | none |  |  |