

Heuristic Evaluation of Link'd

1. Problem/Prototype Description

An app that centralizes social connection through an instant messaging hub.

2. Violations Found

- 1. H1: Visibility of System Status / Severity 1 / Found by: D**
 - Does not indicate which section of the app you are on in the bottom toolbar, Users may not know which of the bottom buttons will take them somewhere else.
 - Fix: Highlight or darken the current section.
- 2. H1: Visibility of System Status / Severity 1/ Found by: D**
 - In Settings → Chats, the dropdown icons do not change when open/closed. May cause users to be confused when they can open up the 3 sections.
 - Fix: Arrow should point right when closed and down when open.
- 3. H1: Visibility of Status / Severity 2 / Found by B**
 - Unclear what the work and social buttons do on the bottom (intuitively I know what they should do but there's no indication of any categorization of the chats).
 - Fix: some visual indicator as to what group chats are in
- 4. H1: Visibility of System Status / Severity 3 / Found by: B**
 - No notification of where the chat export would go before actually exporting (had no idea if it would download onto my phone somewhere, and then saw it ended up in the archive after the fact)
 - Fix: Clarify what is happening with exporting, and where it is exporting to.
- 5. H1: Visibility of system status / Severity 2 / Found by C**
 - The chat feed lacks indication of how many messages users receive from each channel
 - Fix: Add number to indicate received messages per each channel next to the chat
- 6. H2: Match b/w System & World / Severity 1/ Found by: D**
 - The work/social icons/check boxes on the bottom right may be difficult for users to see or understand the function
 - Fix: Make it more obvious when options are selected or not by highlighting or move the option somewhere else.
- 7. H2: Match b/w System & World / Severity 2/ Found by B, D**
 - Can not tell if teal/white message bubbles indicate unread status or topic:work/social.
 - Fix: Give Work/social themes distinct colors so it is obvious to users when they are being used.
- 8. H2: Match b/w System & World / Severity 3/ Found by A, B, C, D**
 - Messages are out of order on the homescreen, 11:15pm → 12:23pm → 1:45pm.
 - Fix: If the message is from a prior day, use date/yesterday instead of timestamp.
- 9. H2: Match b/w System & World / Severity 1/ Found by: B**
 - How does email function on this (one of the examples was outlook)? It is confusing as to how you would essentially convert an email chain into a text string
 - Fix: add clarity/help on how this works, for example changing the interface to one similar to sending an email (subject line, body, etc.)
- 10. H2: Match between system and the real world / Severity 1 / Found by C**
 - In the contact search page, "Search in conversations with xxx" might cause confusion as users are not familiar with the word conversations within messaging apps.

- Fix: Change “Search in conversations with xxx” to “Search chat history with xxx”
- 11. H2: Match between system and the real world / Severity 1 / Found by C**
 - In the settings page, “Manage accounts” might make users confused as it could mean managing a Link'd account or users' messaging app account.
 - Fix: Change “Manage accounts” to “Manage messaging accounts”
- 12. H2: Match between system and the real world / Severity 1 / Found by C**
 - In the settings page under the notification tab, users might not be familiar with the word “message reminder”.
 - Fix: Change “message reminder” to “message notification”
- 13. H3: User Control & Freedom / Severity 3/ Found by A, B, C, D**
 - No back buttons, which means that users have to go to the home/settings /address-book page to exit screens.
 - Fix: Add a back button
- 14. H3: User Control & Freedom / Severity 3/ Found by D**
 - When searching, there is no way to go back or cancel the search. Only out for user is to go to main pages or to settings.
- 15. H3: User control and Freedom: / Severity 3 / Found by A, D**
 - On slide 15 where the user searches “bo” in their address book, the bottom tab that allows you to return to home that has been there on every other screen is no longer there. This means that the user will have to navigate out via a longer, less intuitive path.
 - Fix: Include the bottom tab there with the same functionality as on other pages
- 16. H3: User Control / Severity 2 / Found by B**
 - No means to export an archived chat other than email
 - Fix: add extra means to get archived chat (local download, any connected messaging system that supports sending files, google drive or oneDrive, etc)
- 17. H3: User Control & Freedom / Severity 3 / Found by A**
 - While user does have the option to “quit” any section by going back to the home screen, they do not have access to go back to the initial login screen by logging out
 - Fix: Make a functionality to log out which takes a user back to the signin page
- 18. H4: Consistency & Standards / Severity 2/ Found by D**
 - Despite having favorite contacts, there is no way to view favorite status from a contact page.
 - Fix: favorite icon for contacts when viewing their page.
- 19. H4: Consistency and Standards / Severity 2 / Found by A**
 - Color choice for messages in chat alerts on home page seems to have significance initially (maybe for sent vs received messages), but upon clicking into the chat view the color of both sides of the message change (one is a slightly different shade of blue, another is grey now)
 - Fix: Either choose to differentiate sent and received messages by color or don't, and if you do stick with the same colors for each regardless of view. Additionally, if you do stick to drastically different colors to help users who can't see color well to still be able to differentiate between sent and received messages
- 20. H4: Consistency and Standards / Severity 1 / Found by A**
 - Some descriptive sentences start with a capital letter in descriptions (such as with “Search in conversations with boss” on frame 16 but others are all lowercase (such as the descriptions of settings options on frame 2), which is inconsistent.

- Fix: For descriptions of functionality, be uniform in the choice to start with a capital or lowercase letter in all.
- 21. H4: Consistency & Standards / Severity 3 / Found by B**
 - The message that appears on the screen on slide 7 is not the most recent message like one would expect (boss's display message is their most recent, but it seems like the user already sent a reply)
 - Fix: always show the most the most recent message
- 22. H5: Error prevention / Severity 3 / Found by D, A**
 - No double confirmation or undo for importing messages. May cause users to have unwanted merged conversations
 - Fix: Add a confirmation pop-up or an undo button that asks the user if they are sure or if they want to undo.
- 23. H5: Error prevention / Severity 2 / Found by B**
 - Users currently have no last names anywhere (or last initials), which can make it difficult to differentiate people who have similar/same names
 - Fix: show last names or initials
- 24. H5: Error prevention / Severity 3/ Found by B**
 - Slide 5, the color of the selected button is darker (not an action color, almost the opposite), which is confusing (we were actually split as to which one we thought was selected)
 - Fix: switch it to a action color
- 25. H5: Error prevention / Severity 3 / Found by C**
 - In the chat import section, there should be indication of which type of file is acceptable for importing into Link'd
 - Fix: Add note near the import area that only .csv or .txt is acceptable
- 26. H6: Recognition rather than recall / Severity 1 / Found by A, C**
 - In the chat box, there should be an indicator of what time the messages are sent.
 - Fix: Show chat sent time next to each text message
- 27. H6: Recognition rather than recall / Severity 2/ Found by D**
 - When sharing archived messages, does not show you which file you are sharing once you move to the share screen
 - Fix: textbox with the current file on the top.
- 28. H7: Flexibility & Efficiency of Use / Severity 3 / Found by D**
 - No way to specify what portion of the conversation to export. Users might want to export a specific day of conversation.
 - Fix: Add a date/time range selector to the export screen
- 29. H7: Flexibility and efficiency of use / Severity 2 / Found by C**
 - Users might want to delete a specific messaging account from the contact; however, the current prototype do not provide flexibility for users to do so
 - Fix: Add option for users to delete messaging accounts after being added
- 30. H7: Flexibility & Efficiency of Use / Severity 2 / Found by B**
 - Unclear how adding accounts works and how I would select and enter my account info (am I limited to only the major sites? If I forget my password are you handling the re-auth or is the site I entered?)
 - Fix: Drop down/ fill in for selection, via pop-up or open a new page to official re-auth for forgotten password
- 31. H8: Aesthetic & Minimalist Design / Severity 1 / Found by B**

- Redundancy in search feature (Slide 15), no need to have the contacts show they start with B when you are already searching for things that start with Bo
- Fix: remove the redundant segment

32. H8: Aesthetic & Minimalist Design / Severity 2 / Found by B

- Keyboard remains after search (Slide 15), takes up most of screen
- Fix: as soon as user hits search/enter, remove keyboard from screen

33. H8: Aesthetic & Minimalist Design / Severity 1 / Found by B

- redundant “via” on the main chat screen, it is already implied to be from the service whose logo is next to it.
- Fix: remove the word via, just show the logo of the messaging service

34. H8: Aesthetic and minimalist design / Severity 2 / Found by C

- In the chat feed, the logos of other apps are not aligned as it depends on the name of the sender. This might lead to less aesthetic appeal.
- Fix: Move the logo to be before the name of the sender or area above or under the time

35. H8: Aesthetic and minimalist design / Severity 1 / Found by C

- Other apps’ logos have vibrant colors that do not go with the Link’d color scheme, lessening the aesthetic appeal of the app.
- Fix: Use word or use logos with just their outline to cut out the logo color

36. H8: Aesthetic & Minimalist Design / Severity 3 / Found by D

- Search bar in settings stays on page as you hit different menus, it becomes confusing as to what the search is searching in (if I search in the managing accounts tab, is it searching all of settings or within the current screen?)
- Fix: change default text to clarify or only have search bar on main settings screen

37. H10: Help and documentation / Severity 3 / Found by B

- There was extreme confusion around what importing does. Having archived chats in this area is confusing. Also, “import to” is an oxymoron that causes confusion.
- Fix: Clarify what this does.

38. H10: Help and documentation/ Severity 3 / Found by D, C, B, A

- Export/archived/Import areas may not be intuitive. New users may not know what Export/Import are for.
- Fix: add a ? symbol that explains them when selected or description underneath

39. H13: Value alignment/ Severity 3 / Found by D

- Value of decreasing overwhelmingness. But for people who receive many messages on different platforms, the new messages would take up multiple screens of space.
- add a filter for messages on the home screen.

3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of Status	0	2	2	1	0	5
H2: Match Sys & World	0	5	1	1	0	7
H3: User Control	0	0	1	4	0	5

H4: Consistency & Standards	0	1	2	1	0	4
H5: Error Prevention	0	0	1	3	0	4
H6: Recognition not Recall	0	1	1	0	0	2
H7: Efficiency of Use	0	0	2	1	0	3
H8: Minimalist Design	0	3	2	1	0	6
H9: Help Users with Errors	0	0	0	0	0	0
H10: Help & Documentation	0	0	0	2	0	2
H11: Accessible	0	0	0	0	0	0
H12: Fairness & Inclusion	0	0	0	0	0	0
H13: Value Alignment	0	0	0	1	0	1
Total Violations by Severity	0	12	12	15	0	39

Note: check your answer for the green box by making sure the sum of the last column is equal to the sum of the last row (not including the green box)

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D
Sev. 0	0%	0%	0%	0%
Sev. 1	16.7%	25%	41.7%	25%
Sev. 2	16.7%	50%	25%	25%
Sev. 3	40%	53%	26.7%	60%
Sev. 4	0%	0%	0%	0%
Total (sevs. 3 & 4)	40%	53%	26.7%	60%
Total (all severity levels)	25.6%	41%	30.8%	38.5%

***Note that the bottom rows are *not* calculated by adding the numbers above it.**

5. Summary Recommendations

We break down our recommendations to the Link'd team into three parts: application flow, functionalities and aesthetic design.

1. Application flow

There are a few sections within the application that do not have the ability to go back to the previous section such as going back from the “Add a new account” section to “Manage accounts” section. Therefore, adding this back function would make the application flow much smoother for the users.

In addition, users’ contacts might have different handles among their messaging accounts. It is important for the Link'd team to figure out how to combine them together for ease of use.

2. Functionalities

With this medium-fidelity prototype, it is difficult for users to understand the purpose of work and the social button on the bottom right of the main page. Therefore, adding ? near the section could help users understand the function and be able to use it going forward.

Moreover, within the chats setting section, it is difficult to understand how to navigate “Import”, “Archive” and “Export” features. Adding description below the header or ? next to the section would help improve user experience using these features.

3. Aesthetic design

There is a room for improvement for aesthetic design of the app such as the alignment of the messaging app logo or cutting out redundancy words eg. “via”. Moreover, the team can fix some wordings in the app so that there is a lower barrier of learning for the users.

Severity Ratings

- 0 - not a usability problem
- 1 - cosmetic problem
- 2 - minor usability problem
- 3 - major usability problem; important to fix
- 4 - usability catastrophe; imperative to fix

Heuristics

H1: Visibility of System Status

- Keep users informed about what is going on

H2: Match Between System & Real World

- Speak the users’ language
- Follow real world conventions

H3: User Control & Freedom

- “Exits” for mistaken choices, undo, redo
- Don’t force down fixed paths

H4: Consistency & Standards

- Words, actions, and UI elements should be consistent across the entire platform
- Follow platform and industry conventions

H5: Error Prevention

- Minimize error-prone conditions
- Remove memory burdens, support undoing, and warn your users when necessary

H6: Recognition Rather Than Recall

- Make objects, actions, options, & directions visible or easily retrievable

H7: Flexibility & Efficiency of Use

- Accelerators for experts (e.g., gestures, keyboard shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design

- No irrelevant information. Focus on the essentials.

H9: Help Users Recognize, Diagnose, & Recover from Errors

- Error messages in plain language
- Precisely indicate the problem
- Constructively suggest a solution

H10: Help & Documentation

- Easy to search
- Focused on the user's task
- List concrete steps to carry out
- Not too large

H11: Accessible

- Users can interact with the system using alternative input methods.
- Content is legible with distinguishable contrast and text size.
- Key information is upfront and not nested for screen readers.
- Purely visual or auditory content has text-based alternatives for users with low vision and low hearing.

H12: Fairness and Inclusion

- Users shouldn't feel that the design is not made for them.
- The design should meet all users' needs equally and prevent the reproduction of pre-existing inequities.
- It should not create additional burdens for members of disadvantaged populations.

H13: Value Alignment

- The design should encode values that users can understand and relate to.
- Conflicting collateral values should not emerge when the user interacts with the product.
- Encoded values should match users' values in a broad set of use-contexts.