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Competitive Analysis Report

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Septa: Creating a Better Public Transportation Application

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# **Summary for team members’ contribution**

Zhan Li:

1. Draft and modify competitive analysis Excel spreadsheet and analysis report.
2. Created the SEPTA App with two competitors’ analysis in the competitive analysis Excel spreadsheet.
3. Working on the introduction part of the analysis report. Finishing off competitive analysis Excel spreadsheet.
4. Draft the introduction part for the competitive analysis section.

Nicholas Carmen:

1. Created one competitor's analysis in the competitive analysis Excel spreadsheet.
2. Wrote Readability, Content, Appearance, Utility, and Future Work for the discussion section.
3. Worked on part of the conclusion
4. Worked on formatting Final draft and grammar check.

Yiyun Zhang:

1. Created competitive analysis for utility section.
2. Worked on Utility-Purpose Indicators and Utility Scores spreadsheet.

Belmin Oommen

1. Created/completed competitive analysis for the Moovit Application on excel Spreadsheet.
2. Worked on Homepage, Navigation, and Search Sections in the Discussion
3. Worked on part of the Conclusion.
4. Helped Grammar Check and Formatting the final draft.

Frederick Brown

1. Creating usability competitive analysis
2. Revised introduction part

**Septa: Creating a Better Transportation Application**

# **Introduction**

Southeastern Pennsylvania Transportation Authority (SEPTA) was created and enacted by Pennsylvania legislature on August 17th, 1963, and then in 1965, absorbed two smaller scale agencies that pre-dated SEPTA. SEPTA was created on the founding ideology that citizens deserve a safe, reliable, and universally accessible form of public transportation; SEPTA dedicated themselves to remain a customer-driven organization. SEPTA dub themselves as a customer, “personal tour guide,” and emphasizes the importance of no-stress travel to customers. To further champion their customers’ needs, SEPTA recognized the integration of technology into civilians’ everyday life and sought to develop an App that would bring their transit network right to the fingertips of their customers. The App began its prototyping in 2012 and underwent extensive research and reviewing to ensure the application would be a highly user-friendly platform. The initial SEPTA App launched in 2013, was revolutionary for its time; it allowed users to check transit schedules and find service information. In 2017, SEPTA updated their App based on feedback and comments they had received from their consumers. The updated SEPTA App caters to all needs a user may have; a key feature on the app is the ‘Real Time Vehicle Locator’ that provides users with a visual and interactive tool of the real-time location of any SEPTA trains. The accurate arrival times of this real-time data allows users to be at ease using SEPTA services. The SEPTA App merges technology and transit, while remaining simple to use and understand. Any potential burdens that come with using public transportation is taken off the user, enabling these users to travel with ease while still enjoying a personalized experience directly from their mobile device. This paper will be analyzing and improving the overall UI/UX of the SEPTA App, which is an assistant smartphone app for users of SEPTA (Southeastern Pennsylvania Transportation system), developed by the Southeastern Pennsylvania Transportation Authority. This is an App designed for general users, anyone can download it in both App Store and Google Play Store platform:

https://apps.apple.com/us/app/septa/id724915219#?platform=iphone

https://play.google.com/store/apps/details?id=org.septa.android.app&hl=en\_US&gl=US

When the creators were developing the SEPTA App, their goal was to provide a comprehensive platform for civilians in and around the Southeastern Pennsylvania area through a mobile application that would allow easy access to schedule their daily route and check the operating condition of public transportation systems (bus, subway, rail, NHSL, Trolley, etc.). This app is an official App from the Southeastern Pennsylvania Transportation Authority, so SEPTA App also acts as a portal for authority figures to broadcast any public alters or notification. The SEPTA App developers are adamant in promoting user-friendliness on the app and even recently innovated a simplified payment process by allowing users to bind their account with a physic “SEPTA Key” card with this app.

For users, the main functions that they can access through the SEPTA App are route schedule and timetable for all transportation methods provide by this platform; receiving emergency alter, the notification from authority; checking real-time public transportation operating conditions; save the most frequently used route; pay for tickets; and provide a channel to send feedback to authority for the App and SEPTA services.

The SEPTA App reaches many patrons across the Southeastern Pennsylvania area; these patrons are not homogenized and differ in their demographics, uses of SEPTA functions, and in the service zone they reside in. Considering these key factors: service zones, functions, and overall level of service, this project has distinguished three main user groups. These three user groups were determined based on their profession and their frequency of using SEPTA service; for the convenience of sampling and analysis, this project will focus on users around the Philadelphia city area.

User Types

The first group identified is the commuters, who rely on the SEPTA service for daily work. They use long-distance transportation (bus and rail) and combine with the middle to short-range transportation methods around the greater Philadelphia area. In general, users from the commuter group rely on the SEPTA App to provide transportation from home to workplace daily via around the trip. They are noted as the heavy users of the SEPTA service, and the App will function as a vital tool that will help them schedule ahead, avoid later works, and tracking the SEPTA service operating situation to ensure that their trip is safe.

The second group is students who using the SEPTA service go to the school campus and back home. Further analysis yielded that these users are more likely to rely on middle to short-range transportations (subway, trolley) and transport through Philadelphia urban area and/or the Philadelphia University City area. This group presents similarities to the commuter group due to majority of student users having a fixed schedule, which is extremely sensitive to SEPTA service operating changing like the first group.

The third and final group determined are people who reside around SEPTA service zones, but do not solely rely on public transportations to commute daily. An example of a user from this group is a person who is a resident of the Philadelphia area that typically prefer to drive their own car to work or school; non-residence only stay in Philadelphia areas for a brief time. Users from this group use the SEPTA App and services not out of necessity but as an option. They mostly use the service when their original primary transportation methods become unavailable, or they do not have a primary transportation solution available.

## **Demographics**

Users of this application vary tremendously among all questions surrounding demographics. A study conducted in 2017, provided some insight on the demographic report of public transit riders. The majority, 89%, of riders are aged 25 to 54 and the remaining riders are divided among the younger than 25 population and the 65 and over population. Over half of these riders obtained a bachelor’s degree or higher level of education (SEPTA, 2017).

图形用户界面

中度可信度描述已自动生成图形用户界面, 应用程序

描述已自动生成图形用户界面

描述已自动生成图形用户界面, 应用程序

描述已自动生成表格

描述已自动生成

*Figure 1*. Main interfaces of Septa Application

# **Competitive Analysis Summary**

In this analysis, there are four competitors: three direct competitors: Transit, Citymapper, Moovit; and Uber as the indirect competitor. For direct competitors, those apps have similar functions with the SEPTA app, which provides general users with public transportation information and allows users to schedule their trips. For the indirect competitor, Uber also provides transportation solutions for users. However, its focus is on an online car-sharing service, which becomes a potential competitor for SEPTA’s public transportation service.

As a comprehensive platform app providing public transportation information and other travel advice, the app design should offer the necessary information to users in the most convenient ways. In this case, overall UI design and functions organization become the central guarantee for a pleasant user experience.

In two main aspects of analysis, usability focus on apps interactive process and interface design. The competitive analysis is divided into “home page,” “navigation,” “app organization,” “links & labels,” “search,” “readability,” “content,” and “appearance.” Those elements constitute the flow of UX for a phone app. With the comparison between the SEPTA app with those competitors, a couple of design flaws and failures arose. The competitive analysis of utility is focusing on specific functions offered by the SEPTA app and competitors. The difference between those apps represents their unique market positioning, and this analysis provides samples for trade-off functions and organization structure for the target app.

## **Usability**

Three direct competitors to the SEPTA App were identified and analyzed: the Transit App, the Citymapper App, and the Moovit app.

The SEPTA App only provides service to five counties in the Southeastern Pennsylvania area whereas the Transit App services 269 cities, the Citymappers App covers majority of the US and Europe, and the Moovit App guides users in over 3400 cities. For the data acquired, it can be noted that the SEPTA App is the only application among its competitors that services a small region. Due to the SEPTA App’s small coverage area coupled with the fact that it is a state-instated entity, it is the only application with the capability of authority broadcasting regarding public alters. Furthermore, in the case of severe weather like a snowstorm, the SEPTA App can alert its users immediately.

While the homepage of the SEPTA App provides users with simple and clear information, it is identified as being old-fashioned and out of date receiving a usability score of a 6. SEPTA’s competitors are described similarly as providing the necessary information but also as being ‘pleasant’ and ‘concise.’ Since SEPTA’s presentation in the mid-1960s, it has been a responsibility of the state; further meaning that the application and website money are provided by state allocated funds. Unlike SEPTA’s counterparts like Moovit, which received a usability score of 9, that can hire any graphic designer to assist with the aesthetics of their home page. Moovits homepage greets its users with a warm and welcoming feeling and highlights iconic city images dependent on the user’s location. Regardless of the SEPTA apps outdated home page design, the app upholds SEPTA’s mission statement of providing customer-centered services because the app is very user friendly. The discoverability and usability of an app is extremely important because without clear signifiers and concise functions, a user may become frustrated with their struggles with the app and delete it. Converging with the similarities among competitor’s user-friendliness, the SEPTA App also stacks up next to its competitors with simple navigation.

Further affirming and embodying the SEPTA App’s mission statement, the SEPTA App provides clear means of contact to users on the app. SEPTA App users can call customer service from the app, comment, and access a live chat to send feedback. The users viewed as high priority, and emphasis is placed on their ability to contact a SEPTA representative. Other competitors, more specifically, the Citymappers App, provide their users with limited resources regarding contacting a representative for assistance. The Citymappers App only offers a built-in ‘contact us’ option to provide feedback. The SEPTA App ranks high in app organization among its counterparts; receiving a higher score in every category opposed to their competitors. The SEPTA App is simple, and the application is easy to use; hence their emphasis of the phrase “travel with ease” throughout their site. This app focuses its efforts on creating a simple platform that brings travels to their users. Users can travel hassle free because information is quite easy to find.

There are many elements that contribute to users’ overall satisfaction and experience with an app. Some of these elements include readability, appearance, organization, and navigation. An app lacking even one of these crucial elements may result in dissatisfied users that are less likely to return to that app. Another key component of app’s success is what service the app is providing; regardless of how aesthetically pleasing or easy to use an app is, if the service offered by the app is not enhancing the user’s life, there is no need for the app. Through this papers analysis, it can be observed that SEPTA provide a highly personalized and specialized service for its users. The area that the SEPTA App services is small in comparison to other competitors, which enables the SEPTA App to have accurate real-time tracking of their transit services and provide users with individualized attention. The SEPTA app has a strong service offered but lacks in other elements. While the organization and navigation of the SEPTA App is strong and clear to users, the appearance of the app is lacking majorly among its competitors. Citymappers which received a 9-appearance score, and Moovit, which received a 10-appearance score, present their apps in vibrant colors that create a lively and interesting aesthetic to their users. The SEPTA App is archaic and boring comparatively, which is affirmed by the appearance score of 4, and moreover could be a major downfall of users’ satisfaction with the app. To stand out among its competitors and highlight their unique services in a way, the SEPTA App must undergo some aesthetic redesigning to emphasizes their services.

## **Utility**

The close relationship with social networks provides a faster, easier way to access the app service and get latest information. Our observation shows the SEPTA app has good but not the best performance in links and connections with social networks. It covers two popular platforms Facebook and Twitter but lacks support on Apple and Google, which Uber supports. The quality of information on social media shows the timeliness of service updates and interactivity between customer support and users. The SEPTA app only has basic notification and announcement updates on social media. There is no evidence showing any interactions with customers. It is acceptable, but other competitors have better performance, such as frequent interactions with customers.

The feedback-providing channel is the primary method for customers to get help or send feedback with customer support. The SEPTA app has the most coverage on feedback methods, including phone, comment, and live chat, while other competitors only support email or built-in messages. Customers should find frequently asked questions and answers by themselves to avoid waste of time and effort. However, the SEPTA and Citymapper apps do not have a built-in help and FAQ center, while Transit and Uber apps have.

The ability to automatically find the closest transportations is one of the essential features to increase the degree of convenience and efficiency. However, the SEPTA app does not provide such a function, and users must manually look for services, while all other competitors offer this feature. For a transportation application, one of the most frequently used features is scheduling. It can help customers make their travel plan and assist service providers in dealing with capacity and traffic. The SEPTA and competitors all have this feature. One similar feature that benefits both customers and service providers is unusual traffic warnings. Both can make changes to their plan based on this information. The SEPTA, Citymapper, and Uber apps have this feature, but Transit and Moovit apps do not. The multiple transport method choices are another valuable function for both sides. It is convenient for customers to make travel plans while letting service providers better manage their transportation vehicles. All these apps, including the SEPTA app, have this feature built in.

Although privacy protection does not participate in any service functionalities, it indicates how service providers treat their customers’ personal information. It is an important document in the legislation field, but the SEPTA app does not have any privacy statements in the application, while all other competitors have. A vivid map is another feature that improves the user experience. The SEPTA app only shows basic information on the map, and the map is not interactable. However, the other competitors have fully interactable maps and UX as their core of the apps.

The real-time traffic information helps users estimate or change their travel plan or time accordingly and helps service providers manage the traffic, route, and vehicles. The SEPTA app only shows limited real-time traffic information, such as scheduled information in operation states. The Moovit app does not provide this kind of information, and the other three competitor apps show real-time traffic on the map. The associated service is an indicator that tells how close the app is related to others. The SEPTA app has limited options that users can choose to connect their key cards. Other competitor apps allow users to open Uber, Lyft, or other services. The collection of favorite places is another helpful feature in transportation apps. It will enable customers to save their favorite or frequently used locations. All these five apps, including the SEPTA app, have a built-in collection of favorite places function.

# **Discussion**

## **Homepage**

To start, the homepage is one of the main dimensions being focused on while reviewing the septa application. The home page is often the first place on the application where users will interact with the program. Allen and Chudley (2012) talk about how a homepage can be compared to a signpost. When a user arrives at the signpost, they are given multiple options to where they can go and what they can expect. Some general tasks and questions that a homepage can offer or provide an answer to include support for returning customers, contact information, information about the software, or offer specific features that users need (Allen & Chudley, 2012). If a homepage included every single one of these features, it would be too complex for a person to use. So, a designer needs to understand exactly what their target audience wants to accomplish by visiting the homepage. The last thing to consider with homepage design is to make sure that the homepage supports the business's goals. (Allen & Chudley, 2012.) In many cases, the home page serves as a first impression of the business for many users. Poorly designed home pages will negatively impact the application and business.

Additionally, on the competitive analysis, the criteria we focused on for the homepage include how informative it is, whether the page communicates a site value proposition, the features the homepage offers, whether the information displayed on the page is clear, and how welcoming the homepage is. Based on these criteria, the Septa application only scored well on providing a clear page. It scored lower on the other measures since it does not offer any additional features other than adding a favorite. It is not informative, and the appearance is not welcoming, especially for occasional and newer users. It is important to note that scores on the competitive analysis are measured with numbers between 1 to 10. A score of 10 means that the app does an excellent job in that criteria category. Scores under a six are indicators of poor design and potential rework required to improve the application.

In contrast, the other applications in the competitive analysis scored high marks for the homepage criteria. On the Moovit application specifically, the homepage immediately offers features for the user to look up directions, request ride services from Uber and Lyft, navigate to look at public transportation lines and stations. This home offers a complete signpost for a user.

Furthermore, with the Septa application, the homepage will need some rework. The page itself allows the user to add favorite transportation routes, login, and a navigation button on the top left, which provides the user a list of options to choose from. After looking at the homepage itself (Figure 1), it does not present itself as a signpost. The main thing that stands out is the favorites button. This page can be beneficial for the target audience groups of daily commuters and students, but it might deter or confuse the target group of people who only occasionally use septa services. To fix this, it might be good to add a little more information to the home page, especially to help people who occasionally use Septa services. This can include features like a short message or header that explains what Septa is, location input to show all nearest Septa transportation methods, and a link to access the help page immediately on the homepage itself. Providing these features will help make the homepage more a signpost, offer options to all the target audiences, and help portray the business goals of Septa.

## **Navigation**

Another critical dimension to look at while reviewing the septa application is navigation. According to Allen and Chudley (2012), good navigation will allow users to find things and understand the application's options. A good navigation system will help users efficiently accomplish what they want to do on the application. Allen and Chudley (2012) mention that people will notice poorly designed navigation systems more than well-designed ones since they will not have difficulty finding what they need with a good navigation interface.

To add to this, in the competitive analysis section, the criteria chosen for the navigation dimension includes whether the navigation stands out, does the navigation menus portray the app structure and content, allow users to return to the homepage with ease, and if the navigation is consistent across all the pages in the application. Based on these criteria, the Septa application scores perfect marks. The navigation interface is the best feature on Septa's application software. The system itself is accessible through the homepage by pressing the three horizontal lines at the top left. The option choices are clear for the users to go through, and if they need assistance, the navigation menu has a link to connect with Septa through live communication channels like phone, chat, and social media.

Also, Septa scored the highest in this dimension compared to all its competitors. While the other apps score high marks in this category, Septa's navigation was the easiest to use and offered the majority of features the target audience would need to access. The only thing the navigation interface lacks on Septa's software is having a link to a FAQ or help section. This feature is a fantastic way to get users instant help instead of relying on live communication methods. However, users can still seek live support through the navigation interface option to contact Septa.

## **Search**

Next, having a reliable search interface is another vital dimension in good application design. In his article, Jones (2021) mentions that people search today to find answers to problems, accomplish tasks, and do something. He compares searching to starting a journey or, in this case, a consumer journey. Searching starts the journey, and once the task is completed, the journey is concluded. In Septa’s case, the journey begins with users searching for transportation options on the application.

To elaborate, while the navigational interface is done quite well on the Septa application software, the search features did not score very well on the competitive analysis. The criteria used to measure this section include ease of use, whether the search feature works intuitively, and if the search interface offers filtering options to narrow down the results. Septa scored five, six, and six in these criteria. The other competitor applications scored much higher and even had a score of ten for some requirements in this section.

Additionally, the primary reason Septa is receiving low scores in this dimension is due to how complex and fragmented the search options are. For example, new and occasional riders might not be aware of the lines and stations by name so that they might have difficulty processing results. There is a search near address option, but it is not displayed in a prominent area for users to easily spot. Other applications like the Transit app and Moovit offer all route options immediately after typing in the address the user is trying to travel to. Entering the address or allowing location access is the first thing the competitor apps ask for or display to the users. If Septa makes search by addressing a much more prominent search feature on the app, their scores in this dimension will drastically improve since they remove confusion from people who do not know much about septa lines and stations.

## **Readability**

Understanding the content, you are reading whether a book, website or even a label is a fundamental design aspect that requires more thought than one would think. The color and functionality of the app do not matter if the users cannot understand what the content is, or letter type is very off-putting. However, the design of letters goes beyond that. The correct spacing, letter size, and design can help dictate where the eyes go first. We can use the design of letters to make one part of the page stand out and others to be hidden. Loyd mentioned in his paper that one of the biggest mistakes when it comes to readability is type spacing (2013). He then goes into saying that readability alone is sometimes the “hardest concept to grasp for beginning developers and designers” (Loyd, 2013). Therefore, this became one of the major Dimensions we had to consider when thinking about redesigning the SEPTA app.

The three main aspects that we wanted to look at when thinking about readability are: is the font easy to read, easy to scan, does app layout make reading difficult? We felt as though these were core concepts that all apps must-have for basic functionality. Realizing that English is not always everyone is first language and that some people have learned disabilities like dyslexia, we analyze if the fonts were easy to follow for most people but also the reading level was low enough for everyone to understand. We also realized older people will utilize the app and so making sure the app wording placement is not only functional but understandable. By using this logic, it became our criteria for comparing readability.

Looking at the charts, we see that Uber and Moovit App had the best readability based on the letters they chose, the spacing/location of their sentences, and lastly easiest enough for anyone to understand. We felt as though Uber and Moovit use simple concise wording. Transit App and Citymapper were also on the higher end of the scale but had a feeling of being a little more cluttered and the letter type was not as appealing. Overall, though both apps were still on the upper end of the scale when comparing them to Uber and Moovit you felt that there was a clear winner.

When using the same Criteria on the current design of the SETPA app, you could see that everything from the letter type to layout felt off. The app letter type felt very rigid and uninviting. The placement of the words was off and sometimes completely off the screen when the app glitched. Popup happened randomly with a ton of information which was exceedingly small and hard to digest. SEPTA tried delivering an app in a simple format but created a more complex readability issue because of these issues.

## **Content**

Designing can only be as good as the content you deliver to the customers. The app might have a pretty picture, cool slide shows, and warm colors but without the correct content, the app serves no purpose. Sarah Winters in her blog post talks about the steps all designers need to consider when giving the right content to users, such as, “Data and evidence,” “What the audience needs,” “At the time they need it,” “In a way they expect” (2019). Looking into each of these we see the process of giving the right content is not as simple as putting a picture, words, or even maps in the application. It is giving the user the correct information at the right time and in the right way. If the application requires a map, we need to analyze how the user might be using this app. Uber would want their app to be the first thing people see since their main goal is for the user to get a ride fast. Apps like Home Depot will have a map but not until later when the user has picked out their item and wants to see which store has it in stock. Therefore, content became one of the major Dimensions we had to consider when thinking about redesigning the SEPTA app.

Content being one of the major Dimensions we had to consider when thinking about when redesigning the SEPTA app required us to dive deeper into what we had to consider so that we could deliver the information to the user. Questions such as, Are the app provide relative comprehensive functions, Is the content targeted to our app's core function, is graphical map engaging, is graphical map easy to interactive, Does the content attract our users, became our focus points. The idea when choosing these as our criteria was two things, one being does the app information correctly tell the user what they want to know in the right way and two being does the app provide the information the users need on the map. Since the transportation app relies heavily on a functional map but also the need for updates about schedules and other valuable information, there had dual consideration in the design.

When just looking at this kind of criteria, we could easily say that all four apps had a good understanding of the information they needed to deliver and how to deliver it. The only issue was that the Transit App, Citymapper App, Moovit App, and Uber could not score a 10 out of 10 in attraction. The reason behind this is because not everyone likes to use these specific apps and would rather use another. The only way that an app could score a 10 out of 10 is if all users used one app and no other transit app could survive, assuming they were a direct competitor. Uber score slightly higher because they are an indirect competitor.

When using the same Criteria on the current design of the SETPA app, you could see that the design did not meet the criteria we specified at the same level as the other apps. The app also had a low download rate compared to other apps used making the content not as attractive to users.

## **Appearance**

The overall appearance of the application is something everyone thinks about never do not actually achieve. The overall appearance of an application or product defines what that product is. Users remember the look of your product but not the exact words that the site said. The Appearance also help created signifiers for users so they can use the site seamlessly even if they have never used it before.

Appearance being one of the major Dimensions we had to consider when thinking about when redesigning the SEPTA app required us to dive deeper into what we had to consider so that we could deliver the information to the user. Criteria such as: Is it attractive & aesthetically pleasing, does site appearance reflect its culture and values, is color used appropriately, Does the site appearance bring you joy? The reason we choose such criteria to compare against was for a two different reason, one being does the design of the app satisfy all the diverse users and two being does the design on the app appeal aesthetically to those users. While one culture might be attracted to one type of design another culture will not. Transit App, Citymapper App, Moovit App, and Uber all preformed high within this area. SEPTA on the other hand did not.

Additionally, the primary reason Septa is receiving low scores in this dimension is due to how forced the coloring was. SEPTA was focused more on using their brand colors in places they did not belong. These colors did not draw the eyes to the right location, and it felt very overwhelming. SEPTA did not feel warm and inviting but dingy and dull.

## **Utility**

By comparing Transit App, Citymapper App, Moovit App, and Uber there were a clear model that most apps, like our SETPA app, must conform to. This includes social media, feedback, privacy, responsive map, and personalization. By adding social media, as explained by Padhye, it improves functionality, social sharing, ease of access, increased downloads, higher usage, Exposure and Visibility, Important Analytics Data, and much more (2015). This also helps with proving the user with a more personalized experienced and can help user when they need more feedback from issues or events that are happening. However, when social media is involved, information become key to others. So, privacy must have to be looked at as a criterion in the design. Apps like uber dedicate entire pages to how their data is stored and protected and presenting that data in the correct way prevents lawsuits and other adverse outcomes.

When comparing social media to the other apps, it felt more forced then as an integrated feature. Uber allow you to sign up using social media and they utilize that information when they create your account. SEPTA social media is hard to find and just hands you links on how to get to their Facebook page. There were also user complaints about the personalization aspect messing up causing people to use wrong schedules or just get frustrated in general.

## **Future Considerations**

While doing this analysis of the SEPTA compared to other direct and indirect competitors, we noticed that there were several criteria within our dimensions that we wanted to look further into. One of those criteria was the need for legibility and readability. While we focused more of readability then legibility, we realized there were far more criteria to consider. We soon realized throughout our analysis there was a need for more information about content, like research and how we deliver the information to the users. We also saw that we lacked enough data on the users, so we wanted to focus on research efforts on more features for daily commuters and student audiences. Lastly, I believe there was some basic criteria about social media and privacy, but there was lack of depth. By defining these criteria better, we might uncover a deeper reason behind the power of these two.

# **Conclusion**

In conclusion, after completing the competitive analysis, it was discovered that Septa would need to make some changes to its mobile application to contend with its competitors. Some key things learned from competitor applications regarding utility include offering more integration with social media platforms, including an interactive live map for users, and providing a link to an FAQ page. As mentioned in the discussion, we can easily determine that integrating these features not only adds appeal to use the app, but also adds new layers of functionality. While SEPTA did integrate the basic idea of the utility dimension, it score quite low because of how they presented it and how they utilized certain features. Additionally, it is vital to consider dimensions having a good homepage, navigation interface, search feature, readability, proper content, visually appealing appearance, and good utility features. Septa scored much lower than its competitors in terms of the homepage dimension and needs to include more features like a short “about” message, location input so users can see all nearest Septa traveling options, and a link to the support if the user needs it. Septa does an excellent job with the navigation dimension and has an easy navigation interface for users to move around to different pages in the application. Septa needs to do better for the search dimension, especially for the target audience of occasional septa riders and inexperienced users. Offering a more prominent search by address feature will improve the search interface tremendously on the application.

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**Appendix A**