Project: Witsmo App

Three Risks identified:

1. *Technical & team cohesion between mobile app development team (Team 11) and web app development team (separate USC engineering student group).*
2. *On-Demand video chat capabilities between customer and financial expert. Which COTS are available to support mobile-to-mobile, mobile-to-web, and web-to-web video chats (COTS integration capabilities).*
3. *Implementation and integration of AI/ML based personality insights for financial guidance through advisor matching and personalized education.*

1.) Use the top-10 list of serious risk sources in the ICSM book chapter 15 to categorize the 3 risk you identified in question 1). Briefly explain the relationship between the problems and the associated categories. If the identified risks do not fit in any given category, please identify a new category with supporting explanation.

Risk 1:

Technical & team cohesion between mobile app development team (Team 11) and web app development team (separate USC engineering student group).

Category:

Personnel Shortfalls

Relationship:

In our project there will be another USC student engineering team working on the web app of Witsmo while we (Team 11) work on the mobile app. It is only natural that there must a shared back-end development between both the web app and the mobile app. This will ensure no data is duplicated and both web and mobile applications are taking data from the same updated location since a user will have the choice to use either platform. The risk involved here is being able to achieve proper communication between teams and meshing both teams' agendas. They will most likely have their own roles like project manager for instance and thus two completely different teams coming together can cause incompatibility issues, especially on such a short timeline. Thus I would categorize this risk as personnel shortfalls.

Risk 2:

On-Demand video chat capabilities between customer and financial expert. Which COTS are available to support mobile-to-mobile, mobile-to-web, and web-to-web video chats (COTS integration capabilities).

Category:

Architecture/reuse/non-developmental item (NDI) conflicts

Relationship:

Our client's main selling point for the financial therapy app is "On-Demand Video Chat". I have never developed anything utilizing on-demand video chat functionality and neither has anyone in our team. We will have to look into specific COTS/NID that supply this functionality. Additionally, we will need to make sure they are compatible for the web app as well. The COTS/NDI chosen will have to allow a customer and a financial expert video chat regardless if either one is on the web app or mobile app. This uncertainty in COTS/NDI availability and integration makes me categorize this risk under Architecture/ reuse/non-developmental item (NDI) conflicts.

Risk 3:

Implementation and integration of AI/ML based personality insights for financial guidance through advisor matching and personalized education.

Category:

Inflated Expectations

Relationship:

Our client desires an AI/ML integration in the Witsmo app in order to better help customers looking for financial advice as well as to separate Witsmo from other competitor services. This AI/ML feature will begin by giving the user an assessment test to gather personality traits that will in turn influence the financial advisor search engine and education feedback. Most likely this feature cannot be done given our short and concrete timeline for the project. Additionally the app is in its infancy stage and thus other feature like the basic UI/UX features still have to be developed. Thus I would consider this risk to be under the Inflated Expectations category.

2.) For each risk, explain in steps how you plan to mitigate the risk. Which one of the 5-risk management strategy category (buying information, risk avoidance, risk transfer, risk reduction, and risk acceptance) are you using? Please note that risk mitigation steps should be specific to your project. A generic step such as "build a prototype" is not specific enough.

Risk 1:

Technical & team cohesion between mobile app development team (Team 11) and web app development team (separate USC engineering student group).

Risk Mitigation Management Strategy:

Risk Reduction

Explanation:

In order to reduce some of the risk involved in collaborating with the separate team we will assign a developer on both teams to be the point-of-contact between teams. These developers will be responsible for communicating information between teams and also establishing any data schemes and back-end design criteria. We will also schedule regular meetings with the other team to give current statuses of development to each other. This will create accountability between teams and increase compatibility thus reducing risk.

Risk 2:

On-Demand video chat capabilities between customer and financial expert. Which COTS are available to support mobile-to-mobile, mobile-to-web, and web-to-web video chats (COTS integration capabilities).

Risk Mitigation Management Strategy:

Buying Information

Explanation:

In order to reduce the risk of COTS uncertainty we can buy information by developing a prototype testing currently researched and available video char services. Some COTS available are Twillio, OpenTok, and Vidyo. We will research which ones seem to be the most compatible and develop a quick and dirty prototype simply showing the concept of on-demand video chat through mobile phones and the web app is possible and that we know how to do it. This will be an incremental prototype as we will use that concept and build upon it add the UI/UX features and expanding the functionalities.

Risk 3:

Implementation and integration of AI/ML based personality insights for financial guidance through advisor matching and personalized education.

Risk Mitigation Management Strategy:

Risk Avoidance

Explanation:

It is risky to commit to AI/ML implementation features on the app given our short timeline and since the app is still in the early developmental stages. More than likely we will not hit our deadlines if we committed to those features. Thus we plan avoiding this risk all together by excluding that feature in our requirements. This will be done through client negotiations and getting our stakeholders to understand the software engineering process that involves documentation, testing, and researching that seems slow at first but has the client's best interest in mind while showing that what is feasible through feasibility evidence. Feasibility evidence may include our working prototype of video chatting, back end database integration, UI/UX testing, etc.