**Problem Statement:**

Usage of bathrooms is indispensable on a day-to-day basis. Thus, access to safe, clean, and functional bathrooms is essential for the University of Minnesota community. Unsanitary and unsafe bathrooms might lead to health issues for the users and cause unwanted worry and discomfort. The University of Minnesota has a large campus that spans Minneapolis and Saint Paul. However, not all locations secure good navigation guidance: sometimes, the navigation board on each floor of the hall is misleading or confusing, while maps of the building are only located on the first floor. This makes it hard for people to navigate the bathroom, even in urgent situations. In addition, according to the interviewees, the University of Minnesota is lacking in a streamlined report system. Many students find it difficult to find a resource that can help them quickly address the issues. Acknowledging that the current situation might bring inconvenience and discomfort to the University community, we work to provide solutions to better the bathroom experience at the University and make it more fun for future users of the system.

**Solution Approach:**

People have different needs and take into consideration different things when it comes to selecting a bathroom to use on campus and in general. We found that the best solution to help users find bathrooms that work for them was to use a map page; this is where users can view buildings and bathrooms that may meet their needs. The search bar allows users to type in the names of halls around campus and find directions to said halls (similar to Google Maps). The UI of each hall allows users to view bathrooms on each floor of a hall; not only that but users can find bathrooms based on specific amenities.

Then, the main data driver of our product is the bathroom ratings. Users can anonymously look at and leave ratings about bathrooms and specific experiences they may have had with a certain bathroom and amenities in that bathroom. From our perspective, this would help provide the University of Minnesota community with a shared place to exchange feedback about bathrooms, and hopefully provide insights to help improve the user experience with on-campus bathrooms.

The report feature is somewhat similar to the ratings one, however, the information you submit goes to facilities management so that they can easily identify problems with bathrooms and make changes as soon as possible. This app features a streamlined report system for bathroom issues, since we were aware that there is currently no quick way to report bathroom issues right now for students to get help immediately.

**Major Changes between Milestone 2 and 3**:

After Milestone 2, we received plenteous helpful feedback to continue refining our products. Changes we made at the beginning of Milestone 3 include but not limited to: add linking for the feature transition, refine current feature designs, and add additional function and “help” feature for the app. There really haven’t been any modifications we’ve made to the tasks our product supports.

For mapping and navigation, we improved the search bar of the map page. Firstly, we added suggestion chips to allow users to quickly search for a specific amenity or type of bathroom they were looking for, in addition to manually searching for nearby or a specific bathroom. We also added a suggestive drop-down that suggested the most recently searched bathroom. For the pop-up results (feedback designs), we add additional information for the bathroom (available amenities) and a “rate” shortcut that links to the “Rating” page. We committed to making gender-inclusive bathrooms easy to find which we did using the chips design pattern under the search component.

We flushed out the ratings and reporting flows to better reflect the vision we had for this section of the app. We made improvements in the UI visually and logically to enhance user experience.

In addition to our above features, we also add a “help” feature with “Frequently asked questions” on the main page to help our users find support if they find difficulties navigating through the app.

Overall, we spent a lot of time on the interaction and motion design of the app to create a seamless experience compared to the previous milestone.

**Competitor Reanalysis:**

Compared with the competitors such as NeedtoPoop and FlushToilet Finder & Map we identified in Milestone 1, we've implemented a couple of key features to create a distinctive interface for our bathroom rating app. While there are general location-based review platforms available, our app primarily focuses on the rating and reporting of bathrooms specifically on campus. This focus allows us to tailor our interface and features to the preferences of students and provide a dedicated platform where they can efficiently share and access important bathroom-related information.

In terms of speed and ease of use, our app emphasizes simplicity and clarity. Users can easily locate campus bathrooms either by browsing the map on the landing page or by using the search bar to find specific buildings, accessibility features, or ratings. For example, FlushToilet Finder & Map allow users to only search for bathrooms without any filter. In contrast, our app allows users to find bathrooms specific to their needs such as accessibility. We've also optimized the user journey by minimizing the number of clicks required to rate and report bathrooms. Each bathroom has its own dedicated page where users can quickly accomplish their desired tasks, ensuring a streamlined user experience especially useful for those on the go.

Additionally, our app supports in-app reporting without redirecting users to an external webpage. If a user encounters an issue with a bathroom such as cleanliness problems or maintenance issues, they can conveniently report it directly through the app. This feature not only benefits users by improving campus facilities but also strengthens our partnership with the university administration, fostering a community-driven approach to campus maintenance and improvement. For example, the Needtopoop app does not have a reporting page/section where users can report an issue to maintenance.

Furthermore, our app also caters to specific user groups within the university community. For example, students with disabilities can benefit greatly from detailed accessibility ratings and reviews, which help them navigate campus facilities more effectively. Faculty and staff members may also find value in accessing reliable information about nearby bathrooms, especially during busy work days or events.

In conclusion, by focusing on campus-specific bathroom ratings, optimizing usability, and supporting community-driven maintenance efforts, our app offers a unique and valuable service to the university community.