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The Problem

- Blind and low-vision (BLV) people increasingly rely on Generative AI (GenAI) to access information and decision-making.
- Trust models assume users can inspect outputs, read data practices, and operate controls.
- These assumptions fail when the interaction is inaccessible.
- Little work examines how different factors shape trust among BLV users.

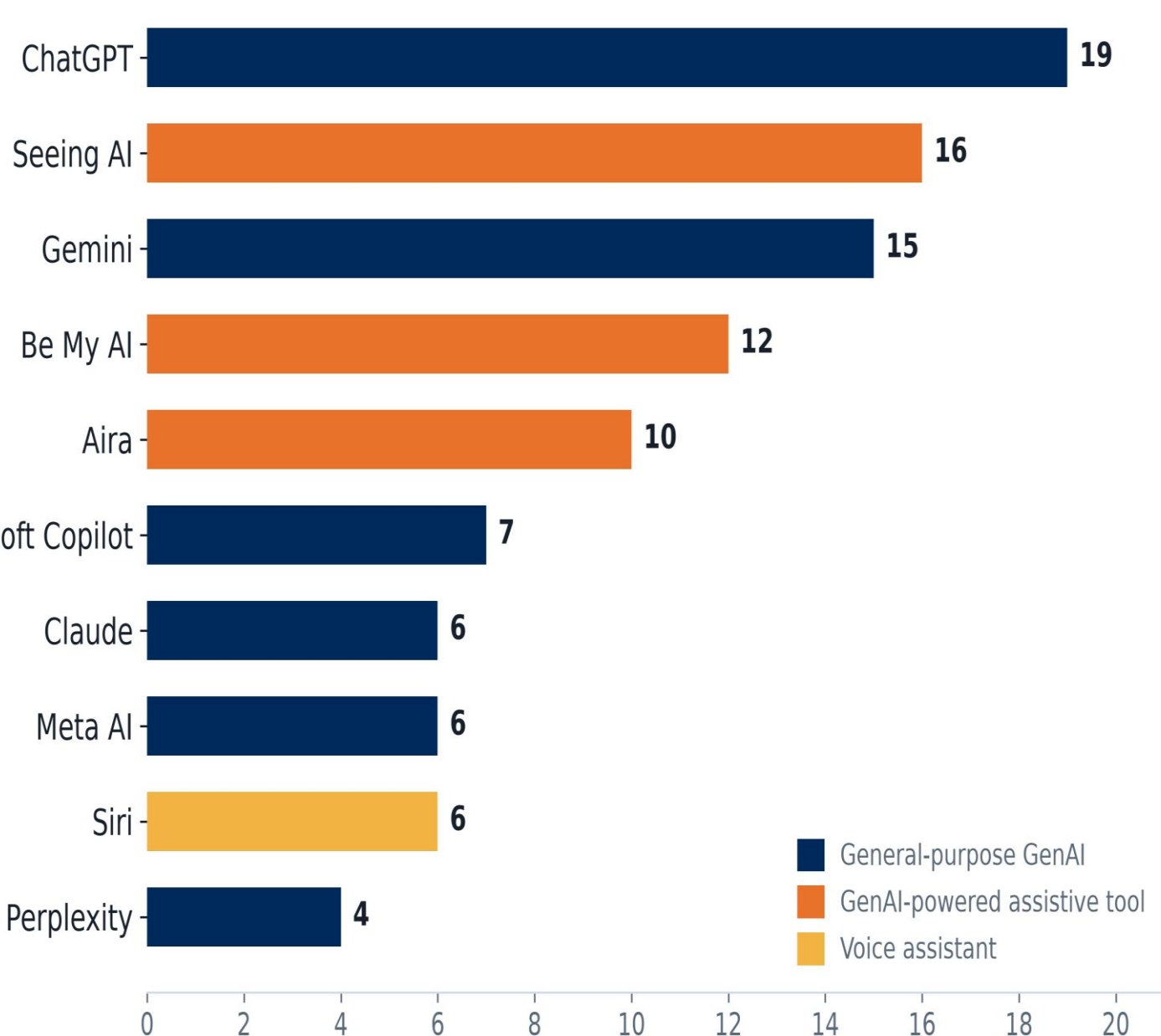


Formative Study

- Semi-structured interviews with 19 BLV participants
- Participants used ChatGPT, Google Gemini, Meta AI, Be My AI, Seeing AI, Aira, etc.
- Data analyzed using reflexive thematic analysis.
- Interview focused on lived experience of users' trust, privacy, accessibility of GenAI tools and design recommendations.

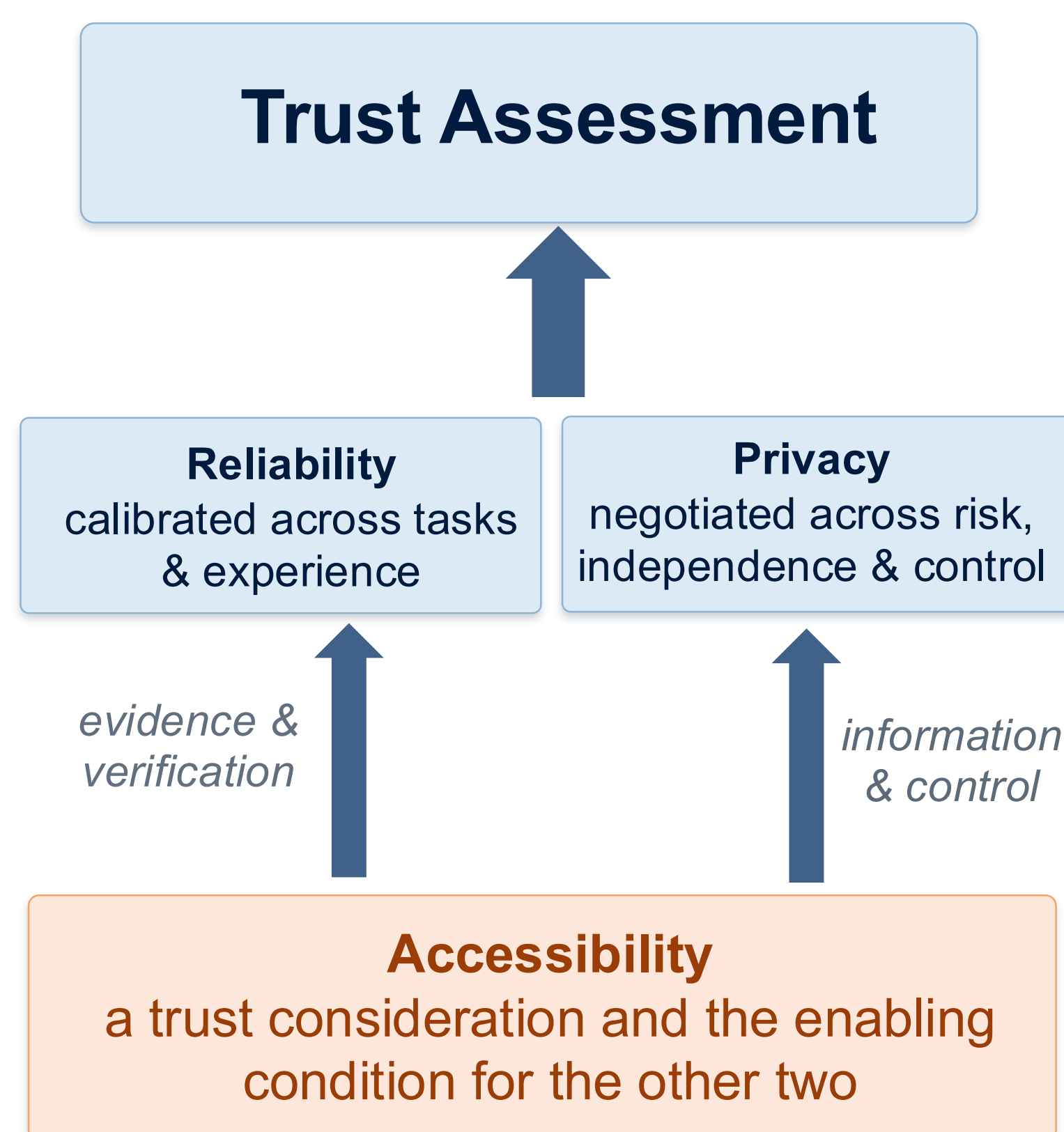
Tools Used

AI & Assistive Tools Mentioned in Interviews



The TRAP Framework

Trust through Reliability, Accessibility, and Privacy:
established trust factors reorganized around how BLV users assess trust towards GenAI.



Design Recommendations

Accessibility built in, not bolted on
early BLV user involvement in design & testing

System-state, verification & repair
expose what was processed, non-visual error cues

Task-sensitive assurance
more support for higher-consequence tasks

Accessible by-default interaction
state, outputs & controls

Accessible privacy preflight
flag sensitive content before it is shared

PrivacyGuard

Before an image is shared, it is scanned on-device for two classes of risk.

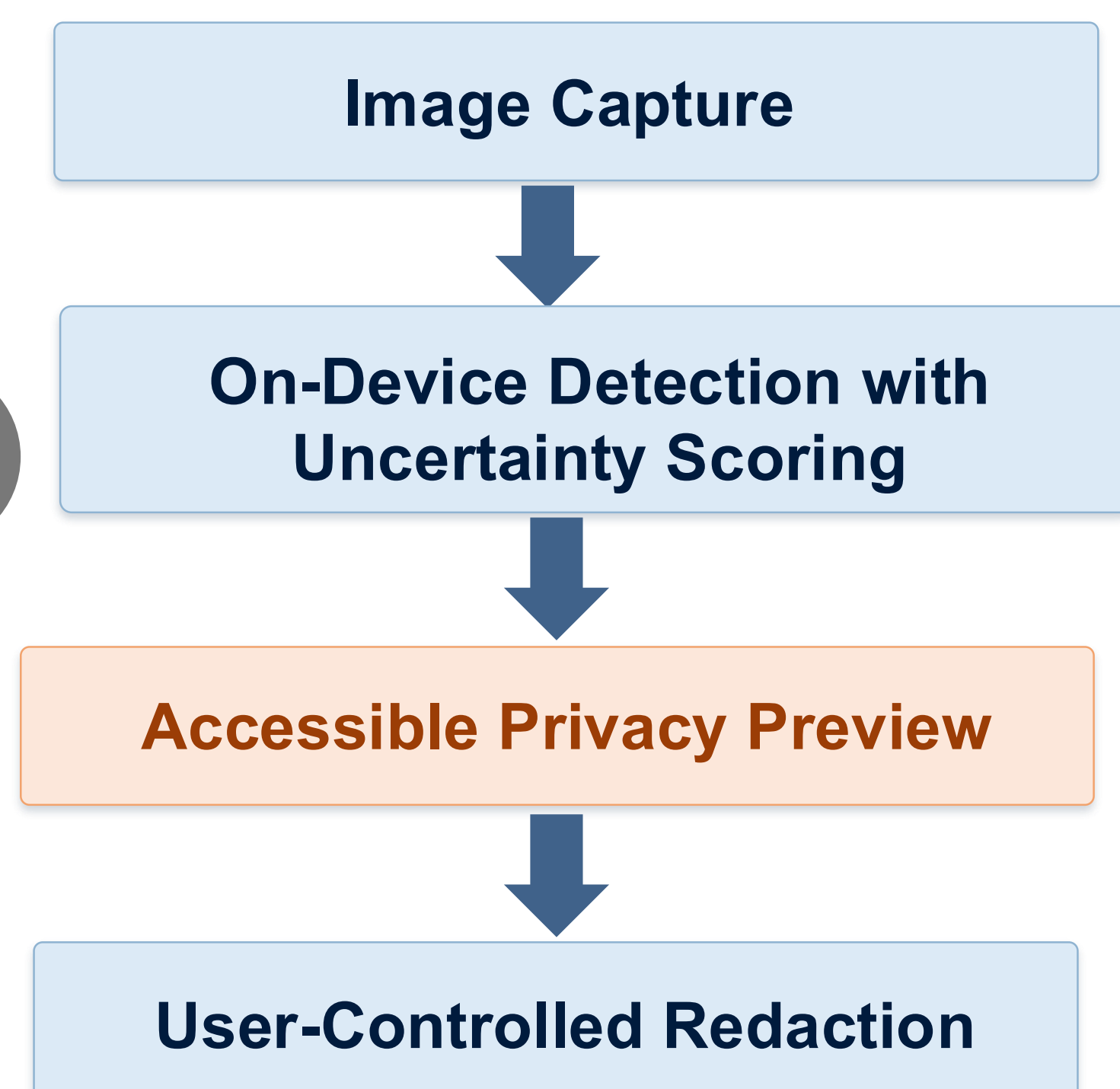
Traditional PII

- Faces
- Names
- Contact info
- Financial details
- ID documents

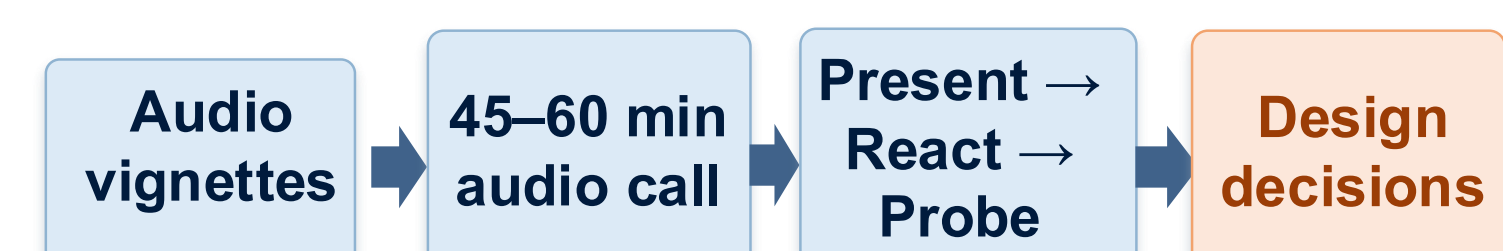
Contextual Risk

- Prescription labels
- Bystanders
- Documents & letters
- Sensitive screens
- User-defined content

Architecture



Concept Evaluation: Speed Dating



References

- Adnin et al. "I look at it as the king of knowledge": How Blind People Use and Understand Generative AI Tools. ASSETS 2024.
- Davidoff et al. Rapidly Exploring Application Decision through Speed Dating. CMU HCI Institute 2007.