

# Heuristic Evaluation: Tream

## 1. Problem

Tream connects people with the vision of a project with experts to realize a project.

## 2. Violations Found

### H2-1: Visibility of system status:

#### **Problem #1 [H2-1: Visibility of System Status] [Severity 3] [D]**

The interface for allowing users to create a new project shows the message “Application Submitted! Good Luck!” when the user submits an application to join a project. However, there is no indication of status (i.e. how the user will be notified, etc.), thus potentially leading to confusion (especially for new users) as to how the notification process works. Adding a one-line explanation of how the user will be notified will be sufficient.

#### **Problem #2 [H2-1: Visibility of System Status] [Severity 3] [D, C]**

In the interface for creating an application to join a project, when saving an application, the feedback that user gets is “Saved! You can continue your application later.” However, a user might get confused as to what the system is doing in terms of where the application is saved. Specifying where a project is being saved as part of this feedback message will help clarify this substantially.

#### **Problem #3 [H2-1: Visibility of System Status] [Severity 2] [A, B]**

The Calendar view, in my opinion, serves two functions: 1) to set aside tasks and deadlines and 2) to show how ahead or behind schedule we are on those deadlines. The current calendar view lays out exactly what the activities and deadlines are, but obfuscates how the overall team is doing. Specifically, the nod to a progress bar is at the bottom and there is no indication of what date it is today in relation to the calendar. Putting a progress bar at the top for high visibility and then highlighting what date we are on will help clarify the calendar view.

#### **Problem #4 [H2-1: Visibility of System Status] [Severity 2] [B]**

On the Current Projects page, it is not immediately clear what the circled number at the upper right corner of a project means. For the “Make a Website” project, we noticed that the number “2” also shows up next to the “Work” button on the bottom tab bar. Since tapping on “Work” brings the user to the Slack page, I’m guessing that the number at the upper right corner of a project ultimately corresponds to how many new notifications there are in Slack. To fix this, we can make it clearer that the number corresponds to the work notifications by adding the “Work Notifications” after the number on the project box. To make the best use of the space, the number can be placed on the bottom of the box, as follows:

**Problem #5 [H2-1: Visibility of System Status] [Severity 2] [B] [2]**

Additionally, on the “Current Projects” screen, there is no way to distinguish between projects the user has started and projects the user has joined. This issue is similar to the one described above. As with the above suggested fix, a way to differentiate between Started and Joined projects would be to add a “started” or “joined” label at the bottom left corner of each project box.

**Problem #6 [H2-1: Visibility of System Status] [Severity 2] [B, C]**

This next issue pertains to Task #2 - joining a new project. If we go to “Join New Project” → “Technology” → “Make a Website” → “Join Project”, we are brought to an Application page where a user can apply to join the project. Clicking on the “Save” button brings up a message indicating that the user can continue his or her application later. However, there is no currently no way to differentiate a project that has an application in progress with a project that does not. As with the previous suggestion in #6, we could add a “saved” tag/label to the project box, or make all saved projects have a box with a different color.

**H2-2: Match between system and the real world:**

**Problem #7 [H2-2: Match between system & real world] [Severity 1] [A]:**

The thermometer at the bottom of the Project “Make a Website” page seems to be Tream’s nod towards a progress bar. Users may confuse this with how intense the event is, for example, is the team behind schedule and needs to crank on the project? We would recommend changing it to be the familiar horizontal progress bar.

**Problem #8 [H2-2: The Calendar view in the Project] [Severity 1] [A]:**

“Make a Website” page may confuse users because the layout looks more like a timeline, without the usual motifs of blocks for days in a calendar. We would suggest changing the name to Project Timeline or make the days more explicit, perhaps by enclosing each day in a box and having events written inside of them.

**Problem #9 [H2-2 Match between system & real world] [Severity 1] [C]**

On the “Join New Project” page, projects areas (e.g. technology, journalism, food) are mischaracterized by the word “genres”. You could use a more definitionally accurate description, such as “project areas”. (Task: join a team)

**Problem #10 [H2-2 Match between system & real world] [Severity 1] [C, D]**

In the “Add Calendar Event” modal, Tream uses the word “event” to refer to what seem to be tasks. More precise wording (i.e. task or deadline instead of event) would help. (Task: work as a team)

**H2-3. User control and freedom:**

**Problem #11 [H2-3 User Control and Freedom] [Severity 2][C, D]**

The interface in the “Individual Calendar” (or “Group Calendar”) section currently has no option to edit, delete or remove a calendar event. This lack of control could pose an issue if the user creates an event by mistake. It would be useful to have these backtracking features to enable the user to undo these changes. (Note that this lack of backtracking is also in the “Current Projects” section)

**Problem #12 [H2-3 User Control and Freedom] [Severity 3] [D]**

The interface that enables the user to join a project has currently has no option to cancel an application. This lack of flexibility could be an issue if the user joins a project by mistake. It would be useful to have this feature to enable the user to backtrack.

**Problem #13 [H2-3 User Control and Freedom] [Severity 2] [B]**

Upon clicking on the “Work” button at the bottom of a project page, the user is redirected to the Slack page for the project. Other than the fact that a user can’t navigate back to the Projects page (the README states that this will be supported later, so this is ok), a Slack page popping up might come across as unexpected for new users. To give users more control, we can make an intermediate screen pop-up that asks for confirmation: “This will open up the project page on the Slack app. Are you sure you want to continue? (Yes/No)” This way, users can know what to expect if they were to choose “Yes”. The intermediate pop-up screen would look similar to the one that appears right after you tap on “Submit” to add an event to the calendar.

**Problem #14 [H2-3 User Control and Freedom] [Severity 1] [A]:** When hitting the + button in the Calendar View, we are prompted to “Add Calendar Event.” It is possible that the user hits this by accident, or does not know what the button is intended to add. Regardless, a popup box appears, but the user may simply want to exit. It took me a while to finally locate the Cancel button and kill the popup. An easy “emergency exit” state that is fairly intuitive is to allow the user to tap away from the popup to cancel the addition.

**Problem #15 [H2-3 User Control and Freedom] [Severity 1] [A]:** We found the menu button a great way to introduce users to the three core tasks of the application. It is very intuitive. However to exit out of the menu is surprisingly unintuitive. The user is required to press the back button on the main screen to move back to the main screen. Perhaps this is a limitation of the prototype, but we would have liked to just press anywhere in the main screen to escape the menu view.

**Problem #16 [H2-3 User control & freedom] [Severity 2] [C]**

In the “Start New Project” form, there are limited prompts describing for what a project creator should input. For example, if the person creating the project needs to set a deadline or describe the estimated scope or time commitment of a project, there is no structured way for her to do so. Of course, in the current interface, the user could provide arbitrary unstructured

information in the “Enter Project Specifications Here” input field; however, the vagueness of this prompt puts the burden on the user to think of all of the information that is relevant to potential applicants. Adding more form inputs (such as project deadline), even if they are optional, could help the user broadcast a fuller description of the needs of her project, and this could also systematize application lifecycle (so that applications close when they are expired). (Task: start a team)

## **H2-4. Consistency and standards**

### **Problem #17 [H2-4 Consistency and Standards] [Severity 2] [B, D]**

When adding a new project and pressing “Save”, the feedback mentions that the project will be added into the “Current Projects” section. Since the project isn’t hasn’t been created, one shouldn’t expect the project to be in the “Current Projects” section since the creation process hasn’t completed yet. Even if the project should be added to the “Current Project” section, other created projects have no explicit indication of whether they have been created yet. Thus, placing this “unborn” that would require such an indication (i.e. a status of “not created yet”) would be an inconsistency. A fix would be to either include identification for whether a project is still under construction for all projects in the list or just create a separate section for projects still under construction.

### **Problem #18 [H2-4 Consistency and Standards] [Severity 3] [D]**

The interface the enables the user to view current projects lists each project as a title and a brief description. However, when creating a new project with the + icon, it only enables user input for the project specifications, desired team members or incentive. This inconsistency doesn’t explicitly enable the user to input the title for the project and might confuse the user as to how the title is determined (is it inferred from the input of “What’s the Dream?”). Adding a separate column for “Project Title” can help clarify this.

### **Problem #19 [H2-4 Consistency & standards] [Severity 1] [C]**

From the “Current Projects” page, the plus icon allows the user to start a new project or join an already-created project. The plus icon is a convention for “create something new”, so we did not expect it to allow me to join an existing project. A possible revision: clicking the plus icon would take the user directly to the “Start New Project” screen. (Task: start a team)

### **Problem #20 [H2-4 Consistency & standards] [Severity 2] [A, C, D]**

On the “Current Projects” page, the plus icon is positioned in the header bar and allows people to join or create projects. In the “Project Calendar” page, the plus icon is below the header bar and serves a different function. Using the same plus icon for two different purposes and at two different positions could confuse users. To remedy this inconsistency, you could use a different icon and/or move the icon into the header bar. (Task: work as a team)

**Problem #21 [H2-4 Consistency & standards] [Severity 1] [B]**

We will again use the “Make a Website” project page as an example. The Team Calendar contains a “Current Progress” meter at the bottom of the screen, but such a meter is not present in the Individual Calendar. This may or may not have been intentional, but the fact that this is the only difference structure-wise between the two calendars might cause the user to wonder why there isn’t a progress meter for the Individual calendar. To maintain consistency between the two calendars, and to keep track of progress for individual milestones, we can add a “Current Progress” meter at the bottom of the Individual Calendar screen as well.

**Problem #22 [H2-4 Consistency and Standards] [Severity 1] [D]**

The interface in the “Current Projects” section presents a list of various projects in the boxes that look the same as the boxes (where each box also represents a project) in the “Join a New Project” section. However, clicking on the boxes in the “Current Projects” section brings you to the calendar of the section while clicking on the boxes in the “Join a New Project” section takes you to the project specifications. This can be potentially confusing to a user since clicking on boxes that look the same can lead to reaching 2 different outcomes. It would help to add a more explicit indication that communicates to the user what will happen if you click on a box.

**Problem #23 [H2-4 Consistency and Standards] [Severity 1] [D]**

The interface in the “Project Make a Website” screen has the headers of the boxes left aligned. However, a lot of the headers/titles in the other boxes are center-aligned (i.e. in the “Join New Project” section or the “Calendar” sections). This may be visually jarring to the user and is a design inconsistency in the overall app. This can be easily fixed by sticking to making everything left aligned or center-aligned.

**Problem #24 [H2-4 Consistency and Standards] [Severity 1] [D]**

The interface in the “Join a New Project” section presents a list of various projects with the creators of the project visible while the “Current Projects” section also presents a list of various projects, except without the creators/members visible. This is visually inconsistent to the user who might want more information in terms of which members are currently part of a project. A fix could be to add the icon of all members in a project for both interfaces (the squares in “Join a New Project” and the squares in “Current Projects”).

**H2-5. Error Prevention****Problem #25 [H2-5. Error prevention] [Severity 1] [A]**

H2-5: The location of the Search input box in “Join New Project” page is slightly misleading. Some users may see this input box as a way to search for different project genres. On the other hand, some users may suspect it is used to actually search for a specific project. We would like to see the latter as we do not believe the app should hold so many genres such that searching

would be necessary. A way to address this ambiguity is to specify how to use the search bar with the greyed out text in the input box. Another way would be to place the search bar below all the genres, so that it looks less like it is searching for genres.

## **H2-6. Recognition rather than recall**

### **Problem #26 [H2-6 Recognition rather than recall] [Severity 2] [A]**

H2-6: Recognition rather than recall. When starting a new project, the user is required to list the skills that are desired to make the project a reality. Instead of having a text box for this, it would relieve the user of the burden of recall to have a selection process of hashtags. This would help the user think through all the required talent needed, without having to remember all of them by herself.

### **Problem #27 [H2-6 Recognition Rather than Recall] [Severity 2] [C, D]**

The interface in the “Join a New Project” presents a search bar with the pre-loaded text “Search” auto-filled. However, it is a bit confusing exactly what the user is searching for in the search bar (Is it a user? Is it a project name? Is it a genre?), and would often times require the user to recall what exactly they are searching for (only possible for returning users). It would be helpful to have a clearer description (i.e. “search for a project name, user or genre”) as the preloaded text in the search bar.

### **Problem #28 [H2-6 Recognition Rather than Recall] [Severity 1] [D]**

The interface in the “Current Projects” listing presents the projects in the various boxes where if the user clicks on the boxes (projects), the user ends up in the calendar for the project. This isn’t obvious or instinctive for the user and thus, would require the user to recall/remember what clicking on boxes in this specific interface does. It would be helpful to instead have a calendar icon next to the title (or somewhere close to each box) to indicate to the user naturally that clicking on the box transition to a calendar corresponding to the project.

## **H2-7. Flexibility and efficiency of use**

### **Problem #29 [H2-7 Flexibility and Efficiency of Use] [Severity 0] [D]**

The interface of “Joining a New Project” currently displays a search as well as the different genres of projects to click on. However, experienced users may already be in various projects and thus, it might be useful for them to be able to simultaneously also see which projects they are in (so they don’t overcommit, overlap commitments, etc.). This can be fixed simply by adding a “Current Projects” section underneath the “Genres” section.

### **Problem #30 [H2-7 Flexibility and Efficiency of Use] [Severity 2] [A]**

In the creating new project page, it may start to get tedious for a power user to, every time, fill out the form to create a project, especially if the projects usually require the same talents. A way to alleviate this is to create a few predefined sets of talents that usually go together. For

example, in an iOS app development team, there are usually one or more iOS programmers and a designer.

**Problem #31 [H2-7 Flexibility and Efficiency of Use] [Severity 3] [A, C]**

When clicking submit to share a new project to the world, the app asks if we are sure we want to submit. This we feel is wholly unnecessary and eats away at whatever enthusiasm the user had in creating an event. It is not life or death to accidentally submit a project request, and if so, it should be fairly easy to delete or amend a project request. Thus, instead of error prevention, which would diffuse the passion for a new project, just have an easy way for the user to recover from a submission misstep. There must be a way to delete a project that the user has created.

**H2-8. Aesthetic and minimalist design**

**Problem #32 [H2-8. Aesthetic and minimalist design] [Severity 1] [B]**

On the “Current Projects” screen. The menu that pops up after the user presses on the button with the “Plus” button (at the upper-right corner of the screen) would look cleaner if its options (“Start New Project”, “Join New Project”, “Cancel”) were all evenly spaced apart. Currently, the “Cancel” button is separated from the other buttons by a larger gap, and contains gray text instead of the white text of the other two buttons. Additionally, the magenta color of each button contrasts sharply with the light red color of each project box.

To make this menu more aesthetically pleasing, we can move the “Cancel” button upwards to close the gap to the above button and add a white background to the menu. The white background would be similar to the one found in Yes/No screens that pop up to confirm whether or not a user wants to perform a given action. The white background more clearly isolates the menu from the regular background more clearly, and addresses the color overlapping issue discussed above. Once we make add a white background to the pop-up menu, we can change the text of all 3 buttons to black or magenta (a color that contrasts with white).

**Problem #33 [H2-8. Aesthetic and minimalist design] [Severity 1] [B]**

On the “Current Projects” page, pressing the button with the plus sign at the upper-right corner of the screen brings up a pop-up menu on the screen with following options: 1) “Start New Project”, 2) “Join New Project”, 3) “Cancel”. These 3 options are already available in the Menu icon at the upper-left corner of the screen. Although the plus symbol places an emphasis on adding a *new* project (either starting or joining a new project), the same 3 options are duplicates of the ones we get from pressing the menu button at the upper-left corner. To fix this issue, we can consider removing the button with the plus sign altogether.

**Problem #34 [H2-8. Aesthetic and minimalist design] [Severity 1] [A, B, D]**

We will use the “Make a Website” project page as an example. Instead of writing out the dates in full (i.e., “October 1st”), a more minimalistic design could use just the numerical representation of the dates (i.e., 10/1), and make the project box (containing the name of the task and the avatars of people involved) larger. The original intent was most likely to have the

dates and boxes be evenly divided by the vertical line that runs through the center of the screen, but it might be worth considering making the text for the project descriptions larger (currently smaller than the date text), and/or having the boxes staggered similar to how posts/photos on the Facebook timeline are staggered. It would also help to significantly reduce the font size of the dates and space allocated to them to enable the events to be larger and thus, more readable (maybe a ratio of 1:3 instead of 1:1?). The word October shows up for each day in October with an activity and the term calendar is used in both individual and team Calendar views, when hopefully it is obvious we are looking at a calendar. Also it would be repetitive to see every Project page to be named "Project <Project Name>" where the "Project" term hopefully should be self-explanatory. We would remove repetitive words.

**Problem #35 [H2-8 Aesthetic & minimalist design] [Severity 1] [C]**

On the "Application to Join" page, the text field watermark text ("Explain why you're interested" and "Explain how you can help the team") is redundant with the application prompts ("Why do you want to join?" and "How would you contribute?"). Remove the text field watermark text to avoid this redundancy.

(Task: join a team)

**Problem #36 [H2-8 Aesthetic & minimalist design] [Severity 1] [C]**

On the "Project Calendar" page, there is no need for the "Calendar" button in the footer, since the only page on which the footer appears is the calendar page itself. To reduce the number of UI elements on the page, you could (1) remove the "Calendar" button and move the "Work" button to the top controls bar, or (2) transform the "Individual / Team" toggle into two footer buttons that replace the "Calendar" footer button. (Task: work as a team)

**Problem #37 [H2-8 Aesthetic & minimalist design] [Severity 1] [C]**

The color scheme and UI of the app could be polished to look more professional. The light pink, hot pink, and red color scheme feels visually jarring and may be inappropriate for an app that would be used in a professional or semi-professional context. (Task: all)

**Problem #38 [H2-8 Aesthetic & minimalist design] [Severity 1] [C]**

After clicking to add an event to the calendar, two popovers appear. The first confirms that the user wants to add the event; the second notifies the user that the event has been added and requires the user to click "Close". This process requires more clicks than needed. The second click could be replaced with a disappearing status bar; the first and second clicks could be replaced with a disappearing status bar with an undo button. (Task: work as a team)

**Problem #39 [H2-8 Aesthetic and Minimalist Design] [Severity 1] [D]**



The interfaces in the “Calendar” sections have a tab bar at the bottom of the screen that has a small font size. This makes it difficult to read the text and interpret the icons. An easy fix would be to increase the size of the icons and text to make this more readable.

**Problem #40 [H2-8 Aesthetic and Minimalist Design] [Severity 1] [D]**

The interface in the “Application to Join” page has a note that says “Your profile is linked to this application for viewing by the project creator”. This message is superfluous (it seems implicit that the project creator should be able to view your profile) and can be confusing at first glance to the user. Instead, just say: “Your profile will be linked to this application”.

**Problem #41 [H2-8 Aesthetic and Minimalist Design] [Severity 1] [D]**

The interface for enabling users to create new calendar events in the “Individual Calendar” section currently presents a pop-up where the font size is a bit too small to be read. It would be helpful to make the font size larger to improve readability.

**H2-9. Help users recognize, diagnose, and recover from errors**

**Problem #42 [H2-9 Help users recognize and recover from errors] [Severity 3] [B, D]**

The interface for creating a new project or joining a new project currently doesn’t check for blank user input. This lack of error reporting could be problematic if the user forgets to input information in a field. An appropriate error message should be displayed if the user doesn’t fill in any of the fields.

**Problem #43 [H2-9: Help users recognize, diagnose, & recover from errors] [Severity 3] [C]**

If the user has submitted an event/task on the project calendar page and needs to change the task deadline, there is no way to do this. Making the calendar events/tasks clickable and editable would fix this issue. (Task: work as a team)

**H2-10. Help and documentation**

**Problem #44 [H2-10 Help and documentation] [Severity 2] [D]**

In the interface for creating a new project (“Start a New Project”), it can be a bit confusing (especially for a new user) to know how to input information in the various fields. There are one-line descriptions/guidelines of what should be added, but this information is still vague and more catered towards experienced users. A fix could be adding a help button to show examples of how to input information in the various fields. (Note that this also applies to the “create a new calendar event” section).

**Problem #45 [H2-10 Help and documentation] [Severity 2] [A]**

We found the help messages slightly verbose in this application. Every time we submit a project or save a project that we’re am trying to submit, we get a help message about where the project is saved. As users, we only really need to see this once, and after that, the help messages are

really just getting into the way of the flow of the application. We would have an in app walkthrough when the app is first opened with the help messages, and no more afterwards.

### 3. Summary of Violations

Category	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
[H2-1: Visibility of Status]	0	0	4	2	0	<b>6</b>
[H2-2: Match Sys & World]	0	4	0	0	0	<b>4</b>
[H2-3: User Control]	0	2	3	1	0	<b>6</b>
[H2-4: Consistency]	0	5	2	1	0	<b>8</b>
[H2-5: Error Prevention]	0	1	0	0	0	<b>1</b>
[H2-6: Recognition not Recall]	0	1	2	0	0	<b>3</b>
[H2-7: Efficiency of Use]	1	0	1	1	0	<b>3</b>
[H2-8: Minimalist Design]	0	10	0	0	0	<b>10</b>
[H2-9: Help Users with Errors]	0	0	0	2	0	<b>2</b>
[H2-10: Documentation]	0	0	2	0	0	<b>2</b>
<b>Total Violations by Severity</b>	<b>1</b>	<b>24</b>	<b>13</b>	<b>7</b>	<b>0</b>	<b>45</b>
<b>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)</b>						

### 4. Evaluation Statistics

Severity / Evaluator	Evaluator A	Evaluator B	Evaluator C	Evaluator D
sev. 0	0	0	0	1
sev. 1	5	4	8	9
sev. 2	5	6	4	5
sev. 3	1	1	3	5
sev. 4	0	0	0	0
<b>total (sev. 3 &amp; 4)</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>5</b>
<b>total (all severity levels)</b>	<b>11</b>	<b>11</b>	<b>15</b>	<b>20</b>

## 5. Summary of Recommendations

Overall, this prototype was very successful from a usability standpoint. Most usability issues were minor and none were catastrophic. Apart from usability, there are some essential tasks that have neither been implemented in this prototype nor mentioned in the README.

Furthermore, this prototype demonstrates compelling use cases for its first two tasks (start a team and join a team) but not for the third task (work as a team).

This prototype was highly usable. Even without the instructions in the README, navigation through the app was intuitive and simple. We never felt lost, and we could always retrace my steps to get back to the home screen / menu. Many of the usability issues surfaced in this evaluation deal with clarity of copy, redundant UI elements, blank form input validation, and missing functionality around the tasks that were implemented in this prototype. These were spread fairly evenly by violation category and task, and the modality of usability issues related to H2-8, aesthetic and minimalist design. These issues in particular should be straightforward to resolve.

Some functionality has neither been implemented in this prototype nor mentioned in the README. For example, the final version of Tream may need to implement application review, allow for multiple roles for the same project, and implement application status checking or notification so that the user can know whether her application to join a team was accepted.

While it is clear why people would use Tream to create and join teams, it is less clear why they would continue to use the app to work as a team. I'm curious why you decided to use a third-party application (i.e. Slack) for messaging, but not a third-party application for task management. Existing applications such as Jira, Asana, Trello, and Todoist implement task management in a more full-featured way than the calendar functionality in Tream, and we wonder what incentive a team has to continue using Tream to coordinate tasks when more full-featured options exist. Perhaps if Tream offered something that these other applications didn't, the use case for Tream's third task would be more compelling.

Furthermore, we feel that the app could have benefited - both functionally and aesthetically - if there were a Tream favicon at the upper left corner of each screen. This is similar to the "F" logo on the upper left corner of the screen, which takes you to the Newsfeed/Home page when you click on it. Similarly, the homepage for Tream is the "Current Projects" page. It would be nice if the Tream logo could be on each page so that the user could conveniently navigate back to the Current Projects.

Infusing some playfulness in the application may be something that Tream could experiment with. Perhaps each new project can take on a spirit Pokemon, playing off of the website, that the team members can use as a point of rally and pride. Furthermore, it is unclear from this prototype where the incentive is to collaborate with others on an activity. The prototype is completely project centric and does not record anything related to the user. Perhaps a log of

previous projects and something cute like Pokebadges may be enough of a kick for people to work on projects. A hint towards this in the prototype, we believe, would have been helpful in understanding how to structure incentives in the high fidelity prototype.