

What to Fix Princeton

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Section 1: Overview

The motivation behind our project stems from recent campus activities which showed that change is something that is desired in our community. However, it is not always easy for students to gain support for causes they care about without significant student action. That is where our project comes in. The goal of 'What to Fix Princeton' is to provide students a convenient way to suggest and support ideas for change that fellow Princeton students have.

Our project will be a website that primarily provides functionalities for idea suggestion and voting. A student will sign in, and then he or she will be able to create a 'petition' for his or her idea. Each petition will have a title that describes the general idea, and a more detailed explanation underneath. The petition also includes a vote counting system that has a set limit for how many days this petition is 'active' for and how many votes are required during this 'active' phase for this petition to be considered by USG. If the petition gathered enough votes within the given timeframe, the petition will change status to 'pending' and USG will have to consider the idea. Once USG is ready to consider it, the petition's status will be changed to 'completed'. Otherwise, if the petition did not meet the goal within the days allocated, the petition will be archived and be considered 'expired'. Before a user submits an idea, the website will show a list of petitions that contain words listed in their new idea to decrease the chance of duplicates.

Other students will be able to vote on 'active' ideas from the home page. The home page will also display categories such as 'facilities' and 'dining services' that users can click on to peruse other petitions. Users can click on 'hot' or 'top' sections to see which petitions are gathering the most votes at a given time. Each petition will also have a comments section so students can voice their opinion more if they wish.

All of this will hopefully lead to a product that USG can eventually integrate into Tigerapps and use to facilitate conversation between the student body and themselves.

Section 2: Requirements and Target Audiences

Though essentially anyone with a netID will be able to log onto our website, we believe that most of our users will come from the undergraduate community because undergraduate students actually live on campus and are thus more affected by the living conditions here. USG is our other main target audience, as they will ideally become very

involved in laying out the policies that the website will run under, such as deciding how many days a petition can be active for.

Through our website, the undergraduate community will benefit by being able to voice their ideas for change as well as support others' brilliant ideas. This will hopefully create a system which will allow the university to improve the students' quality of life. Our website specifically aims to facilitate smaller changes that would be nice to have but which no one is actually passionate enough about to spearhead.

USG will benefit from our project by being the recipients of all these ideas from the student body. After meeting with the current USG student leaders, it was clear that they had a desire to make conversation with the students easier with this type of system, but did not have the resources required to implement it. There exists a popular service, 'UserVoice', that helps Brown University and Columbia University to provide their students with this type of website (<http://www.wtfbrown.com/forums/246558-student-feedback-for-brown-university>). However, Princeton's USG did not want to spend thousands of dollars to provide this service since there was no guarantee that it would become popular enough to justify the costs.

That is where What To Fix Princeton will shine. It aims to make use of low-cost services available to developers on the public domain to implement this website. This will provide USG with a practical alternative to UserVoice. Functionality wise, our website will have a different voting system than what UserVoice has. Rather than simply having a vote count, we add an expiration date and a minimal number of votes required to each petition. This will prevent the petition from representing an outdated idea or opinion, as well as set a minimum bar for petitions to be considered worth USG discussing. As an extreme example, if the petition expiration were to take 4 years, then no students who had an opinion about this issue would still be here after those 4 years are over. Our website will also not include a 'no support' feature, as we believe that if enough students vote in favor for an idea, it is worth USG discussing it regardless of how unpopular it may be with the rest of the student body.

Section 3: Functionality

When a user first opens the website, the user sees all the petitions that are currently being voted on. The user can explore the website to examine what kind of petitions there are on the website, and what kind of thoughts Princeton students have about their own school. If the user sees a petition that he or she wants to vote on, or has a petition to propose, the user will have to log in through CAS.

One of the example petitions could be "Open the library for 24 hours." The user first logs in and type in a keyword such as "library." The website will show the user petitions that are still active and relevant. After looking through the list of petitions shown by the search, if the user sees one that matches his or her idea, the user can simply vote on the petition to show support. If the petition has not been made previously, the user can

post the petition on the website and designate the appropriate category. In order to make more people aware of the user's idea and earn more votes, the user can choose to share her petition on Facebook. Now the user simply waits and sees how the petition progresses.

Meanwhile, other users desiring the same change also log into the website and attempt to post the petition. Now that the petition is already active, the rest of the users will simply continue to vote on the petition; however, users will not be able to double vote on the same petition.

If the petition reaches 50 votes in 10 days (tentative limit at the time of launching the project. subject to change later according to USG), USG and everyone who voted for the petition will be notified, and USG will consider the petition to see if it can actually be put into practice and whether it is worth implementing or not. (While the ultimate goal is to integrate this website into USG's server and Tigerapps, in the beginning stages, the project team members will serve as "USG" to moderate the petitions that have reached the desired number of votes.)

If the petition fails to reach the goal, then USG will not be notified of the petition. The petition will simply be moved to the "archive" section of the webpage and have the status 'expired'.

Section 4: Design

The website application will be hosted on Heroku and developed using Django. The database will be managed using Heroku Postgres. Bootstrap will be used for user interface. Files will be shared between the team members on Github.

User Interface

The home page will display a suggestion box, and previous petitions that have been created by other students. Petitions in the "Top" section are displayed by default. A user can click other sections, such as "Hot", "New", "About to expire", "Category", "Status".

For each petition, our site will display both the number of votes so far, percentage of the goal reached, and the number of days left until the deadline.

All the petitions will be divided into different categories so that it is easier for the users to look into relevant petitions in a certain category. "Hot" and "Top" sections can also allow users to see which petitions are receiving the most attention at the moment and contribute to them if interested.

The list of items that the users will have access to under "Category" are: "All", "Academics", "Athletics & Recreation", "Community Issues", "Dining & Housing", "Other", "Student Activities", "Student Services", "My ideas", "Ideas I support". As the

website becomes more popular and more diverse types of petitions are presented, categories available for the users can be adjusted for better practicality.

The list of items under “Status” are: “Active”, “Expired”, “Pending”, and “Completed”.

For the petitions that recently successfully achieved the goal, there will be a banner on the top of the website. The banner will easily notify the users about which petitions will be considered by USG in the upcoming days. Since there might be multiple petitions that reach the goal in at one time, in order to prevent inefficiency, we decided to only keep the banner for a short period of time. Once petitions achieve the goal, these petitions will change status to ‘pending’ for the users to see even though the banners will no longer be available.

Process

The Heroku web application will serve the most relevant petitions to the user, depending on which category and status they have selected to view, in descending order of number of votes. The default category displayed on the home page will be the “Top” category, which shows the most voted, active petitions.

When a petition reaches the required goal, the creator of the petition and USG will be notified via email. We decided not to email all the voters because in the case that a user votes for several petitions which hit the goal, his or her email will be flooded. The petition will also change status to ‘pending’. However, once USG actively responds and wishes to tell the student body that they are discussing the issue, our website will send an email to all the people who voted, and the petition will change status to ‘completed’.

Data Management

Heroku Postgres will be used for data management.

For each petition, it will store:

- Title and content of the petition
- Expiration date
- Comments
- Number of supports that have been received so far
- People who have supported the petition (netIDs)
- Status (‘active’, ‘expired’, ‘pending’, ‘completed’)

For each user, it will store:

- Their netID
- Which petitions this user created
- Which petitions this user voted on

Section 5: Timeline

Date	COS333 Timeline	Group Timeline
March 14	Design Document	Plan out the general timeline for this project.
March 21	Project Status Website	Launch the project status website regarding What to Fix Princeton.
March 28	Prototype	Set up a barebones website with the database, web application, and front-end talking to each other.
April 4		User can post, comment and vote. Figure out CAS login.
April 11		Display different categories on website after searching and sorting. Be able to send emails to users.
April 18	Alpha	Display top banners for the petitions that reached the goal recently. General improvements on UX design.
April 25	Beta	Minor improvements and bug fixes.
May 2-5	Demo	
Dean's Date	Final Documentation Submission	

Section 6: Risks and Outcomes

None of the members in our team are experienced in web application development, so learning front-end, back-end, and data management will be a challenge for all of us. This could slow down the development process, but hopefully not by too much.

On the other hand, if the learning turns out to not take that long, we may have a finished product too soon relative to the schedule. In this case, we will also create a mobile website version of What to Fix Princeton, and also start talking with USG regarding the integration of our website into their servers and Tigerapps.