

TAM Analysis

PU1 I can accomplish asking for emergency help more quickly using RescueMe

Results Avg – 2.428 out of 4 which means disagree.

PU2 I can accomplish asking for emergency help more easily using RescueMe

Results Avg – 2.285 out of 4 which means disagree.

PU3 RescueMe enhances my effectiveness in utilizing self-rescuing

Results Avg – 2.785 out of 4 which means disagree.

PU4 RescueMe enhances my effectiveness in utilizing disaster prevention

Results Avg – 2.571 out of 4 which means disagree.

PU5 RescueMe enables me to make better choices on sending emergency help requests

Results Avg – 2.214 out of 4 which means disagree.

PU6 Overall, I find this app useful

Results Avg – 2.642 out of 4 which means disagree.

PEOU1 Learning to use RescueMe is easy for me

Results Avg – 2.928 out of 4 which means disagree.

PEOU2 It is easy to use RescueMe to accomplish both self-rescuing and providing help to others who needed

Results Avg – 3.214 out of 4 which means agree.

PEOU3 Overall, I believe RescueMe is easy to use

Results Avg – 2.571 out of 4 which means disagree.

We can find easily that most of the dimensions achieve a grade less than 3 which means to disagree.

The app that we designed can hardly meet the basic goals and we need to figure out the reasons.

For PU1, PU2, PU3 and PU5 -

These two dimensions are all about asking for emergency help features. From the grade, we can find that users don't like this feature. They find this feature is not easy and quick to interact with. As one of our main features, we can prove that our analysis on sending emergency requests' failure reasons from cognitive walkthrough is correct.

Failure reasons -

1. Asking an emergency request is not as easy as what everyone knows in their daily life like making phone calls.
2. Interactions are not clear to everyone on what they should do.
3. Users prefer the normal way in daily life which is considered the most efficient way.

For PU3 and PU4 –

These two dimensions are about checking broadcasting news nearby for disasters' prevention. Users all consider it's not easy to meet goals for the features. That's the same situation as the one shown from the cognitive walkthrough.

Failure reasons –

1. Icons have no explanations or they are considered as the ones which are not the most suitable for the meaning.
2. Broadcasting news is not listed clearly. Without an introduction, users have no idea how to interact with this page.

For PU6 –

This dimension is related to this prototype's whole process. The grade shows the results disagree on the whole process which also means our current prototype cannot meet basic goals and users' requirements. From the cognitive walkthrough, the problems are confirmed to exist with some failure reasons.

Failure reasons -

1. The current prototype cannot meet users' requirements on both features and goals which only provided a complex and useless way for emergency requests. It's even not as useful as making a phone call when they are in danger.
2. Some pages are missing which make a logical misunderstanding and confusion.

For PEOU1, PEOU3 –

This dimension is related to the prototype's accessibility and usability. Most participants consider this app is not easy to use or learn how to use. According to our cognitive walkthrough, users have no idea how to interact with some features even for the main/ key features like sending emergency help, lacking essential guidelines such as tutorials on interactions.

For PEOU2 –

This dimension is related to a part of our goals which is based on broadcasting news features and locating features. According to our cognitive walkthrough, a conflict exists which means users can get what these features work for but don't know how to interact with them just like what's mentioned above, the failure reasons maybe because

1. Icons have no explanations or they are considered as the ones which are not the most suitable for the meaning.
2. Broadcasting news is not listed clearly. Without an introduction, users have no idea how to interact with this page.

For the three questions about Attitude towards Technology (ATT), it can be concluded that the final average score is between 2-3. We can see from this that, in general, users do not particularly agree with our application.

For ATT1 "In my opinion, it is desirable to use RescueMe In danger or during a disaster", the score is relatively high at 2.53 points. By browsing to each user's ratings, detailed analysis can be observed that in 15 users, only one gives the 4 points (strongly agree), eight users are given 3 points (agree), the rest of the users are all thinking that using RescueMe in danger or disaster is not desirable, in which two users think very undesirable (1 point). Although more than half of the users think it is acceptable, it also shows that there are problems in the overall functional design of our application, which is not reasonable and perfect. As a result, users will not use our product often or not.

For ATT2 "I think it is good for me to use RescueMe if I am in danger", the score is 2.4. The breakdown scores showed that six users thought using RescueMe was good if they were in danger. Two of them strongly agree (4 points). The remaining nine users disagreed, and two of them gave a score of 1 (strongly disagreed). In response to this question, more than half of the users do not think it is bad to use our application when they are in danger. This score is not ideal, indicating that there is a problem with the focus of the function of our application, and the functions presented cannot meet the needs of users.

For ATT3 "Overall, My Attitude Towards RescueMe is Superior", the score decreased to 2.27 points. According to the detailed ratings of the users, more than half (nine users) still gave negative reviews

to The Application and expressed a negative attitude towards RescueMe. Three of them expressed a very negative attitude (1 point). The remaining 6 users have a positive attitude, and 1 user is very positive (4 points). This indicates that we have not grasped the pain points of users and have not understood the needs of users, so we need to further investigate and design the functions of our users and application.

As the score of this part is not ideal, we conducted a further simple inquiry for the users who scored, and some users who disagreed with it said that they were more inclined to directly call for help when they met a disaster. Using an application to call for help is a very cumbersome and time-consuming process. This suggests that further research and planning is needed to ensure that the positioning and functional design of the software meets the needs of users.

For the three questions concerning Intention to use (ITO), we can find that the average score is between 2.4 and 2.5. This shows that for the application itself, the user's intention is not obvious.

For ITO1 "I will use RescueMe in the future if necessary", the average score was 2.4. According to the RescueMe score, eight users will not use RescueMe in the future, with three saying they will not use RescueMe (1 point). The remaining seven said they would use RescueMe if needed in the future. As can be seen from the detailed score, more than half of the users said they would not use it in the future.

For ITO2, "I will strongly recommend other people in Disasters -prone areas to use RescueMe in the future", the average score was 2.47. Seven of them said they would not recommend it, and three of them said they would never recommend it (1 point). Of the remaining 8 users who said they would recommend, two of them indicated they would recommend (4 points). More than half of users said they would recommend it to people in disaster-prone areas, but of those, only 25% said they would recommend it, while about 42% of those who would not recommend it said they would never recommend it. It's not an ideal score overall. The current functions and design of RescueMe are not able to help people in disaster areas.

For ITO3 "I will regard RescueMe as the first choice for people to use when they are in danger", the final average score was 2.47. Eight of those users said RescueMe was not their first choice in a disaster, and a half (4 users) said it was not. The remaining 7 users said the application could be their first choice, and a half (4 users) said it was. The polarization of scores in this part is quite serious, indicating that RescueMe's current help to users in need is not comprehensive, and there may be difficulties in using or functions that are not easy to understand.

After the user finished this part of the rating, we also conducted a simple query to the user. Some disapproving users expressed that some pages and functions in the application are not easy to understand and feel easy to use. A real disaster can be a burden to call for help. For application, we may need to make further planning to ensure that its functions are simple and the layout of the page is simple, which can help people in need.

In order to better understand the detailed ideas of users, we also choose the walkthrough method in addition to TAM Evaluation, to ensure a clearer and detailed understanding of users' ideas and feedback, so that we can analyze the feedback and iterate to improve our application. The purpose is to solve the current user feedback problems.