

Heuristic Evaluation of Planit

1. Problem/Prototype

Planit is an app that supports the travel planning process by using gamification to incentivize a traveler's friends to curate trip ideas.

2. Violations Found

1. H1 - Visibility of System Status / Severity: 2 / Found by: B, D

After you invite your friends to the game, you don't receive confirmation that the invites have been sent. You also don't receive information about who has accepted or declined the request. This is an H1 violation because the user doesn't know whether or not the request might have failed to send and is left wondering.

Fix: Add in a confirmation message that notes the invite has been successfully sent. Additionally, add an error message if the invite failed to send.

2. H9 - Help Users Recognize, Diagnose, and Recover From Errors / Severity: 2 / Found by: D

There's no clear way to undo an invite to a friend. This is an H9 violation because if a user accidentally invited a friend to a game, there is no way to recover from that error.

Fix: Ask the user if they are sure they want to invite the given list of friends. Also provide an undo option for any given invite.

3. H3 - User control and freedom / Severity: 3 / Found by: A

When sending a customized request for friends to play a game, users are unable to cancel the request. While users might naturally tap out of the screen to cancel, it can still be confusing (and the prototype doesn't show any cancellation option).

Fix: Add a "Cancel" button next to "Send" and/or an "X" and/or an option to tap outside to cancel.

4. H3 - User Control and Freedom / Severity 2 / Found by: D

When inviting friends/family to participate in a game, the request is currently just sent via the app. This is an H3 violation because it limits the ways the user can complete such an action. It is possible that certain users would rather ask friends/family to participate via text, email, etc. and there currently is no way to do that within the app.

Fix: Provide different options for mediums that the user can use to invite friends/family to participate in a game. The user can then just select their preferred medium for any given invitee.

5. H8 - Aesthetic and Minimalist Design / Severity 3 / Found by: A, D

If the user invites multiple people to play a game, it's possible that the screen that shows the other players will get very crowded. This can be confusing and distracting for the

user while they are playing the game. This is an H8 violation because the crowded screen will reduce the aesthetics.

Fix: Make the other players smaller and more in the background.

6. H7 - Flexibility and efficiency of use / Severity: 2 / Found by: A, C

If somebody has a bunch of friends, it can be difficult to find specific ones when the list is long. My assumption is that users will generally have a top 3-5 number of people they ask for feedback from most of the time, after which they would add other people if it made sense. You may also be able to expedite the process for users who always create games and frequently ask the same friends by pre-selecting commonly invited friends.

Fix: Add a "Select Top 5" option, strategically place a user's top few friends at the top of the friends list, or pre-select commonly invited friends.

7. H1 - Visibility of Status / Severity: 2 / Found by: D,B

When users are playing the game, it's unclear how close they are to the finish line. This is an H1 violation because the person's status is in question. If users win by typing in the *most* ideas, then having a finish line might not make sense since finish lines imply speed.

Fix: Add some sort of progress bar that indicates how close the user is getting to the finish line, or just remove the finish line completely.

8. H1 - Visibility of Status / Severity: 3 / Found by: D

When users go to the game page, it's unclear which games are currently in progress and which games are completed. This is an H1 violation because users are confused about the state of the various games and would have to click into each one to gain that knowledge.

Fix: Put a red dot to the top right of the games that are currently active.

9. H5 - Error Prevention / Severity: 3 / Found by: A, D

When users are playing the game, it's unclear whether or not their entries are valid suggestions. Are the types of activities locations, or can the types of activities also include "take a walk around so-and-so street?" This is an H5 violation because no error messages are provided, although the README does mention that the low-fi prototype has not implemented it yet.

Fix: Provide a visual indicator that an entry was not valid. For ex., if the user inputs something like a one letter nonsense answer, an X could appear on the screen. If the type of activity is a specific location, a potential fix is to only allow users to type locations extracted from Google Maps; otherwise, I think preventing users from typing places like "aaaa" will be difficult for the scope of this project when developing a high-fi prototype.

10. H3 - User Control and Freedom / Severity: 3 / Found by: C, D, B

There is no clear way to exit the game once you click on it. This is an H3 violation because it limits what the user can do once they click on the game. At the current state, in order to exit the game, the user would likely have to exit the app.

Fix: Provide a button to pause the game and exit.

11. H3 - User Control and Freedom / Severity: 3 / Found by: C

When a user pressed the “Games” button they are taken to their games, but there is not a back or exit button. The home button can take them backwards, but this was not clear to me originally. It should be easy for a user to decide that they no-longer want to engage with the “Games” Section.

Fix: have a back button and a home button, or write the word “back” under home.

12. H2 - Match Between System and Real World / Severity: 2 / Found by: D

When choosing which ideas to keep, it’s not possible to rank the ideas. This is an H2 violation, because in the real world, most people would want to prioritize their travel plans instead of just clustering them.

Fix: Add a way to rank the different ideas that the user decides to keep. For ex., the balloons could be put in different locations based on user preference (e.g the balloon with the idea the user likes most could be put on top of the screen)

13. H7 - Flexibility and Efficiency of Use / Severity: 3 / Found by: D

If a user gets a lot of ideas for a certain location, it might be cumbersome and time consuming to pop every single idea that the user doesn’t like. This is an H7 violation because it’s inefficient for the user to be going through every idea individually when they could get rid of things in groups.

Fix: Provide a way for users to select multiple balloons at a time and delete them all in one go.

14. H7 - Flexibility and Efficiency of Use / Severity: 3 / Found by: A, D

Users might need to drag around the screen to look at all suggestions, which can take too much time.

Fix: Along with the balloons, include a list view that would make it easier to look at all the suggestions at a glance without needing to drag around the screen. Ensure that the balloon bouquet expands horizontally and not vertically so that users won’t need to press and hold on any balloons to drag; instead, they can just drag around by the strings.

15. H8 - Aesthetic and Minimalist Design / Severity: 3 / Found by: A, D

While the current design is very minimalist and aesthetic, it’s possible that as the number of ideas that friends/family submit increases, the screen with the balloons could get crowded and cluttered. This could be overwhelming for the user. This is an H8 violation because the cluttered nature of the balloons would affect the aesthetics of the design.

This is also an H7 violation because users might need to drag around the screen to look at all suggestions, which can take too much time.

Fix: Similar ideas could be aggregated. Multiple screens you can scroll through could be built to reduce the initial load for the user.

16. H10 - Help & Documentation / Severity: 2 / Found by: D

Upon opening the app, it's unclear what exactly the user should do. The idea of inviting friends/family to compete for giving travel plan recommendations is a relatively unfamiliar concept for a lot of people. This is an H10 violation because of the lack of written or guided instruction, which might be a bit jarring for the user.

Fix: Have an onboarding process where you guide the user through some actions they can take on the app. Additionally, it could be helpful to add a Help menu.

17. H6 - Recognition Rather Than Recall / Severity: 2 / Found by: A, D

When users see the balloon interface, it's a bit unclear how the user should interact with it. Users might accidentally pop the balloon by trying to tap it, and then have to click the undo button. They might also not know that they can hold the balloon to see for details. This is an H6 violation because users have to remember they can delete by popping and see more details by holding.

Fix: Provide a visual indicator that tapping results in popping and holding results in seeing more of the details.

18. H4 - Consistency and Standards / Severity: 1 / Found by: D

On the balloon page, the undo and redo buttons are very close to each other. This is an H4 violation because the proximity of the two similar looking buttons to each other might be confusing at first glance. The user could be unclear on the exact difference.

Additionally, it's possible the user accidentally clicks one button instead of the other.

Fix: Move the two buttons apart. You could put one button on the bottom left and the other on the bottom right.

19. H7 - Flexibility and efficiency of use / Severity: 3 / Found by: A, D

Figuring out travel plans can be time sensitive. Because friends might procrastinate on playing the game, travellers might want to be able to set when they should get feedback by instead of waiting around for too long.

Fix: When inviting friends to play a game, include a "play by [date]" in the request.

20. H10 - Help and documentation / Severity: 3 / Found by: A, C

It is unclear whether users need to be online at the same time to play the game or if there is a specific time limit.

Fix: Clarify whether friends need to be online in the games list or if there is a specific limit.

21. H1 - Visibility of system status / Severity: 3 / Found by: A

Assuming that competitors do need to be online at the same to play, it is difficult to tell when all the competitors are online for everybody to play together.

Fix: Include a green dot or some other indication that all competitors are online, and gray out any locations on the games list where not all users are online.

22. H7 - Flexibility and efficiency of use / Severity: 3 / Found by: A

Assuming that competitors do need to be online at the same time to play, this can be difficult if you ask for feedback from, say, friends who live on opposite sides of the world, or from a friend who will never play the game. Waiting to play with somebody and waiting for a game to be played takes way too long.

Fix: Allow the requester to include a time limit for the game (e.g. 1 day). Have each of the penguins' locations be based on how many locations a competitor has suggested so far, and don't show the "FINISH" screen with results until the time limit is up. Include this time limit in the Games List so users will know when a game is about to end.

23. H8 - Aesthetic and Minimalist Design / Severity: 1 / Found by: A

In the games list, placing the location name and the requester name on the same line will have issues when a location name or a requester name is long.

Fix: Make the location name and the requester name on separate lines.

24. H1 - Visibility of System Status / Severity: 2 / Found by: A, B

In the main page, the clock icon makes me assume that the game is in play, rather than already complete and ready for me to choose the best ideas.

Fix: Choose a different icon to indicate game completion

25. H5 - Error prevention / Severity: 3 / Found by: A

Holding to read essential information can be annoying, especially if a user would like that information to stay on the screen handless. This also reduces how much additional information can be added to the info popup (e.g. including navigation to a website of the location). Similarly, it's irritatingly easy to accidentally pop a balloon by tapping.

Fix: Tap for the information popup, which stays on the screen even when the user lets go of the finger (include a "close" button to close). Long press for popping, which the user can tell is occurring by having the balloon inflate for 1-2 seconds and, unless the user lets go, pops when it over-inflates (like a visual "are you sure?" message) OR swipe up to release the balloon from the list of activities (which ensures that the actions on the balloon are different)

26. H3 - User Control and Freedom / Severity: 2 / Found by: A

While in the process of choosing the best ideas, users might want to return to the home screen; however, it is unclear whether the generated ideas is autosaved or not, or if they have to press the "done" button to have their choices saved.

Fix: Clarify that generated ideas are autosaved OR add a "Save" button and reword "Done" to other wording that implies that the list is set.

27. H3 - User Control and Freedom / Severity: 3 / Found by: A

Once a user taps “Done,” it appears that they are no longer able to edit their list anymore, even if they might have accidentally tapped that button before they were ready to create their finalized list.

Fix: Add an icon or button that allows the user to toggle between the balloon UI or the list UI in the Finalized Ideas List, both through which they can remove ideas. Replace the “Done” button with the “Share” button, and just remove the Finalized Ideas List screen.

28. H3 - User Control and Freedom / Severity: 3 / Found by: A

If a user decides that they change their mind and they want, say, Boba Guys to be back on their ideas list, they would have to go through a long series of undoes to include it back on their list.

Fix: Include a way to add back previously generated ideas. This can look like viewing the entire original list and selecting one to re-add (ok), or it could mean manually entering the idea themselves (not great).

29. H1 - Visibility of System Status / Severity: 2 / Found by: C

When a user is creating a new game, the UI has them type in the city name. There is no clear indicator for the system status here, so when a user types the city name, they do not know what the next step in the system is.

Fix: highlight the text box when it is in edit-mode and unhighlight it when the user submits a name, so that the system status is clear.

30. H4 - Consistency and Standards / Severity: 1 / Found by: C

The “Log In” button on the first UI screen does not contain a drop shadow, whereas every other action button throughout the next UI screens has a drop shadow. Unless this was done purposefully, it violates the rules of inconsistent design elements.

Fix: have drop shadows or do not have them for all pressable buttons. Pressable buttons should have a consistent style.

31. H5 - Error Prevention / Severity: 2 / Found by: C

The app does not protect the user from making a login error. For example, if the user inputs an invalid password or username, it should warn the user before they press “Log In” that the username and/or password is invalid.

Fix: outline the login boxes in red and show error message that tells the user they have invalid login criteria.

32. H6 - Recognition Rather than Recall / Severity: 3 / Found by: B, C

When a user enters the game, there are no instructions for how they win. The text prompt provides helpful instructions, but it is still unclear what the point of the game is.

Fix: provide instructions on this screen, such as “come up with the most ideas in X amount of time to win!”

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

When the user wants to select ideas, they are taken to the cute screen with the balloons. I like the design, however, the balloons are drawn to appear two dimensional and the strings are shown as one dimensional and stiff.

Fix: make the design style for the balloons and their strings match.

34. H10 - Help & Documentation / Severity: 2 / Found by: C

There is no documentation on how to add a new friend. You see the currently existing friends, but what if you want to put in contact information for a friend that is not listed?

Fix: show the user how they can add a friend.

35. H10- Help & Documentation / Severity: 2 / Found by: B

It is unclear whether the user is to narrow down ideas to a specific number or simply based on preferences. What if a user dislikes are has already done everything suggested and wants to pop all balloons?

Fix: This can be resolved with on-screen dialogue to specify the appropriate standard.

36. H6- Recognition rather than recall / Severity: 2 / Found by: B

After a user customizes their request message, there is no way to modify or confirm which friends the user wants to sent the request to.

Fix: This can be resolved by changing the flow of screens so that the choosing friends is the last step before sending so there is no need to recall who is included.

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	0	4	2	0	6
H2: Match Sys & World	0	0	1	0	0	1
H3: User Control	0	0	2	5	0	7
H4: Consistency	0	2	0	0	0	2
H5: Error Prevention	0	0	1	2	0	3
H6: Recognition not Recall	0	0	2	1	0	3
H7: Efficiency of Use	0	0	1	4	0	5
H8: Minimalist Design	0	2	0	2	0	4
H9: Help Users with Errors	0	0	1	0	0	1
H10: Documentation	0	0	3	1	0	4
Total Violations by Severity	0	4	15	17	0	36

4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D
sev. 0	0	0	0	0
sev. 1	1	0	2	1
sev. 2	4	5	4	7
sev. 3	12	2	4	8
sev. 4	0	0	0	0
total (sev. 3 & 4)	12	2	4	8
total (all severity levels)	17	7	10	16

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D
sev. 0	0	0	0	0
sev. 1	25%	0	50%	25%
sev. 2	26.7%	33.3%	26.7%	46.7%
sev. 3	70.6%	11.8%	23.5%	47.1%
sev. 4	0	0	0	0
total (sev. 3 & 4)	70.6%	11.8%	23.5%	47.1%
total (all severity levels)	47.2%	19.4%	27.8%	44.4%

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

5. Summary Recommendations

Overall, we really enjoyed the delightful aesthetic and workflow simplicity of the application. The app does a fantastic job of wrapping together all the needfinding in a really novel way. The team also was able to successfully keep text and images to a minimum, while still giving the app a video-game feel.

Many of Planit's violations seem to exist because of a desire to keep the prototype simple. A lot of the violations also involved handling edge-case type scenarios for users within each task. The main problems were centered around navigation and consistency, visibility of system status, user control and freedom, and aesthetic and minimalist design.

The navigation from one screen to the next was pretty clear. However, we would have liked if there were more cancel and back buttons. It seems the home button serves to take the user “back”, but this took a longer than average time to figure out. The that appeared on the game was also confusing. When a user creates a new game and place, there’s nothing within that creation-flow where the user was asked to select a time constraint. Therefore, it’s unclear where the timer of the game came from. Does the app just set the timers? This should be made more clear.

To make things more consistent, more uniformed style for all elements could’ve been used. For example, if a button is clickable, then it should always have a drop shadow or always not have a drop shadow. These consistencies will create a better user experience, and also help establish your personal brand.

Generally, the app is currently very aesthetic and minimalist, but as the number of games, invited people, and generated ideas increases, it’s likely the screen gets more cluttered. The design currently doesn’t take that into account. Moreover, perhaps the general visibility of system status and user control and freedom features were considered less of a priority, given the tasks. In games, these details matter. It’s easy for users to get frustrated in gamified environments, which is why it’s essential to build out features that reduce that.

Another important issue that should be taken into account is whether or not games will happen in real time, as users might not all be online at the same time. If the decision is made to have games happen in real time, a lot of thought should go into how to facilitate that. More generally, it might also be helpful to take a step back to think about whether or not quantity of suggestions is the best way to measure success of a player in a game. Perhaps there should be a way to measure quality of ideas, otherwise people might not generate helpful ideas for the person that requested the ideas.

Great job on the app, and excited to see where this goes!

Severity Ratings

- 0 - don’t agree that this is 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

H5: Error Prevention

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, kb shortcuts)
- Allow users to tailor frequent actions (e.g., macros)

H8: Aesthetic & Minimalist Design

- No irrelevant information in dialogues

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