

Testing results

Testing 1

1. User Needs

- Clear alert differentiation: Wants to know what type of alert it is (SHAHED drones, ballistic missiles, strategic aviation, etc.), not just a general "air raid" notification.
- Alert severity context: Needs information about how urgent the threat is (time to shelter if ballistic missile, for example).
- Fast situational awareness: visual priority to red alert block.
- Location-based sheltering:
 - Needs nearest shelter shown clearly with directions based on geolocation.
 - Shelters must be up-to-date to avoid reaching closed or invalid places.
- Communication flexibility:
 - Wants the option to message (not just call) linked persons, since in shelters mobile networks fail, but Wi-Fi works.
- Linked persons prioritization:
 - Suggests that connected persons should appear at the top during alert situations.
- Status sharing:
 - Needs a simple "I'm OK" or "Need Help" push feature for sharing own safety status.
- Push Notification Customization:
 - Wants to change alarm sounds, adjust volume, add personalized schedules (e.g., "Do Not Disturb" at night).
- Granular threat notifications:
 - Prefers optional alerts for specific threats (e.g., ground battles, artillery, chemical threats) depending on user-set preferences.
- Location setting:
 - Understands need to allow geolocation to get better nearby shelter and threat info; wants control over location radius.
- Improve visual emphasis and clarity on clickable elements like shelter navigation.

2. Comments / Observations

- Positive:
 - Likes that the shelter navigation is integrated with Google Maps.
 - Appreciates integration with Telegram-like detailed descriptions of alerts.
 - Likes the shelter map being inside the main app (doesn't want to install two separate apps).
 - Finds Linked persons' "status OK" feature very reassuring.
- Negative:
 - Shelter map needs to be more intuitive (was not obvious where to click).
 - Changing alert sound was hard to find in settings.

3. User Evaluations / Ratings

- Shelter map: 10/10 importance.
- Status sharing feature: 10/10 importance for concerned users.

- Personalization of notifications (volume, sound choice, scheduling): 10/10 importance.
- Overall task success rate: 7–8/10 (minor confusion at times).
- Task difficulty: 1/10 (very easy overall).

Testing 2

1. User Needs

- Shelter map update: pressing on shelter names should show the route immediately.
- Clear threat type identification:
 - Wants it to be immediately obvious whether it's a SHAHED, ballistic, nuclear, strategic aviation.
 - Prefers threat type to be large and noticeable, not hidden in text - Needs essential info big and upfront, not buried in small footnotes.
- Geolocation-based guidance:
 - Wants the app to automatically suggest shelters based on her current location without too many clicks.
- Linked persons monitoring:
 - Ideally see where the connected person are (e.g., if in shelter).
 - Would like to adjust notification settings per linked person (e.g., track only major threats for mom).
- Status reporting:
 - A simpler way to notify linked persons of her safety or if she needs help.
- Location radius control:
 - Understands and needs control over location radius for alerts (e.g., get alerts for a 10km area around current position).

2. Comments / Observations

- Positive:
 - Appreciates shelter search feature; found it intuitive.
 - Liked linked person feature for monitoring loved ones' status.
 - Understands status reporting ("Need Help" button) easily and intuitively.
 - Sound settings customization (volume, vibration, etc.) were understandable once found.
- Negative:
 - Shelter map access could be faster.
 - Linked persons screen interaction could be improved — expected easier access to detailed linked person info.
 - Would prefer messaging linked persons, not just passive status updates.

3. User Evaluations / Ratings

- Importance of having a shelter map in app: 6/10 (more critical if in a risky city like Kharkiv; less critical in safer areas).
- Importance of linked person monitoring feature: 10/10 (especially for elderly or family in dangerous areas).
- Importance of sending personal status : 7/10.
- Importance of customizable alert sounds: 7/10.
- Task difficulty: 2/10 (easy).
- Task success self-rating: 7/10.

Testing 3

1. User Needs

- Not understand what "3 пакети" (3 rockets) means (number of rockets? type?).
- Suggested that the app show not only what is flying but also successful interceptions.
- Simple and fast shelter access:
 - Separate Clickable button linking directly to the shelter map.
 - Prefer green color coding (more intuitive for safe spaces; red seems alarming).
- Wishes to see location (city, district) of a connected person during a threat.
- Prefers one-click emergency SOS, with fast data transmission (location, message, possibly photo).
- Needs ability to reduce or manage air raid alert sounds (lower volume, shorter duration, etc.).
- Needs alerts based on current GPS location (not static city selection).
- Wants adjustable location radius to cover border areas (important in rural zones near regional borders).

2. Comments / Observations

- Positive:
 - **Shelter map** function is very intuitive and useful for unfamiliar cities.
 - **Linked persons feature** is highly appreciated; rated as very valuable.
 - **Location-based notifications** (dynamic switching of regions) seen as important.
- Negative:
 - Status update button ("дати знати, що зі мною") is unclear — suggested rebranding to obvious "SOS" functionality.
 - Color coding confusion: Red markers on the map were confusing (should indicate shelter safety, not danger?).
 - Alert information block (like "3 ракети") could be clearer — ambiguous without explanation.
 - Sound settings logic unclear: not obvious why certain options (like muting after 60 seconds) exist.

3. User Evaluations / Ratings

- Importance of real-time threat and interception updates: expressed high interest (no explicit rating given, but strongly implied).
- Importance of shelter map: 7/10 (very valuable when in dangerous or unfamiliar cities).
- Importance of linked persons monitoring: 9/10.
- Importance of emergency SOS: 7/10 (would prefer native integration, but useful).
- Importance of dynamic location tracking: 9/10.
- Ease of task completion: rated 1/10 (very easy).
- Task success self-rating: 9/10 (very successful).

Testing 4

1. User Needs

- Needs distance to shelter shown explicitly (preferably in meters).
- Wants more specific threat type details (e.g., type of threat, region affected, severity).
- Prefers to see live updates during an ongoing alert.

- Needs to quickly check if an important person (like a friend or relative) is safe during an alarm.
- Supports status reporting but thinks it is not applicable, when the user is already in danger
- Needs ability to adjust sound settings depending on time of day (e.g., quieter alerts at night).
- Understands roughly how radius affects which alerts he gets.

2. Comments / Observations

- Positive:
 - Shelter map functionality intuitive and useful.
 - Linked person status monitoring appreciated, especially when in different regions.
 - Dynamic location alerts are seen as logical and important.
- Negative:
 - Threat information on the main alert screen was too general — wanted richer context (e.g., attack direction, scale).
 - Help request feature ("Need Help") perceived as useful, but limited — remote contacts might not realistically be able to assist.

3. User Evaluations / Ratings

- Importance of shelter search and map functionality: 8–10/10.
- Importance of linked persons monitoring: around 6/10 (less important if user trusts the person to manage their safety).
- Importance of dynamic threat information: very important (no direct numerical rating, but emphasized multiple times).
- Status sharing connected person: 6–7/10.
- "Need Help" alerting remote people: 2–3/10.
- Ease of task completion: 1/10 (very easy).
- Task success self-rating: 9/10 (very successful).

Testing 5

1. User Needs

- Expects obvious shelter maps accessible via a clear button.
- Wants distance-listed shelters, with meters.
- Wants to be informed if key people moved to a shelter.
- Visualization of status is preferred.
- Needs fine control of alarm volume, especially in different situations

2. Comments / Observations

- Positive:
 - Large red alert visual is very effective at night; user said it is enough without extra information.
 - Linked persons' shelter status was found valuable and reassuring.
 - Appreciated shelter distance indication logic (300m, 500m, 1000m).
 - Volume control highly valued (important for real-life usability).
- Negative:

- Shelter map access could be clearer.
 - Help function's link to authorities could cause user to hesitate to use it due to fear of bureaucracy.
 - Shelter information personally not perceived as very valuable (only 2–3/10 in importance).
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3. User Evaluations / Ratings

- Importance of real-time critical alert visualization: implied very high (not numerically rated but emphasized multiple times).
- Importance of shelter map: 2–3/10 for user personally (but acknowledges it's good that the app has it).
- Importance of linked persons monitoring: 8–9/10.
- Importance of emergency status ("Need Help"):
 - Only close contacts notification: 5/10.
 - Notification + automatic authority call: 4/10 (even lower due to concerns).
- Importance of customizable alert sound: 7–8/10.
- Task completion ease: 1/10 (very easy).
- Task success self-rating: 9/10 (very successful).

Testing 6

1. User Needs

- Needs the ability to quickly scan critical alert information without stress during night-time alarms.
 - Needs a map with nearby shelters clearly marked, including routes and names of streets.
 - Wants the option to link personal Telegram channels to automatically pull live alerts into the app to avoid switching between apps.
 - Wants more intuitive navigation between general settings and sound/alarm-specific settings.
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2. Comments / Observations

- Positive:
 - Likes the overall map interface for shelter search and found it logical for orientation in a new city.
 - Appreciates that Google Maps integration is available for routing to shelters.
 - Thinks linked persons feature is very valuable, especially if living in high-risk regions.
 - Finds the status update ("Need Help") useful
 - Very positive about alarm sound personalization, especially if it helps distinguish urgency by sound alone.
 - Likes the idea of vibration-only modes during lectures or at night.
 - Negative:
 - Volume adjustment for alerts important but difficult to find.
 - Considers detailed customizations (like sound for different threat types) both practical and emotionally comforting.
 - Unclear what "3 rockets" message exactly means — suggested clarification.
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3. User Evaluations / Ratings

- Importance of shelter map feature: 8.5/10 (if in an unfamiliar city).
- Importance of linked persons monitoring: 4/10 (currently) — 9/10 if user had vulnerable contacts in high-risk areas.
- Importance of "Need Help" status function: 7/10 (for Western Ukraine), 10/10 (for Eastern Ukraine).

- Importance of customizable alarm sounds and volume: 9–10/10.
- Ease of using the app features: generally very easy when clearly labeled.
- Clarity of sound settings: somewhat unclear without prior experience.
- Likelihood to use shelter map without alarm: low unless traveling.

Testing 7

1. Connected person – 3/10 (add automatic geolocation for shelter, automatically detect vital signs)

2. Alarm at night (it is important to be able to look at several areas) 8/10

Give notifications to friends about my status. 9/10 when have relatives in other regions (5/10 when have no relatives in other region)

4. Shelter map 10/10. See the alarm map when there is no alarm

5. In the general settings, specify that alarm notifications change in different areas. Yes, 9/10

6. 7/10 for location.

8. It's cool to have a transition to other Telegram channels in these blocks.

Functionality	Participant 1 (testing3)	Participant 2 (testing4.1)	Participant 3 (testing5.1)	Participant 4 (testing1)	Participant 5 (testing2.1)	Participant 6 (testing6)	Participant 7 (testing7.1)
Shelter map	10	6	7	8–10	2–3	8.5	10
Linked persons monitoring	10	10	9	6–7	8–9	4–9	3
Send status	10	7	7	2–3	5–6	7–10	5–9 (dep on prese relatives same req)
Customizable alarm sound for different regions	10	7	High	9–10	7–8 (expressed that it is the basic functionality)	9–10	9
Dynamic GPS-based alert switching	9	6	9	9	9–10	9–10	7

Metrics	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7
First Attempt Success Rate (%).	4/7 ≈ 57%	5/7 ≈ 71%	6/7 ≈ 86%	5/7 ≈ 71%	6/7 ≈ 86%	6/7 ≈ 86%	6/7 ≈ 86%
Were the Tasks Difficult to Complete? Rate	1	2	1	4	2	2	2
Error Rate per Task	2/7 (was confused by settings & shelter map) ≈ 29%	2/7 (was confused by settings differentiation) ≈ 29%	1/7 (settings) ≈ 14%	2/7 (was confused on how to silence alert & settings) ≈ 29%	1/7 (settings) ≈ 14%	1/7 (settings) ≈ 14%	1/7 (settings) ≈ 14%

Functionality	Navigation Efficiency
Shelter map	2 clicks
Linked persons monitoring	1 click
Send status	3 clicks

Customizable alarm sound for different regions	3 clicks
Dynamic GPS-based alert switching	3 clicks