**Course**: MIS 342

**Task #2**: Analysis Deliverables

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**Project:**The Con Notification System

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**I-Requirements**

**A-Functional Requirements**

**1.Notify**

1.1 - The system will allow customers, patrons and and staff to report incidents and issues.

1.2 - The system will allow the operator to send notifications to the users.

1.3 - The system will allow user to report an issue.

**2.Tracking**

2.1 - The system will keep track of the incident progress and how long it takes to resolve it.

2.2 - The system will keep track of the time

2.3 - The system will keep track of who is handling incidents.

2.4 - The system will allow the operator to manage incidents and dispatch people to resolve the issues.

**3.Analysis**

3.1 - The system should be able to create graphs and statistics based on the current data.

3.2 - The system should store reports for later use.

3.2 - The system should allow data to be used to find trends.

**B-NonFunctional Requirements**

**1-Operational**

1.1 - The system will run on a windows operating system

1.1 - The system will allow 2 way communication between the operator and the user.

**2-Performance**

2.1 - The system should be able to handle large number of users.

**3-Security**

3.1 - Customer’s contact information will be secured

3.2 - Functionalities will be restricted/allowed based on the user’s type.

**4-Political and cultural**

None

**II-Requirements Elicitation Techniques Used**

**A-Interview**

We conducted an interview with Jason Watts and Gill Cnann in order to better understand their needs and expectations with the notification system. To conduct the interview, we used the document in appendix A. Based on the interview result, we were able to get a better understanding of the requirements.

**People Interviewed**: Jason Watts, CIO and Gill Cnann, CEO

**Interviewer:** Daniel Adams, with notes prepared by Calvin Speight and Feng Lin

**Purpose of Interview:**

* To better understand the setting that the Con Notification system solution will be operating in.
* To determine the requirements for this system, both current and any future requirements that the system should be able to adapt to.
* To understand how incidents are currently being reported, handled, and logged.

**Summary of Interview:**

* A need for analytics was expressed in this interview which we were previously not as concerned about. Instead of being an afterthought or something for the system to grow into, we now realize a way to collect, analyze, and present some form of analytics will either be a key part of this system or a companion system that we also need to develop.
* One of the biggest issues with the current system is that the data is scattered and does not get organized and compiled in a timely manner.
* Another main issue is that the current system does not scale to larger events well
* The need for some security to access the system as well as the data.

**Open Items:**

* A copy of an incident report log was requested, Gill Cnann will provide to team

**Detailed Notes:**

* See attached transcript

**B-Questionnaire**

For our third method of gathering the requirements for our project, we decidet to create a questionnaire that would be distributed to some of the volunteers that help Storykeeper Events. We choose to use this method because many of the volunteers come from all over. Not everyone is located in the geographical area of philadelphia. We asked Gil to send this out to volunteers because we felt that this would help us capture another voice that was part of the project. By understanding how some of the volunteers felt about the system, we hoped to gain an understanding of other ways that we could help to provide a high quality product. When designing the questionnaire, we choose to use a Google Doc because it was user friendly and most of the volunteers should have an easy understanding for how it works. We asked them several questions that can be found in Appendix C. We also left an open ended response section for volunteers to list any additional comments that they might want to make to help us provide the best product. Unfortunately we haven’t received any responses yet. We will update our report when we get the answers back

**C-Design Thinking**

**1.Empathize**

During empathise we tried to understand our customer needby using several methods. The goal was to have a clear idea of what our customers need and also engage him more in the process. It was also a time to understand the old system and its limitations. Unfortunately, we couldn’t go and observe an event to get a better understanding of the old system For that purpose, we had group meetings and brainstorming, interview with Gil and Jason and a questionnaire for the agents using the system. From all that feedback, it was clear that Gil and Jason wanted a system that focus more on user interaction and communication to improve their services, data analytics to find trends and statistics to improve their staffing allocation and data security to enforce people access to data.

**2.Define**

SKE is seeking to improve the technological base in order to better serve their customers. Currently, they use excel spreadsheets to document the issues and radios to communicate with their employees. They’re looking into a system that would provide real time data, detail reports of the issues that occur such as the severity, the problem and the solution, etc. The current requirement for the system should be easy to use, allowing two-way communication and the information needs to be easy to access. The future requirements are to have individual logins for different staff members and the customers and a more accurate timekeeping system. The company is fine with any system, which can be improved/expanded in the future. Push notifications and a log system is something that the company is looking into as it would be able to alert the customers and also allowing the customers to submit tickets where the staff would be able to respond and analyze the data afterwards.

**3.Ideate**

In the ideate phase we looked into a couple of solutions that would best fit the requirements and need that Jason and Gil had for their company. The first system, was an app called Discord, it was similar to WhatsApp, and Groupme. In this system a user can send a message or a question to a person within the company as long as the channel they are communicating in is the same. For example if I was the user and I was in the same channel as two other people then I would be able to send any message I may have to them. Only the people in the channel will be able to receive and respond to the messages. Another solution that we proposed is called osTicket, it is a ticketing/log system. This system allows the users to send any message or question they may have to the company. Once the message is received a representative can look over the basis of the message and assign a certain department or person in the company who would be the best fit to deal with the situation or question at hand.

**4.Prototype**

After reviewing the two potential solutions, the osTicket system was found to be the best solution. This system allows a more thorough approach and requires the employee-user interaction to be more precise leaving less room for unresolved issues or problems. The system requires the representative who first reads the message to put the day it is put into the contact log and the last day possible to tend to the message. It also tracks the amount of time it takes the employee to review the problem and solve it. The system also provides the information of who first opened the message, and who solved it. It basically provides the whole “journey” of the message since it was first received to when it was resolved. This seemed to be the best solution for Gil and Jason based on what we discussed in the interview we held.

**5.Test**

In the testing phase, we attempted to see how well these applications would work in a setting where they were operating over an intranet as opposed to the internet. Unfortunately we had some difficulty recreating a useable intranet that would be comparable to the setting this system will need to function in. We were able to test both potential solutions over an internet connection, although the test of osTicket was a demo and not the full program due to costs. Both osTicket and Discord are able to handle the requirements that we were able to test which include; providing logs of the incident reports and how they were handled, an interface that allows for direct interaction with the customers so that customers can report incidents and customers can be notified of issues, provide timestamps to measure how long an incident took to be handled, and provide a secure system. WIthout being able to test the intranet capabilities of these applications we cannot be sure if either system meets the requirements, but we can be confident that these systems at least provide a framework to work with. If they do not run over intranet as effectively, it will be simpler to create an altered version that works over intranet than to create a system from scratch.

**III-Appendices**

**A-Interview Questions**

1. What were the previous method used to collect notifications?
2. Is using a third party software as opposed to developing a brand new system an acceptable solution?
3. What is the average response time to respond to an incident?
4. Which details are required for incident’s logs? What information are you looking for in those logs?
5. What level of security is necessary for this data?
6. What amount of time are you willing to allocate to train employees to use any new system?
7. What's the anticipated capacity limit?
8. What's the average age group of the customers?
9. Would you like the system to send more than push up notifications?

**B-Interview Notes**

Q: What were the previous method used to collect notifications?

A: They used Excel to track data or wrote about incidents that occurred on a piece of paper. Often they would only find out about incidences that happened during the summary meeting at the end of events. They used radios to communicate and often they just dealt with the issue and not document it.

Q:Is using a third party software as opposed to developing a brand new system an acceptable solution?

A: They are ok with any system that can be expanded on later

Q:What is the average response time to respond to an incident?

A: This often depends on the severity of the situation. They want a system that will not only report how long it takes to respond, but they want to know when the situation was taken care of and by whom it was taken care of. They want users to be able to rate an incident as high; medium; or low in terms of risk.

Q:Which details are required for incident’s logs? What information are you looking for in those logs?

A: They would like detailed reports of the incidents. The more provided the better. It should include When did it happen,where it happened, who it happened to, Who responded, who reported it, the severity and when it was fixed. Real data.

Q:What level of security is necessary for this data?

A: It should have username and password encryption. Users shouldn’t be able to see admin info. There shouldn’t be any private information available to the public. They want to be able to identify any problematic people that recur at events. Also volunteers

Q: What amount of time are you willing to allocate to train employees to use any new system?

A: Training should be on the fly or even the day of. It should be very easy to use.

Q: What's the anticipated capacity limit?

A: Anywhere from 250 to 500,000 people. Always looking to expand the numbers.

Q: What's the average age group of the customers?

A: This will mostly depend on the event. There are events where people are looking for something for their 2 or 3 year old while at the same time looking for something for a 45 year old.

Q: Would you like the system to send more than pushup notifications ?

A: they want something that is easy for their customers to use. It should have two way communication

Additional notes:

* They are able to have some form of internet or intranet.

**C-Questionnaire Summary**

For our third method of gathering the requirements for our project we decidet to create a questionnaire that would be distributed to some of the volunteers that help Storykeeper Events. We choose to use this method because many of the volunteers come from all over. Not everyone is located in the geographical area of philadelphia. We asked Gil to send this out to volunteers because we felt that this would help us capture another voice that was part of the project. By understanding how some of the volunteers felt about the system, we hoped to gain an understanding of other ways that we could help to provide a high quality product. When designing the questionnaire, we choose to use a Google Doc because it was user friendly and most of the volunteers should have an easy understanding for how it works. We asked them several questions that can be found in Appendix C. We also left an open ended response section for volunteers to list any additional comments that they might want to make to help us provide the best product. Unfortunately we haven’t received any responses yet. We will update our report when we get the answers back

**D-Questionnaire**

* How long does it take you to respond to an average incident?
* What do you like about the current method of reporting and responding to incidents?
* What improvements would you like to see in the method of reporting and responding to incidents?
* Would you be opposed to using a third party software to report and respond to incidents?
* How do you typically notify your users of any issues that might occur?
* Are there any additional comments that you would like to make to provide the best product for you?