Risk and Risk Mitigation

1. System Vulnerabilities and Integration

Vulnerabilities or bugs within the current systems may be present. Since all applications must be integrated under a single UI and single sign on, existing problems may cause integration issues. This can cause serious setbacks until proper debugging can take place. The dashboard and mobile functionalities cannot be implemented until all applications have been properly integrated.

Mitigation

Proper integration is crucial to the success of the entire project. There may be current bugs or vulnerabilities within the system that will not be known until integration begins. The team will talk with the business units beforehand to find out if there are any known vulnerabilities or bugs. To account for the unknown bugs that are encountered that affects integration, there will be time within the project that is set aside as buffer. If bugs are encountered, but do not affect the integration of applications then the project timeline will move ahead as scheduled.

2. Denial of service

Denial of service happens when the system is not available to the employees for use. This can happen for several reasons that may be a result of natural disasters, hackers penetrating the system, or regular breakdowns. The main concern for denial of service will be from malicious intent.

Mitigation

Security measures need to be taken to make sure that proper mechanisms are in place to reduce the risk of a hacker. There must be encryption to make sure that only those employees are authorized to use the system. Regular network checks must be made to ensure that the system is always available and there are no bottle necks constraining any of the servers. There needs to be an adequate amount of regular and back-up servers for unusual demand placed on the system to ensure that it is always available. A back-up generator will be present in the case of natural disasters. There won't be an interference of service as the generator will provide a consistent availability and kick in immediately if there is any kind of interruption that occurs.

3. Stakeholder Requirement Changes

As the project moves on, stakeholder requirements are expected to change. Changes become more difficult the further along the project is on the timeline. Changes could have major impacts on the scope which could in turn cause costs to increase and the project time to overrun.

Mitigation

A three step process will take place if stakeholders want to change the requirements to the project. (1) The change requirements will be put under review by the project team. (2) A thorough analysis will be conducted to find the effects on the cost and time of the total project. This should take no more than one day. (3) The analysis will be presented to the stakeholders so that they understand the consequences of the changing requirements. (4) The stakeholders will deny or approve the new timeline and costs based on the requirements they have imposed. This ensures that both the project team and stakeholders are on the same page so there is no miscommunication. Presenting the analysis to the stakeholders also might make them change their minds so that the changes do not occur in the first place. A full analysis can show stakeholders the consequences of changes in the project.

4. Data Integrity Risk

All data from previous legacy systems must be kept intact as it is integrated under a single sign and UI. Managers will have useless information for their dashboard application if the data is corrupted. Programming errors, processing errors, or even process errors can corrupt data.

Mitigation

To ensure data integrity, the implementation should be done in phases and the proper testing should take places to make sure that the data is correct. Good programming practices are critical as programming errors cause good data to be processed by the wrong programs. The team will go through proper programming training at the beginning so that bad code does not creep into the project. The project manager will ultimately be responsible for making sure that the right data is being pushed through.

5. Delays in Approvals

Certain procurement of software or hardware in a timely manner is important for the success of the project. Other changes within the project that change the scope, time, or cost will also need to be sent for approval. The approval process can take too much time and cause delays in the entire project.

Mitigation

The upper management needs to keep track of all project changes and budget activities that must be approved. There must be policies present that outline upper management's time limit to get back on approvals sent from the project manager. If upper management does not respond within the specified time limit the request automatically gets approved and the project manager can move forward. This will ensure that there will not be any delays for the project.

6. Turnover Rate

For a project of this size, it can be assumed that there will some turnover within the project that must be accounted for. The high skilled employees will always have other opportunities that they could pursue and may even be head hunted. Losing a highly skilled employee could cause serious issues within the project.

Mitigation

The project manager is responsible for keeping the employees happy so that the turnover rate stays low and the project stays within the time and cost. There are several ways that a manger can make sure their employees stay happy. The first is providing proper compensation to each of the team members. The second is to have proper conflict resolution within the team. There should be good team chemistry and conflicts will only make employees want to leave the project or company. The third is to have a training program ready just in case an employee does leave the team.

7. Uncooperative Business Units

Business units have day-to-day tasks that need attention that could deter them from working with the project team and answering potential questions. The team will need cooperation from the business units so that the integration of all applications can take place. The team will also need feedback so that there can be a consistent and acceptable UI for all employees.

Mitigation

They are always busy with day to day tasks that find time to help us may not seem like a priority. There will be a team liaison that will be designated to communicate with each of the business units. The business units cannot be made to do anything, but allowing them to have a say in what the UI looks like could help to open up communication lines.

8. Employee Acceptance

At the end of the project, there must be proper training conducted so that the employees understand and accept the new UI, mobile development, and dashboard application. Project failure could occur if the employees are unable or unwilling to accept the changes made by the project team.

Mitigation

There needs to be proper training for the employees before the system has been fully implemented so that employees are more willing to accept a system that they understand and can operate. There will also be training available after the complete implementation of UI, mobile, and dashboard application. Allowing the employees to have continuous access to training will boost the chances of employee acceptance.

9. Latency Issues

Mobile development means that there will be added stress on the servers to provide continuous connectivity. If there are latency issues then the mobile applications become useless.

Mitigation

Multi-tasking techniques will allow even poor latency to be covered up. Work can continue while the transmissions happen in the background. Proper infrastructure will be selected based on an extensive analysis to prevent network or latency issues. There will be adequate servers to account for peak demands that could slow the network. Continuous improvements will be made to decrease load times even by fractions of seconds.

10. Executive Changes

For projects of this length, there can be changes in key executives that are a major part of the project. This can cause major disruptions in communication with the team and new executives must be made aware of everything within the project.

Mitigation

There is little that the project team can do to prevent a key executive from leaving the company, but the transition to a new executive can be made easier through continuous documentation of the project. An executive will be able to catch up to speed if there is easy to read documentation to detail all tasks that have taken place from the very beginning.