

Title: Guidelines Shared between Vulnerable Communities

| ID | Guideline: Description |
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|  Elderly & Color-Blind Communities | |
| EC1 | Colour contrast between popups and background: Ensure that colours used between foregrounds and backgrounds have high contrast to cater for potential vision challenges. |
| EC2 | Design without colour to maintain luminance contrast: If colours are used to code or contrast two elements, revise the design without colour (i.e., without chromaticity) to compare them in grayscale (luminance or brightness). |
| EC3 | Maintain WCAG contrast ratios: Ideally, follow the AAA standard of 4.5:1 for text, as well as other ratios for different scenarios, to cater to low contrast vision and colour-blind users. Make use of compliance checkers (e.g., Google Lighthouse) to validate that designs meet required contrast ratios. |
|  Elderly & Rural Communities | |
| ER1 | Give time to act and read: Avoid deadlines or timed events so people with different reading speeds are not rushed or cut off. |
| ER2 | Discoverability – clear purpose and state: Clear focal points, good visual hierarchy, and transparent navigation so users always know what something does and its current state. |
| ER3 | Keep minimalist, simple interface: Key features are easily accessible on the main page; use larger fonts and familiar icons. |
| ER4 | Use linear navigation (forwards and backwards): Prefer forward-and-backward navigation rather than hierarchical tree structures. |
| ER5 | Make onboarding easy: Onboarding processes should be straightforward and avoid frustrating new users. |
| ER6 | Make app purpose clear: Ensure the app communicates its purpose clearly to users who may arrive without prior context. |
| ER7 | Break down information within and across screens: Avoid large paragraphs; use shorter sentences and break content into screens or pages for readability. |
| ER8 | Provide text alternatives: Provide alternatives (e.g., alt-text, large text, or simplified language) for non-text content. |
|  Rural & Low-Digital-Literacy Communities | |
| RD1 | Minimise download times: Use smaller image/video sizes, compression, and substitute images with text where possible to improve performance on low bandwidth. |
| RD2 | Consider alternative information infrastructure: Support cases where multiple users share one device and ensure offline distribution of the app if app stores are not accessible. |
| RD3 | Reduce phone resource usage: Minimise CPU, memory, and battery consumption to support low-end devices. |
| RD4 | Reduce data use: Optimise apps to avoid large data consumption for low-capped plans and areas with unreliable connections. |
| RD5 | Enable offline access: Ensure key features remain accessible offline when network coverage is poor or intermittent. |
|  Elderly, Rural & Low-Digital-Literacy Communities | |
| ERD1 | Simplify navigation structure: Flatten menu hierarchies and prefer linear navigation to reduce cognitive load. |
| ERD2 | Reduce alternative paths: Ensure navigation paths are simple and consistent; minimise branching or multiple routes that may confuse users. |
| ERD3 | Avoid Hamburger Menu: Avoid hidden navigation; if unavoidable, pair the icon with descriptive text to guide users. |

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| ID | Guideline: Description (continued) |
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| ERD4 | Provide informative & clear feedback: Offer clear visual/audio feedback on ongoing processes, status, and errors without overwhelming users. Use progress bars, notifications, and guidance. |
| ERD5 | Understandable error messages: Provide clear, actionable error messages so users know what went wrong and how to recover. |