YouSee
Final Project II

Phase 2

Pitch

Team Name: CodeBusters

Team Organization:

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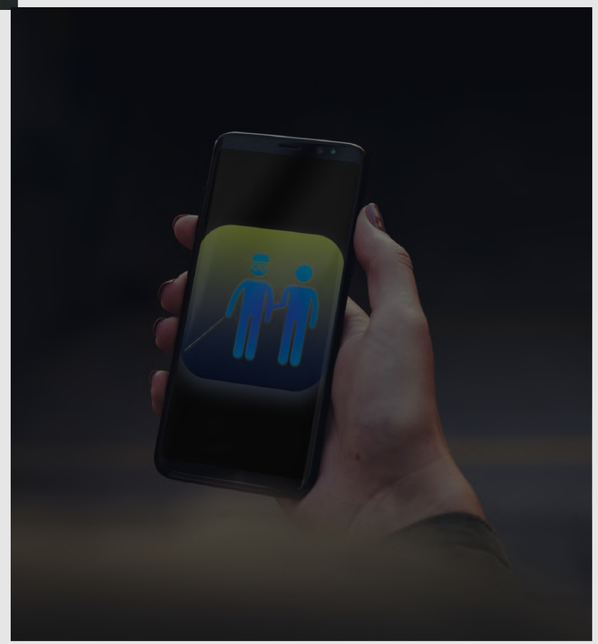
Samuel Osezua *<Team Lead phase II>*

Jacob Chlebowski *<Requirements Engineer, Design>*

Pitch

Agenda



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Pitch

AS-IS

What is the Problem?

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Problem Statement

The problem of	The inability to navigate indoors
affects	Those with visual impairments
the impact of which is	Exclusion and unnecessary difficulties for those with visual impairments
a successful solution would be	An application that would help the user connect to a help/volunteer who would try to successfully navigate them indoors to their desired destination virtually or in-person.

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Product Position Statement

For	People who are visually impaired
Who	Require help to navigate indoors
The (product name)	is a smartphone application (YouSee)
That	Provides the user the ability to navigate indoors by the help of a 3rd party.
Unlike	Current navigation applications, such as Google Maps, that do not provide navigation indoors and does not allow the user to choose routes based on accessibility
Our product	Provides someone to help the user get to their desired location indoors

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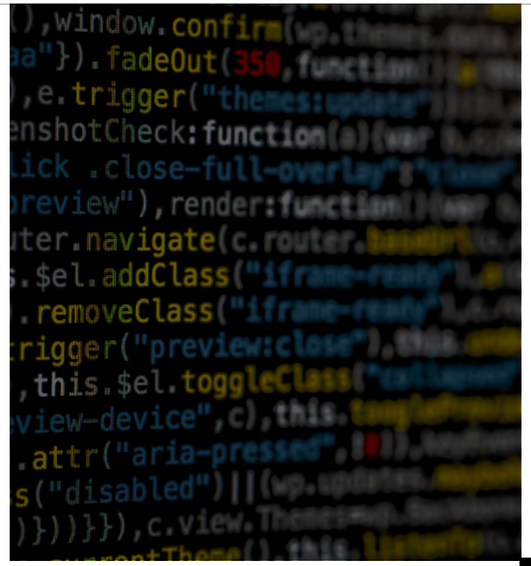
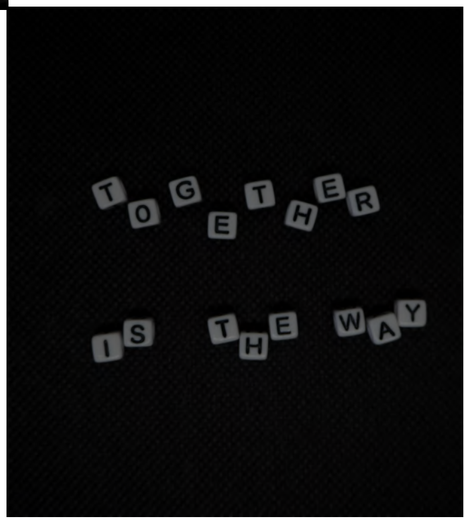
To-Be





What is it that we're building?

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OF

- Team CodeBusters

BY

- Team CodeBusters
- Requirements Engineers
- Software Developers
- Testing Engineers

FOR

- Blind people
- Old people
- Good Samaritans

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Issues with first Mockup

01

Unavailable Volunteer

There may not be someone available to help assist the blind person given a particular time.

02

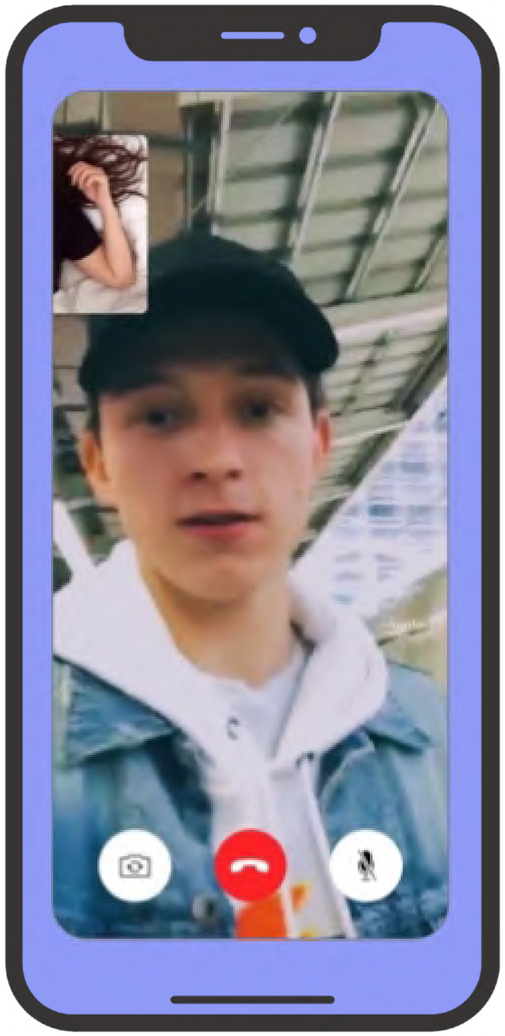
How to trust a volunteer

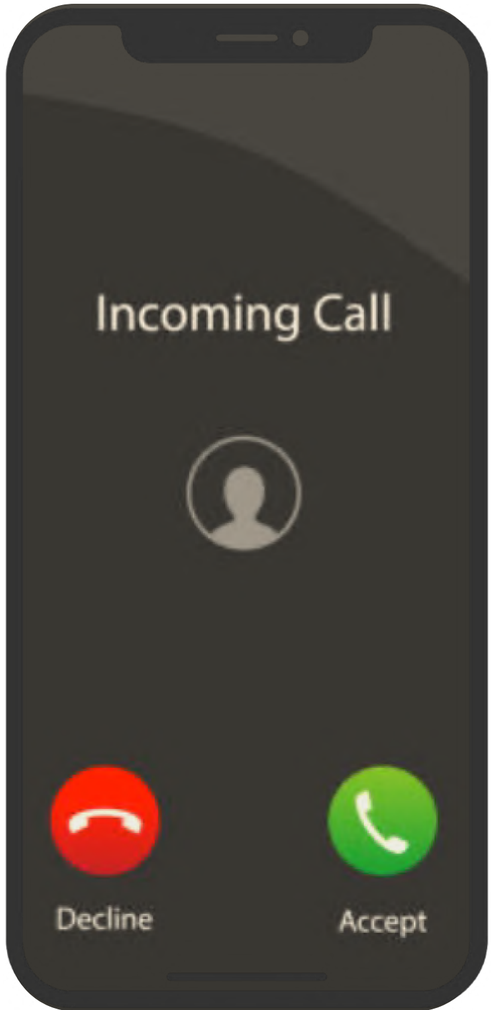
We did not include a way to verify a volunteer.

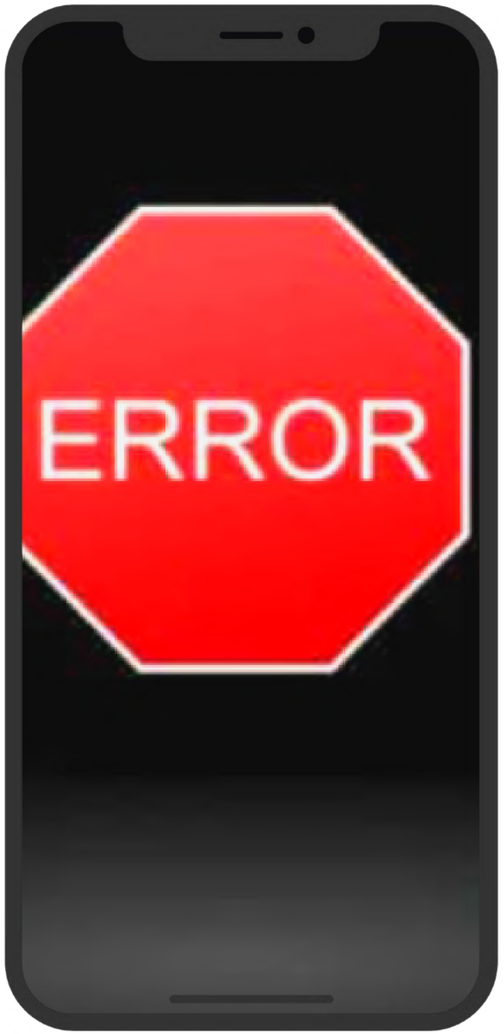
03

Buttons interfering with device commands

The buttons that gives the app commands can interfere with the devices functionality.







Functional

1.0 - The application shall start searching for partner when the user taps the green button that says "search"

1.1 - The application shall make a distinct noise and vibration when the user closes it

1.2 - The application shall make a phone ringing sound while it is searching for a suitable partner

1.3 - The application shall cancel the search and make a distinct sound if the user taps the red button that says "cancel"

1.4 - The application shall state out loud "connected" and vibrate the phone once a suitable partner has been connected

1.5 - The outward facing camera shall turn on once the user is connected to a volunteer and the application shall state out loud "camera on"

1.6 - The application shall go back to searching if the time taken to connect exceeds 3 minutes after finding a suitable partner

1.7 - The application shall end the call if the user taps the red button that says "cancel"

1.8 - The application shall be brought back to the landing page if the user taps the red button that says "cancel"

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1.9 - The application shall change the language of the interface depending on the user's choice from a list

1.10 - The application shall display the user's connection status

1. 11 - The application theme will change when the user selects a different option

1.12 - The application shall call 911 if the user presses the button labeled "emergency"

1.13 - The input and out of the application shall change based on the connected devices

1.14 - The application will import contacts if the user allows it

1.15 - The application will use GPS to track the user's location

1.16 - The application will notify the user if the camera is not detected

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Non-Functional

1.0 - The user shall have a solid internet connection on their phone to connect with a volunteer.

1.1 - The application shall have access to language repositories in varieties of languages such as English, Mandarin, Japanese, German, French and Spanish.

1.2 - The application shall have a customizable user interface, with large/bold font by default for the visually impaired.

1.3 - The application shall be able to contact EMS if the user has an emergency.

1.4 - The application shall be able to connect to bluetooth devices for audio input/output.

1.5 - The application shall be able to detect camera damage if the damage makes the app unusable.

1.6 - The application shall merge user contacts and set emergency contacts for the user.

1.7 - The application shall cache the last known GPS location in the event of disconnection.

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Objectives to Requirements Traceability Matrix									
Objectives to Requirements Traceability Matrix	Non-Functional Requirements	NFR1	NFR2	NFR3	NFR4	NFR5	NFR6	NFR7	NFR8
Functional Requirements									
FR1		x							
FR2									
FR3									
FR4									
FR5									
FR6							x		
FR7		x							
FR8									
FR9			x						
FR10		x							
FR11				x					
FR12					x				
FR13			x			x			
FR14								x	
FR15									x
FR16							x		

Pitch

Use Case Diagram

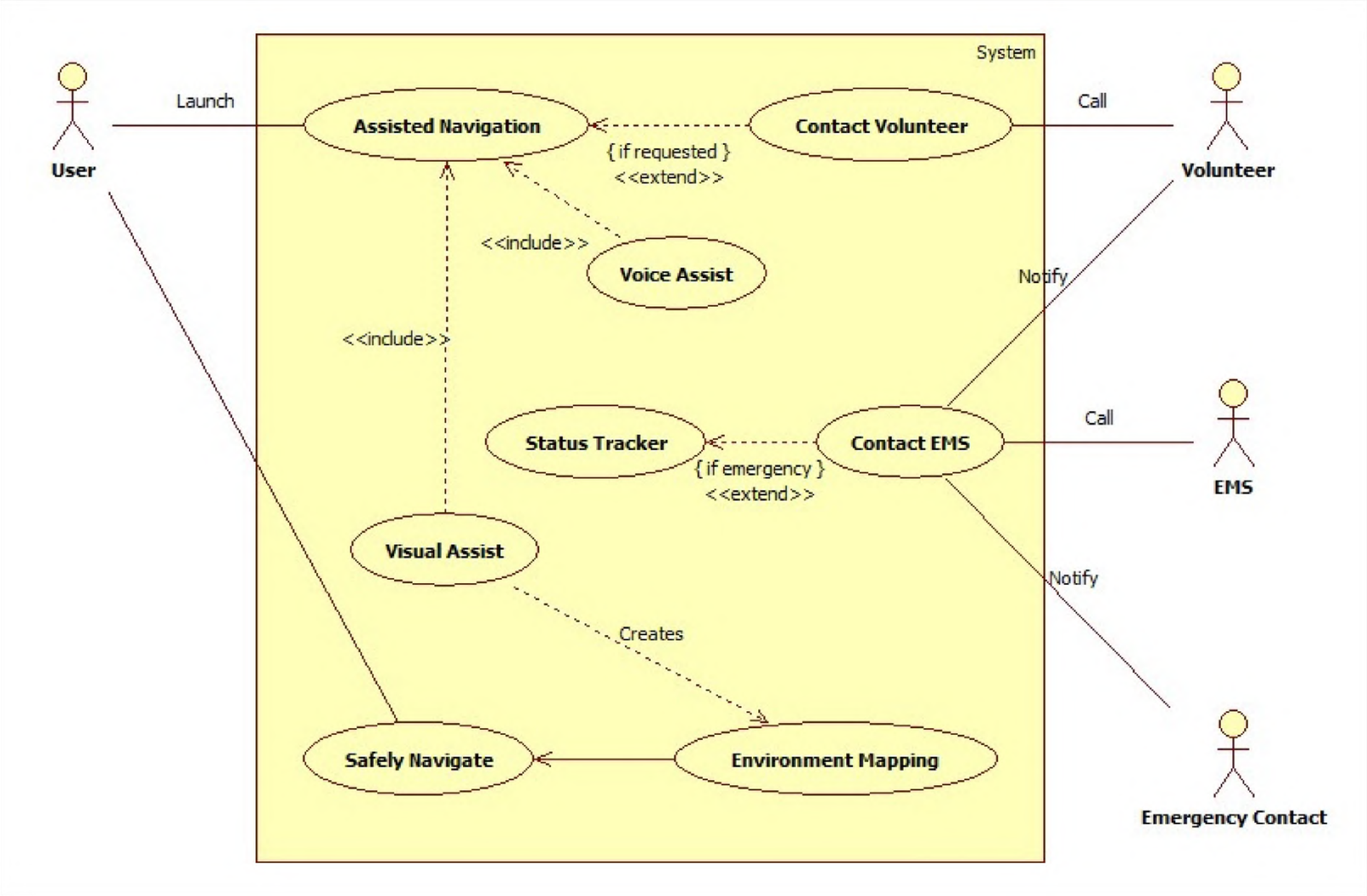
Actors:

Blind User
Volunteer User
EMS Personnel
Emergency Contact

System Includes:

Navigation Technology
- Voice
- Camera Mapping

Communication
- Calls & Texts
- Status/Emergency Tracker



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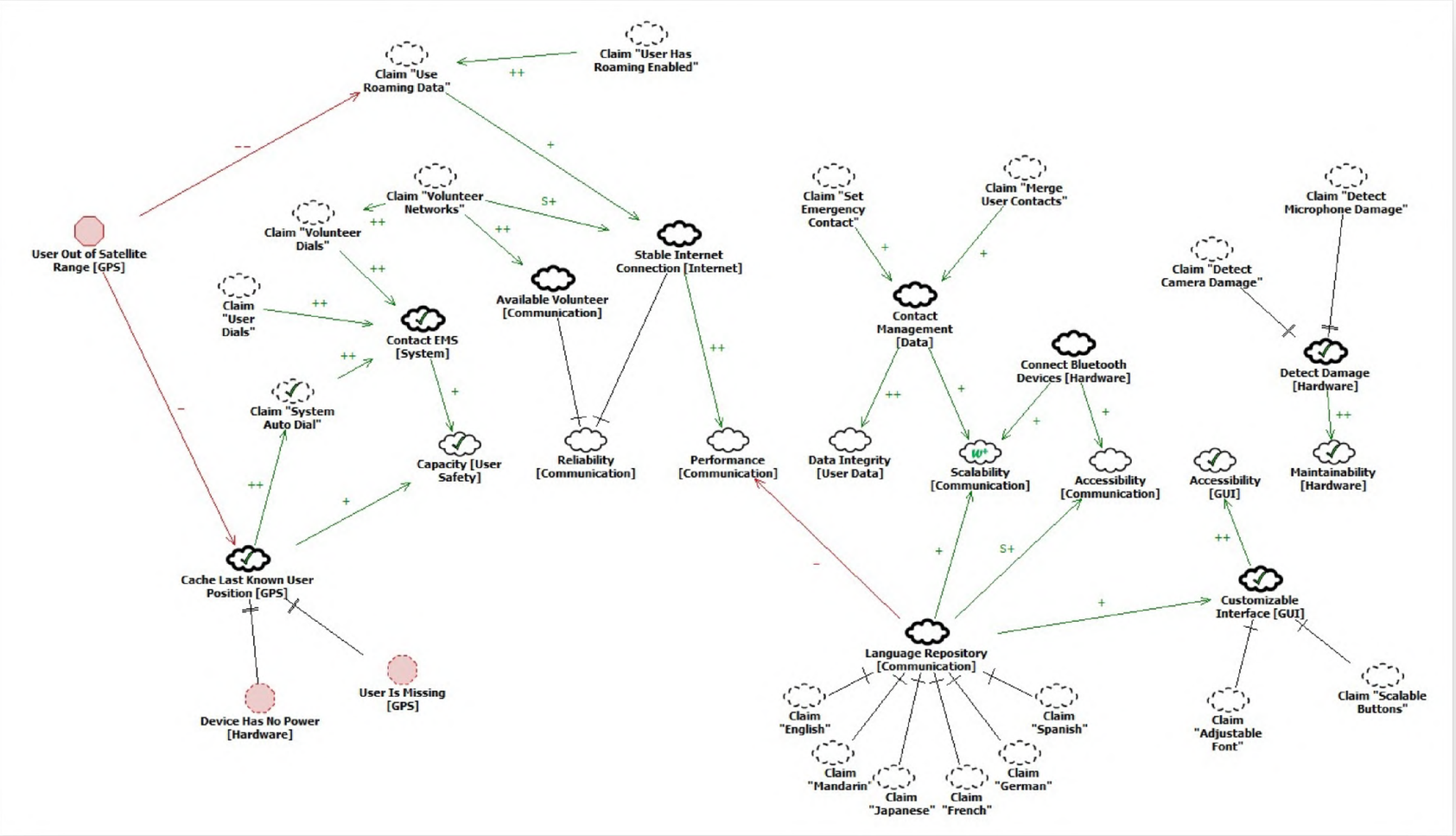
Product Softgoal Interdependency Graph

Types:

Capacity
Reliability
Performance
Data Integrity
Scalability
Accessibility
Maintainability



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Problem Interdependency Graph

Ultimate Goal:

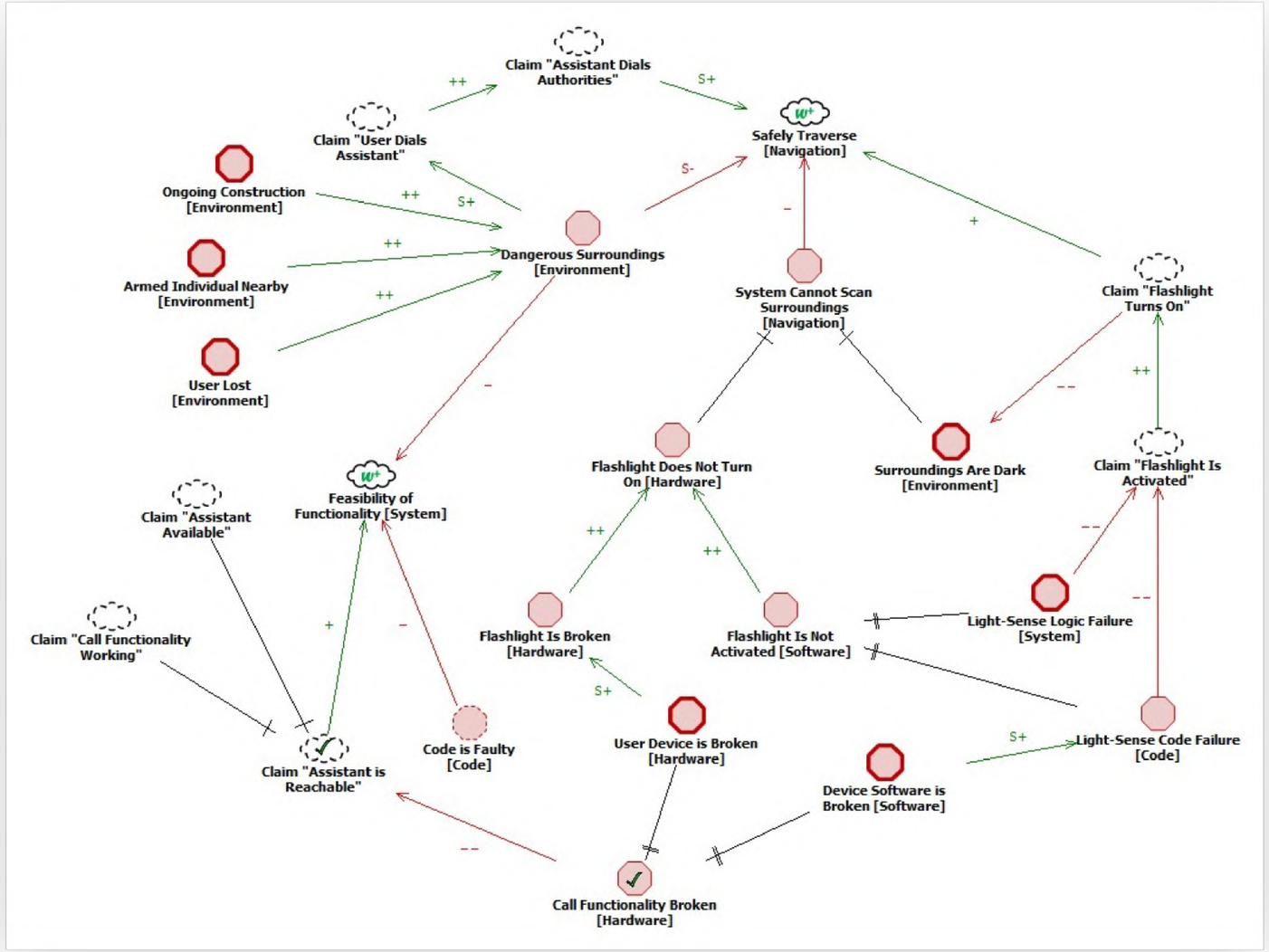
User Can Safely Traverse

Key Problems:

Hardware Problems
- Camera Broken
- Microphone Broken
- Speaker Broken

Software Problems
- Call Function Not Working
- GPS Network Down

Natural Disasters & Unpredictable Dangers



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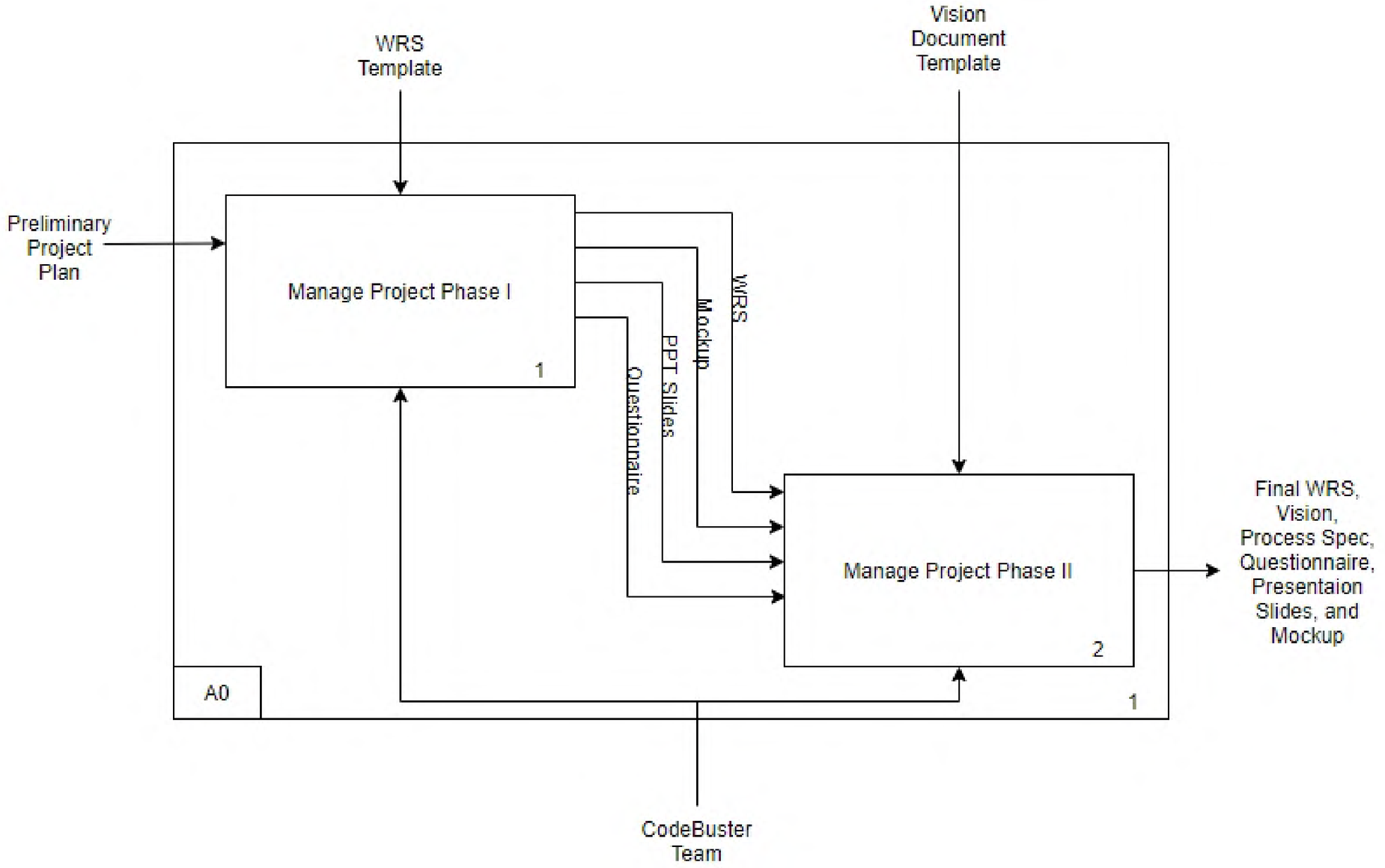
IDEF0 - Process



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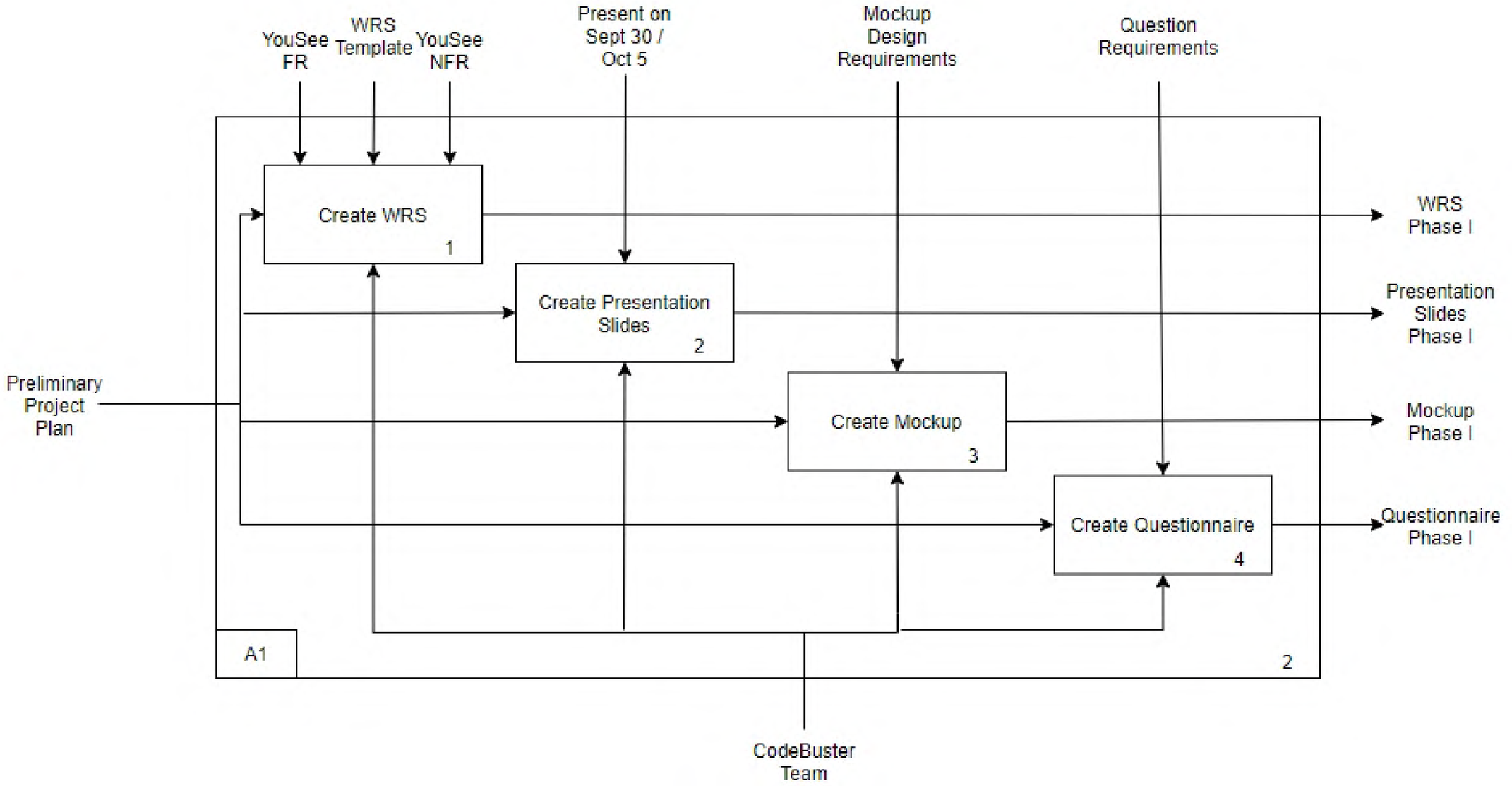
A1 - Phase I



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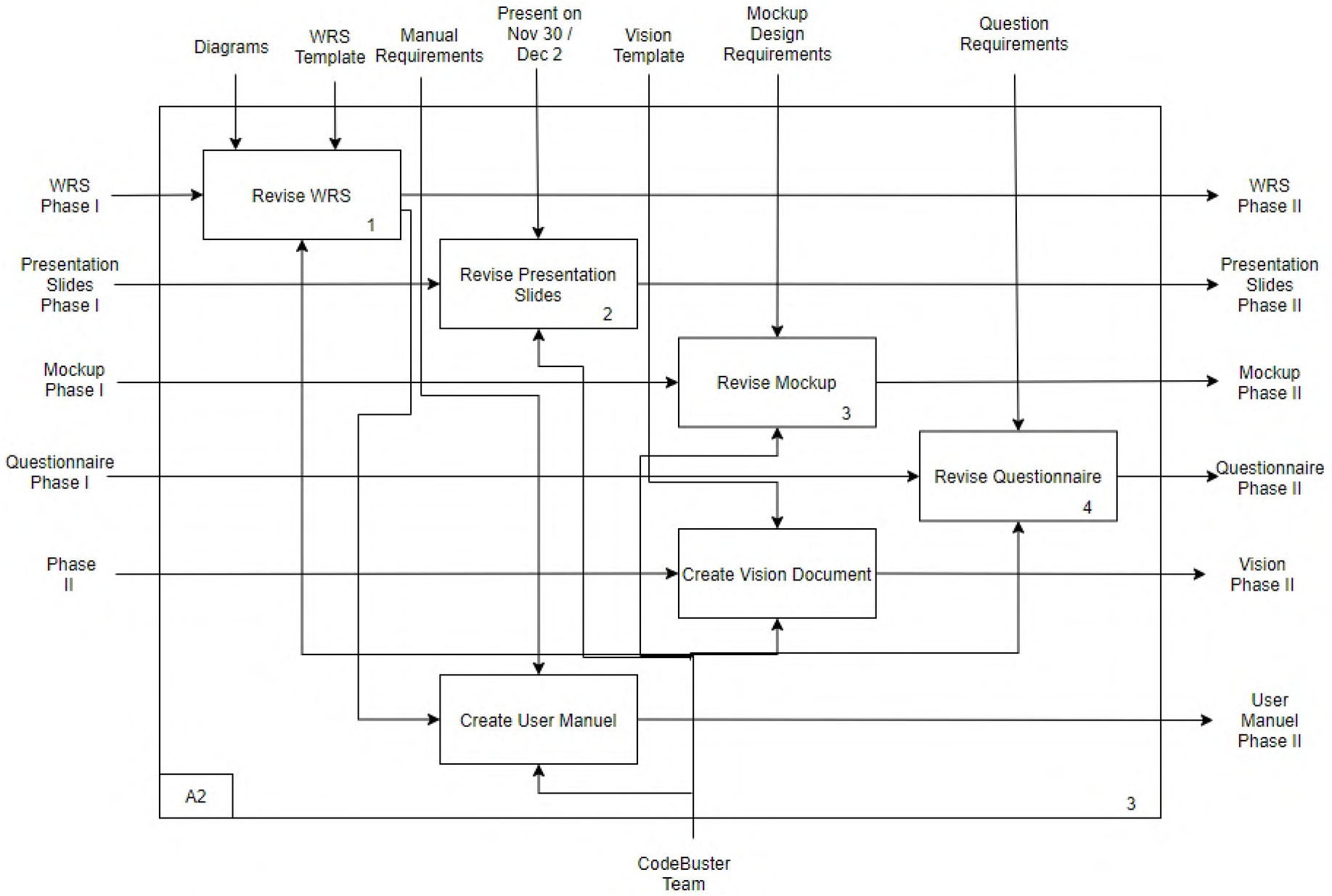
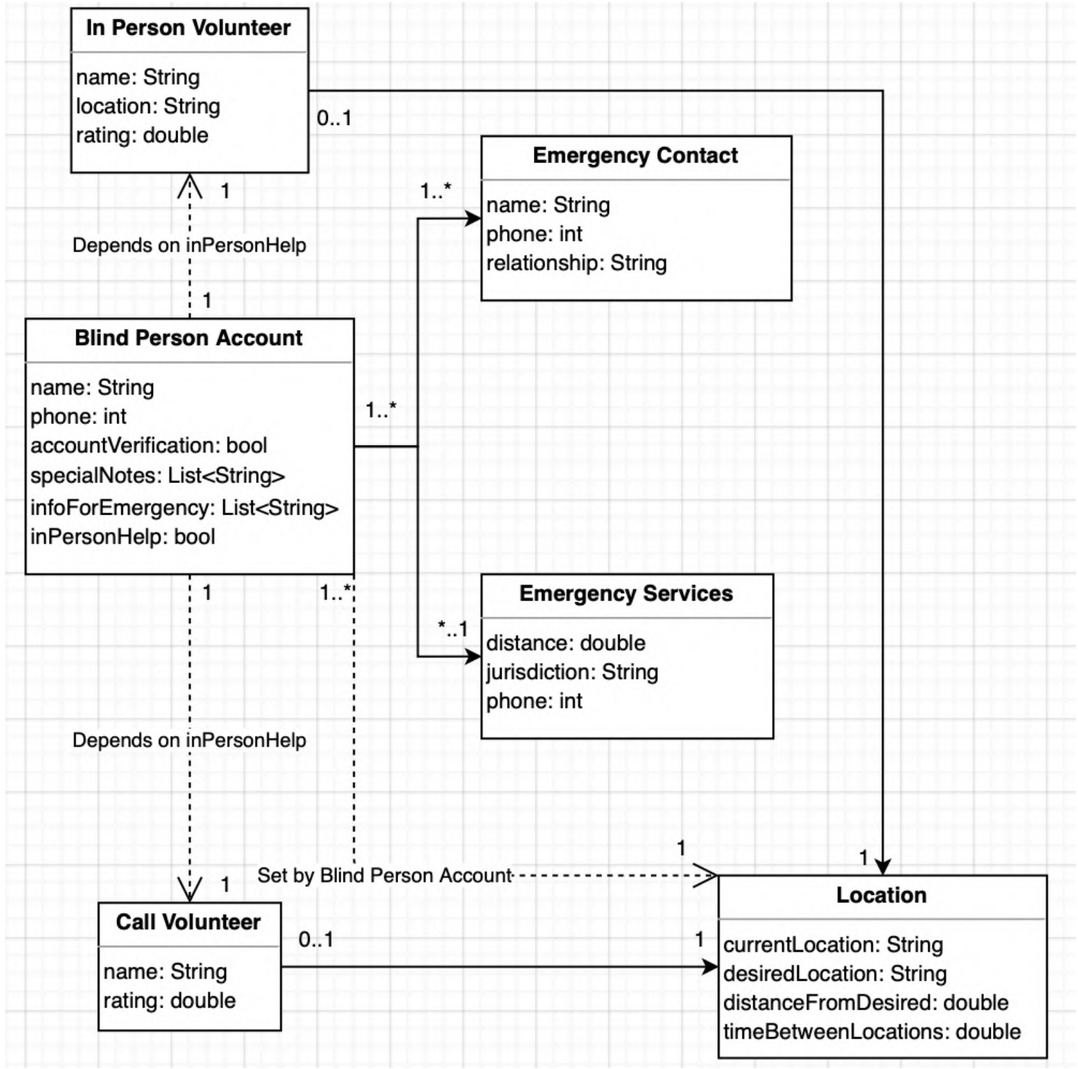
A2 - Phase II


Diagrams
WRS Template
Manual Requirements
Present on Nov 30 / Dec 2
Vision Template
Mockup Design Requirements
Question Requirements
WRS Phase I
Revise WRS
1
WRS Phase II
Presentation Slides Phase I
Revise Presentation Slides
2
Presentation Slides Phase II
Mockup Phase I
Revise Mockup
3
Mockup Phase II
Questionnaire Phase I
Revise Questionnaire
4
Questionnaire Phase II
Phase II
Create Vision Document
Vision Phase II
Create User Manuel
User Manuel Phase II
A2
3
CodeBuster Team

UML Class Diagram



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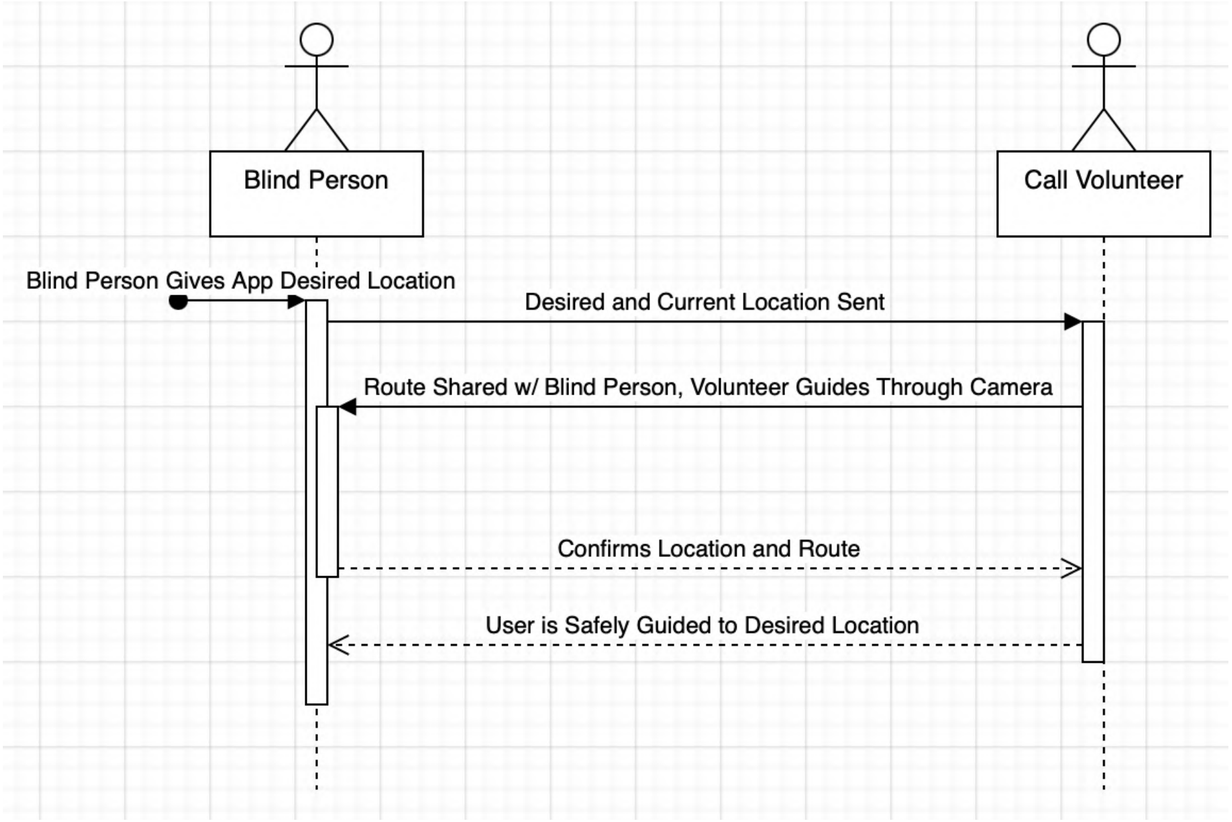
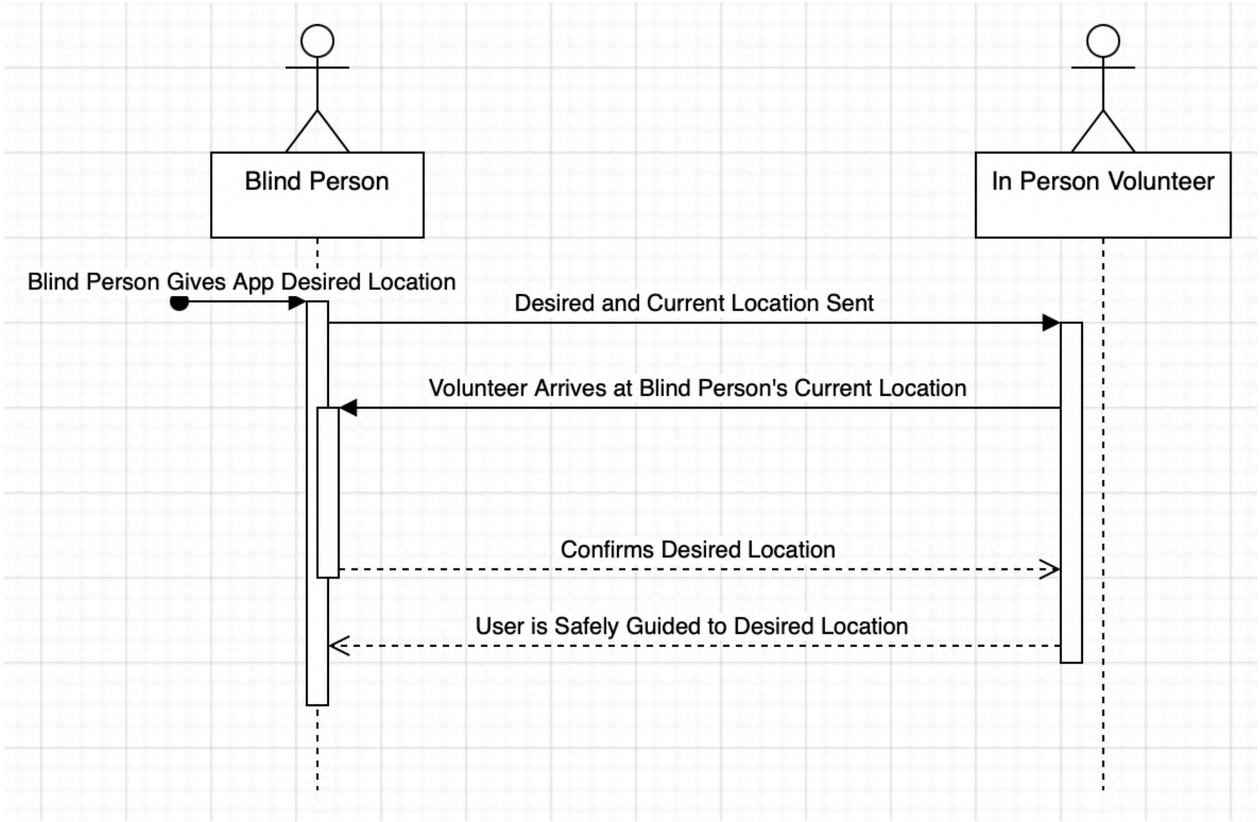
UML Sequence Diagrams





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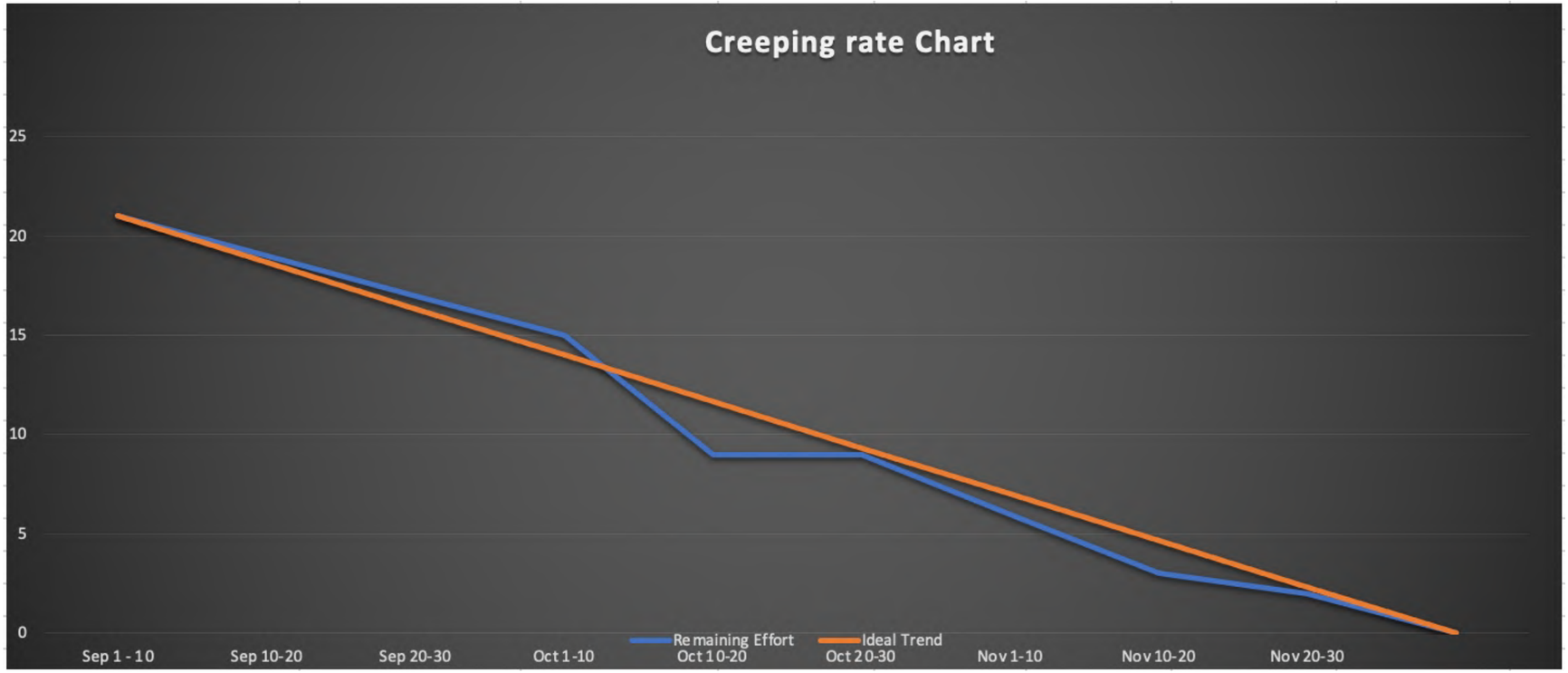
Creeping Rate Chart											
Due Date	Task	Initial Estimate	Sep 1 - 10	Sep 10-20	Sep 20-30	Oct 1-10	Oct 10-20	Oct 20-30	Nov 1-10	Nov 10-20	Nov 20-30
		Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
2-Sep	Preliminary Project Plan	3	2								
30-Sep	Interim Project I	7		2	2	3					
12-Oct	Final Project I Submission	2				2	-1				
16-Nov	Interim Project II	7				1	1	3	1		
30-Nov	Final Project II Submission	2							2	1	2
Remaining Effort		21	19	17	15	9	9	6	3	2	0
Ideal Trend		21	18.6666667	16.33333	14	11.6667	9.333333	7	4.666667	2.3333333	0



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App Demo

https://www.figma.com/proto/s7Oo2E1gjZa54Sv4aDo26Y/Mockup?node-id=7%3A5&scaling=scale-down&page-id=0%3A1&starting-point-node-id=7%3A5&show-proto-sidebar=1

Pitch

Future Features

Student Volunteer Program

- Staff of personal volunteers available 24/7.
- Medical students can apply with YouSee for volunteer or internships.
- Students can acquire letters of recommendations from YouSee management.

Object Detection Specificity

- YouSee *currently* has AR mapping technology and built-in text-to-speech.
- YouSee shall integrate a specific object detection system that integrates both AR mapping and text-to-speech
- A blind user can point the camera at an object and the system will tell them what the object is.
- Include specific details like colors and object brand or model.
- Specificity allows for safety.

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Team Website: http://www.utdallas.edu/~jsh170830/index.html

Thank you

Any Questions?

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