

## Inception Phase Specification – Deliverables

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Cochran  
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Item	Description
System Request	Provide a one page summary of the information system opportunity. Address the elements shown in the SAD text.
Vision Document and Feasibility Analysis (organizational, technical, and economic)	Provide a complete and updated version of the Vision Document using the template provided on Blackboard. Place the Feasibility Analysis, including a narrative explanation, in Appendix A, and incorporate an appropriate reference to it within the Vision Document
Process Models <ul style="list-style-type: none"> <li>• “As-is” Process Model</li> <li>• “To-be” Process Model</li> </ul>	Provide models of the current business process(es) and the envisioned business process(es). Use UML activity diagrams to represent the two process models. Provide an introductory narrative that describes the process models and links them to System Request and/or the Vision Document.
System Requirements	From the high-level requirements (i.e., Product Features section of the Vision Document), construct a complete set of system requirements, organized as a hierarchy. State each requirement using the “shall” format described in Arlow and Neustadt. Provide an introductory narrative.
List of use cases: actors and use of features	From the system requirements and product features (Vision Document), identify the use cases. The use cases should be constructed as overview, essential use cases: (1) use case name; (2) primary actor; and (3) brief description. Provide a trace matrix that associates use cases with system requirements. Provide an introductory narrative.
Initial architecture considerations	Provide descriptions and representations of system architecture options from (1) the design viewpoint; and (2) the realization viewpoint. Provide an introductory narrative.
Risk analysis – high risk items identified	<p>From the Vision Document, use cases, and architecture considerations, determine the high risk items for the project. First, address the use cases:</p> <ul style="list-style-type: none"> <li>• Define the criteria for assessing use case risk</li> <li>• Assign a risk level, either “high” or “low” to each use case</li> </ul> <p>Second, describe all other risks areas:</p> <ul style="list-style-type: none"> <li>• Define the criteria for assessing risk</li> <li>• Assign a risk level, either “high” or “low” to each risk item</li> </ul> <p>Third, describe how risk may be addressed during the iterations of the Elaboration phase.</p> <p>Provide an introductory narrative.</p>

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Date: 16 October 2017

To: Surgery on Sunday (SOS) Louisville  
From: SOS Consultants

Subject: System Request

This memo will provide the business reasons for building a new system and the value that the system is expected to provide. First, recognition needs to be given to Dr. Robert M. Barker and the University of Louisville College of Business, they are providing undergraduate students with an amazing opportunity to work together with a local non-profit organization to improve their current system. Next, the business-related reasons for initiating the new system will be stated. Followed by the business capabilities that the system will provide and the benefits that the system will provide for the organization. And finally, any issues that are relevant to the implementation of the system.

### **Business Need**

- Decrease overhead of managing donor and volunteer information
- Increase donations.
- Improve marketing
- Increase demographic communications.
- Increase flow of information

### **Business Requirements**

- The current system lacks a way to keep the community involved i.e. newsletters
- The current system lacks links to social media on website
- The current system lacks a database to store donor and volunteer information.
- The current system lacks automated storage of donor and volunteer information to database
- The current system lacks a way to translate the webpage
- The current system lacks compatible donor forms
- The current system lacks several donation options

### **Business Value**

- Social media links easier to find on website - 10% increase in donations totaling to additional \$750.00 per year.
- Language translator - 2% increase in friends/family of patients donate totaling to additional \$500.00 per year.
- Saved time and effectiveness from relational database tied to donor and volunteer forms. 2 additional grants at \$5,000 each + 10% increase in donations per year. \$10,750.00

### **Special Issues or Constraints**

- Needs to be an easy-to-use system
- Limited budget
- Prefer to implement while still using WordPress if possible
- Planning must be done by Dec. 4th (end of the fall semester)

## Revision History

Date	Version	Description	Author
09/20/2017	1.0		Eric Chen
9/30/2017	1.1		Brad Riggs/Patrick Warren
10/14/2017	1.2		Brad Riggs

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exist. The details of how the SOS Louisville fulfills these needs are detailed in the use-case and supplementary specifications.

## 1.1 References

SOS Consultants PowerPoint

# 2. Positioning

## 2.1 Problem Statement

SOS Louisville manual records down donors and volunteers, which is very time consuming.

The problem of	Not having a database
affects	SOS Louisville staffs
the impact of which is	Time consuming
a successful solution would be	A simple database to record all the information instead of manually recording it.

## 2.2 Product Position Statement

By using this database, we assume, SOS Louisville will have enough time for other tasks.

For	SOS Louisville
Who	The person usually records the data
The Database System	Is a software application
That	Provides the ability to automate the process of recording and storing donors and volunteers
Unlike	Currently, everything is still being manually entered
Our product	Provides SOS Louisville staffs with easy and simple to use database that will speed their process

# 3. Stakeholder and User Descriptions

## 3.1 Stakeholder Summary

Name	Description	Responsibilities
Board of Directors	Board of Directors.	Responsible for approving events, monitor progress, and approve funding.
Administrators	Manage/update website, facilitate volunteers, gather patient data and schedule events.	Responsible for the upkeep of the entire website, database, and business.

Translate Webpage	Secondary	76% of patients are Spanish speakers and cannot convert the webpage	No conversion at this time	Add in a language conversion tool that will change the language of the webpage
Social Media Links	Secondary	Links are broken	Currently have social media icons available, but not all are functional	All links will be functional and point to popular social media websites

### 3.5 Alternatives and Competition

Instead of the proposed solution, the alternative would be to stay with the current solution, which would cause SOS Louisville to lose money.

## 4. Product Overview

### 4.1 Product Perspective

#### 4.1.1 Employee Management

- 1) Volunteers
  - a) Volunteer Form
  - i) Volunteer Table
- 2) Staff
  - a) Flows Directly to Staff Table

#### 4.1.2 Funding

- 1) Donors
  - a) Donor Form
  - i) Donor Table
- 2) Grants
  - a) Written to Grant Organization for Funding
  - i) Grant Table

#### 4.1.3 Event Management

- 1) Patients
  - a) Patient Referral Form
  - i) Patient Table
- 2) Facilities

After taking a look at a handful of issues and areas that can be improved, here is how we propose to fix it. First, you will want to include links to social media on every page of the website. Whether it is at the bottom or top of each page, it needs to be easily accessed to direct users to your social media pages to get more likes and shares leading to greater awareness. This will bring in more volunteers and donations. Second, a drop-down menu will be added to the top of the webpage that will allow users to toggle between English and Spanish. Since the vast majority of your patients are Spanish speaking, this will allow their family members to better understand your organization making them more likely to support your cause by donating. Third, donor forms need to be improved, when a donor fills out a form to donate, their information needs to be sent straight to you and stored into a database to avoid any potential oversights, avoid potential errors that comes with manual entry, and to eliminate time waste from manual entry. The same thing goes for volunteers and patients, forms need to automatically add their information into a database. The fourth and biggest improvement that will tie everything together is creating a relational database for all volunteers, patients, facilities, staff, events, etc. This will put all the information into one central location and simple queries can be ran to pull any piece of information that you need making organizing and scheduling events more streamlined saving lots of valuable time.

### 7.3 Business Case

Let's assume that SOS Louisville's average donation is currently \$50.00 with approximately 150 donors per year totaling to \$7500.00 in donations. Also, assume that an average grant is \$5000.00 at 5 grants per year for a total of \$25000.

The following describes the estimated increase in donations from making social media accessible from every page on the website:

Pessimistic outcome – 5% increase totaling to an additional \$375.00 per year.

Expected outcome – 10% increase totaling to an additional \$750.00 per year. (See Table 1.0)

Optimistic outcome – 15% increase totaling to an additional \$1125.00 per year.

Allowing the website to be translated to Spanish will increase the likeliness of the friends and family members of the Spanish speaking patients to donate. Assuming that surgeries are performed on 50 Spanish speaking patients per year and each patient has 10 friends and family members totaling to 500 you can expect the following:

Pessimistic outcome – 1% more of friends and family members donate at the average rate totaling to \$250.00 more per year.

Expected outcome – 2% more of friends and family members donate at the average rate totaling to \$500.00 more per year.

Optimistic outcome – 3% more of friends and family members donate at the average rate totaling to \$750.00 more per year.

Improving the donation process making it more user friendly and giving the donors the chance to leave feedback or donate on a recurring basis can result in the following increase:

Pessimistic outcome – 5% increase in donations totaling to an additional \$375.00 per year

Expected outcome – 10% increase in donations totaling to an additional \$750.00 per year. (See Table 1.0)

Optimistic outcome – 15% increase in donations totaling to an additional \$1125.00 per year.

Creating a relational database that will automatically store donor and volunteer information can save time and allow for more grant writing and communication with donors and volunteers which can result in the following increase:

Pessimistic outcome – 1 more grant received per year with a 5% increase in donations totaling to an additional \$5375.00 per year

Expected outcome – 2 more grants received per year with a 10% increase in donations totaling to an additional \$10750.00 per year. (See Table 1.0)

Optimistic outcome – 3 more grants received per year with a 15% increase in donations totaling to an additional \$16125.00 per year.

### 7.4 Technical Feasibility

Familiarity with	SOS Consultants have a solid understanding of the current system SOS Louisville is
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## **7.6 Organizational Feasibility**

**Project Champion:** Erica Sutton and Barbara Martin

**Senior Management:** Erica Sutton and Barbara Martin

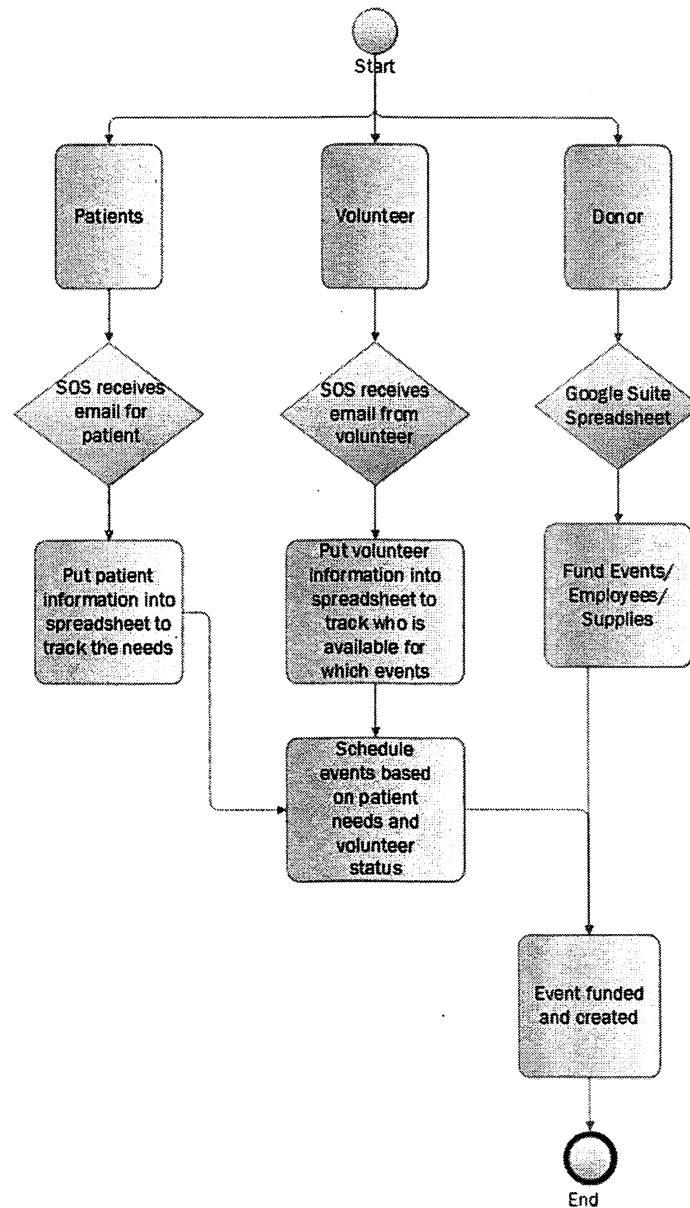
**Users:** SOS Louisville Staff

**Other Stakeholders:** Donors, Volunteers, Facilities, and Patients

The project is strategically aligned with the business because with the improvements to their business processes it will allow them to operate more efficiently and establish a solid foundation that will allow them to keep up with their goal of organizational growth. This means that if they were to double or triple in size, the amount of overhead from the improved processes will be minimal as opposed to their current processes.

## “As-Is” Process Model

Currently, Surgery on Sunday Louisville’s process for taking in donor, volunteer, and patient information and turning this into events, newsletters, and stories is convoluted and extremely manual driven. The donor information gets logged into a Google Suite Spreadsheet via a form filled out on the website. All volunteer and patient information is stored after receiving an email. They must then manually input all information into a spreadsheet by hand which is a long process, depending on the volunteer or patient. When they create events, they must search through these many records to find common links which is a slow process. What SOS Consultants propose is a change in the system completely that will allow for a more streamlined process which would free up time for other tasks within the organization.





## **System Requirements**

The System Requirements sections gives a hierarchical overview of functional and nonfunctional requirements that this system will rely on. Sections 1 takes in the requirements of the system as a whole. Section 2 deals with the donations and donation portal using PayPal, recurring payments, and one-time payments. Section 3 considers the volunteer form, how the volunteers will fill out their information, and where it will be stored. Section 4 allows for a language translator for the entire website. Language translator will translate to at least Spanish. Section 5 requires the site to have social media links on all web pages. Sections 6 requires that a full calendar be displayed under one webpage.

1.0	Website shall be maintained using WordPress as it's already built out.
1.1	Database shall be maintained using MySQL and will be able to add, modify, and delete volunteers and donors.
1.2	System as a whole shall be maintained using Microsoft Azure.
2.0	Website shall have a donation portal.
2.1	Website shall continue using PayPal.
2.2	Donation portal shall give the user the ability to set up recurring payments or perform a one-time donation.
2.3	Donation data shall be gathered using Azure.
3.0	Website shall have a volunteer form.
3.1	Volunteer form shall be changed based on the type of volunteer.
3.2	Volunteer form data shall be maintained by a MySQL database in Microsoft Azure.
3.3	Volunteers shall be added, modified, and deleted.
4.0	Website shall have a language translator.
4.1	Language translator shall be able to interpret to at least Spanish.
5.0	Social media links shall be placed on all web pages.
6.0	An events page shall house a full year calendar.
6.1	The calendar shall store information for organizational events.
6.2	Events can be created, modified, and deleted through Azure.

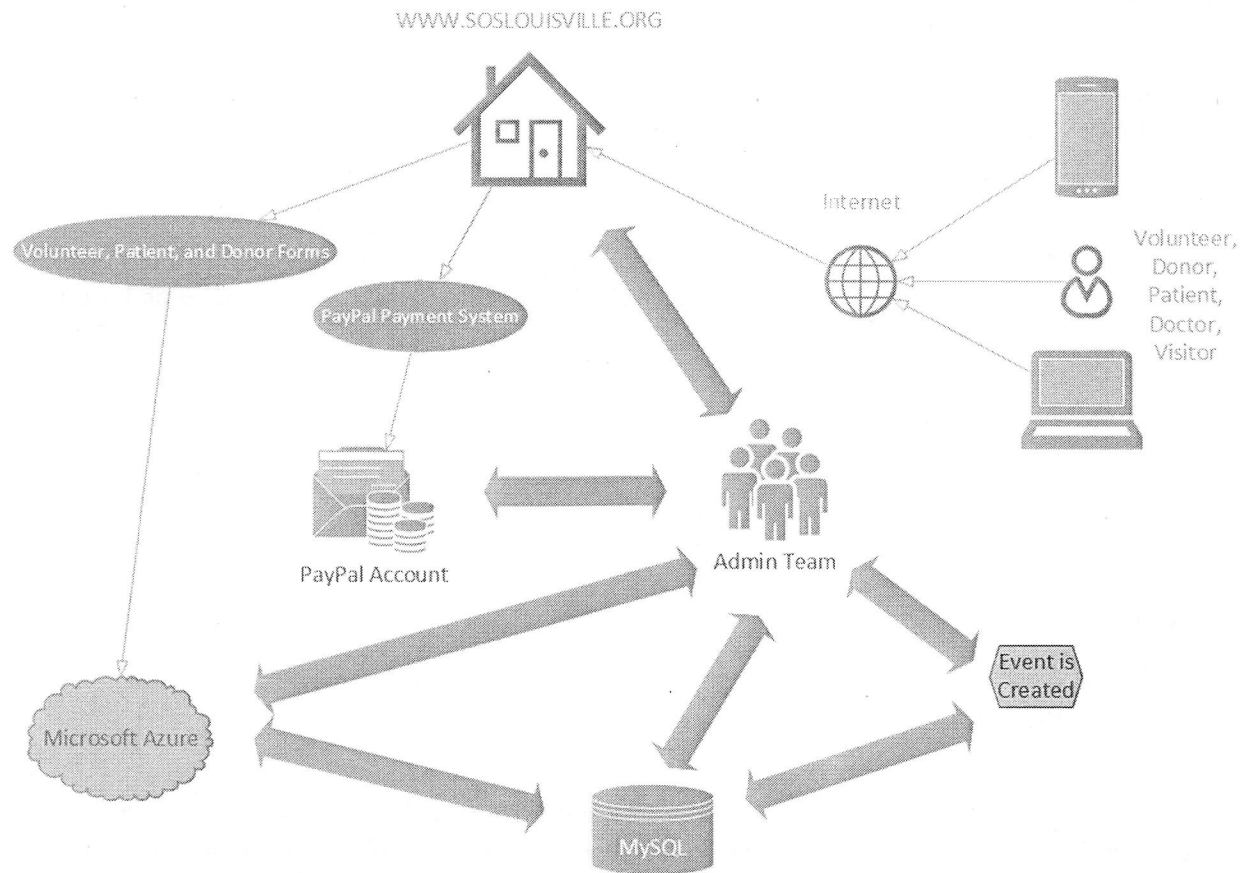
- 4.2.1 One-time payment
    - 4.2.2 Recurring payment
  - 4.3 Leave comments
    - A comment section for donors
    - 4.3.1 Add the comment
    - 4.3.2 Modify the comment
    - 4.3.3 Delete the comment
  - 4.4 Store into database
    - Take the information and store it into the database
    - 4.4.1 Store the form
    - 4.4.1 Modify the form
    - 4.4.3 Delete the form
- 5. Patient
  - 5.1 Sign in
    - Old patients sign in, new patients sign up
    - 5.1.1 Create new patient
    - 5.1.2 Modify patient
    - 5.1.3 Delete patient
  - 5.2 Store into database
    - Take the information and store it into the database
    - 4.4.1 Store the patient
    - 4.4.1 Modify the patient
    - 4.4.3 Delete the patient
- 6. Staff
  - 6.1 Create an event
    - Create an event for the volunteers
    - 6.1.1 Add the event
    - 6.1.2 Modify the event
    - 6.1.3 Delete the event
  - 6.2 Check event registration
    - Staff will check to see event information
  - 6.3 Translate website
    - Translate the website to Spanish
  - 6.4 Access to link
    - Provide a better social media link
  - 6.5 Check information
    - Generate a report listing from the stored information
- 7. Doctor
  - 7.1 Check event
    - Check events that involves patients
  - 7.2 Fill out form
    - Patient referrals form filled out by the doctor
    - 7.2.1 Add the form
    - 7.2.2 Modify the form

This chart displays the system requirements and use cases required in order for the system to operate. The "X" mark is placed where use cases volunteer, for example, meets update on the system requirements side. Placing it there states that, volunteer has the ability to use the update system requirement.

Use Cases								
System Requirements		Volunteer	Register for an event	Donor	Register to donate	Make donation	Leave comments	Patient
	Update	X	X	X	X		X	X
	Delete	X	X	X	X		X	X
	Validation	X	X	X	X	X		
	Fill out form	X	X	X	X	X		X
	Security	X	X	X	X	X		X
	PayPal			X	X	X		
	Comment section						X	
	Store into database	X	X	X	X	X	X	X
		Staff	Create event	Check event	Translate	Doctor	Check event	Patient referrals
	Donation Info	X						
	Update	X	X	X	X	X	X	X
	Delete	X	X	X	X	X	X	X
	Validation	X	X	X	X	X	X	X
	Fill out form	X				X		X
	Patient Info	X				X		
	Volunteer Info	X				X		

## Realization Viewpoint

Now that we have a design viewpoint of the architecture, we can get a visual of the realization viewpoint. With this in place, we can begin to build on the architecture already in place to streamline processes and cut down on unnecessary tasks. Volunteers, donors, patients, and visitors can login through the internet and access [www.soslouisville.org](http://www.soslouisville.org). From there, they can fill volunteer forms, donor forms, and donate money to the organization's cause. Admins have free reign of the website, the PayPal account, the GSuite account, MySQL, and oversee creating events.



## **Team Charter**

### **Team goals:**

#### **This semester our team wishes to...**

- Solve SOS's main problem of organizing their volunteer and donor databases.
- Surgery on Sunday to implement our new system
- Work as a unit to complete every assignment and iteration on time.
- Improve our presentation and persuasion skills
- Communicate efficiently within our group
- Hold every member accountable for his/her parts
- To communicate efficiently with our client and professor
- Present ourselves professionally to our client and classmates
- Build a relationship and establish rapport with our client

### **Team meetings:**

Our team meets twice a week in the classroom, during this time we will discuss upcoming assignments, due dates, and meetings. In addition, to this face-to-face discussion we communicate through GroupMe (a group messaging app). This app allows us to communicate anytime and anywhere. Whether it be face-to-face or through GroupMe, meetings are conducted in order to accomplish a task at hand, this could be anywhere from working on an assignment, working on an iteration, creating a presentation, or preparing to present a presentation. The decisions made regarding meetings, assignments, iterations, etc. are made as a group, meaning everyone has the opportunity to add input. For presentations, we have worked to accommodate each member's schedule. Before a presentation, we plan to meet twice to go over the agenda, and flow of information during the time of presentation.

### **Team communications:**

As mentioned above, as a group we can communicate in one of two ways (face-to-face or GroupMe). However, in regards of material, we have enabled a shared folder in google drive that allows us all to view and/or edit the work done as a group or even the work done in pairs anytime and anywhere. These platforms of communication allow us to communicate ideas, technical material, and make decisions among members. Google drive also allows us to view what others have edited and contributed. It provides an efficient method of collaboration.

In order to communicate with the client or instructor we take a different approach. This communication should not be done as a group; we do not want to be asking the same person the same question six times. This is where a liaison is selected. This liaison will act as the channel of communication between the group and the client or the group and the professor. The liaison is selected on a volunteer basis. Next, the liaison will contact the client or professor through email and once they receive response it is their

## Gantt Chart

I2													
ID	Task Name	Duration (Days)	Resource	Predecessor	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	1-Oct	2-Oct	
A	Gantt Chart	2	Cailyn Cochran	--									
B	Use Cases	3	Eric Chen	--									
C	Vision Document	3	Brad Riggs	--									
D	Initial Architecture Considerations	3	Patrick Warren	--									
E	Risk Analysis - Use Case Risks	3	Eric Chen	A, B, C, D									
F	Risk Analysis - Other Risk Areas	3	Patrick Warren	A, B, C, D									
G	System Requirements	3	Alexa Bearden	A, B, C, D									
H	Inception Phase- Prototypes	3	Cailyn Cochran /Patrick Warren	A,B,C,D									
I3													
ID	Task Name	Duration (Days)	Resource	Predecessor	16-Oct	17-Oct	18-Oct	19-Oct	20-Oct	21-Oct	22-Oct	23-Oct	24-Oct
A	Use case descriptions for high risk use cases	3	Brad Riggs/Alexa Bearden	--									
B	Updated Gantt chart	3	Cailyn Cochran	--									
C	Use case diagram	3	Eric Chen	A,B									
D	Use case HTML prototype (high risk use cases)	3	Patrick Warren	C									

The two Gantt charts include the task names, duration (days), the resource (person completing the task, task dependencies, and a visual of the duration and completion of each event for iteration 2 and iteration 3.

The first Gantt chart, I2, lists and describes the tasks for the completion of iteration 2. The first four tasks include the Gantt chart, use cases, vision document, and initial architecture considerations. These tasks did not have any predecessors, and had duration of at most 3 days. The following tasks were risk analysis for the use cases and other risk areas, system requirements, and inception phase (prototypes). These had predecessors of the first four tasks, so they must be completed first.

The second Gantt chart I3, lists and outlines the 4 tasks for iteration 3. The tasks for this iteration included use case descriptions for high risk cases, updated Gantt chart, use case diagram, and use case HTML prototype. For the first two tasks, there were no dependencies and had 3 days of duration. The use case diagram will begin after the first two tasks, and lastly the use case HTML can begin after the third task is completed.

months and upcoming months. To the right of the calendar we added a noticeable donation box to give users another donation option aside from the navigation bar. Under the new donation box, we added a newsletter form for visitors to subscribe to weekly or monthly newsletters to find about SOS's events and fundraisers.

On the navigation bar, we added the language selection dropdown box to accommodate to the Spanish-speaking patients and visitors. On the right side of the navigation bar, we added three social media buttons that will allow users to visit their other platforms and stay up to date with their events and news.

Lastly, we created a prototype for the footer of their website that highlights their contact information, volunteer sign-up, social media, donation options. We included the contact information because most websites include this information in the footer, along with the social media. We included the donation button again to give the users another option, since this is their biggest source of financial support, aside from grants and partnerships.

Overall, we have seen some improvements to the usability of their website, like the separation of volunteer forms and a monthly donation option. The prototypes reflect improvements that will increase user interaction with their website and social media platforms. Adding more donation buttons will give users more options to donate, and help emphasize their fundraising needs, and the language dropdown box is essential to the Spanish speaking visitors.