

Analysis

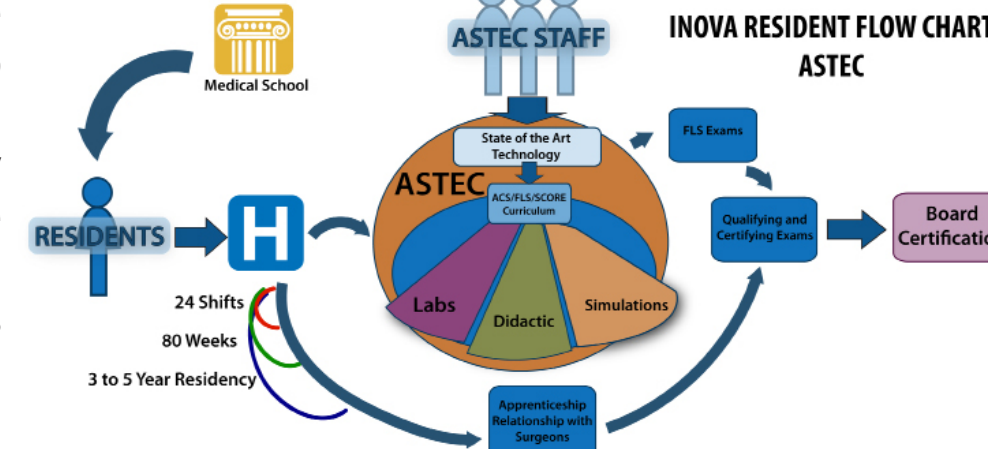
Refining Our Focus

Our objective is to use the information gained through our contextual inquiry and analysis to refine our system concept in order to move closer to a useful and functional prototype solution. In the process of data collection and analysis, the following issues have come into focus:

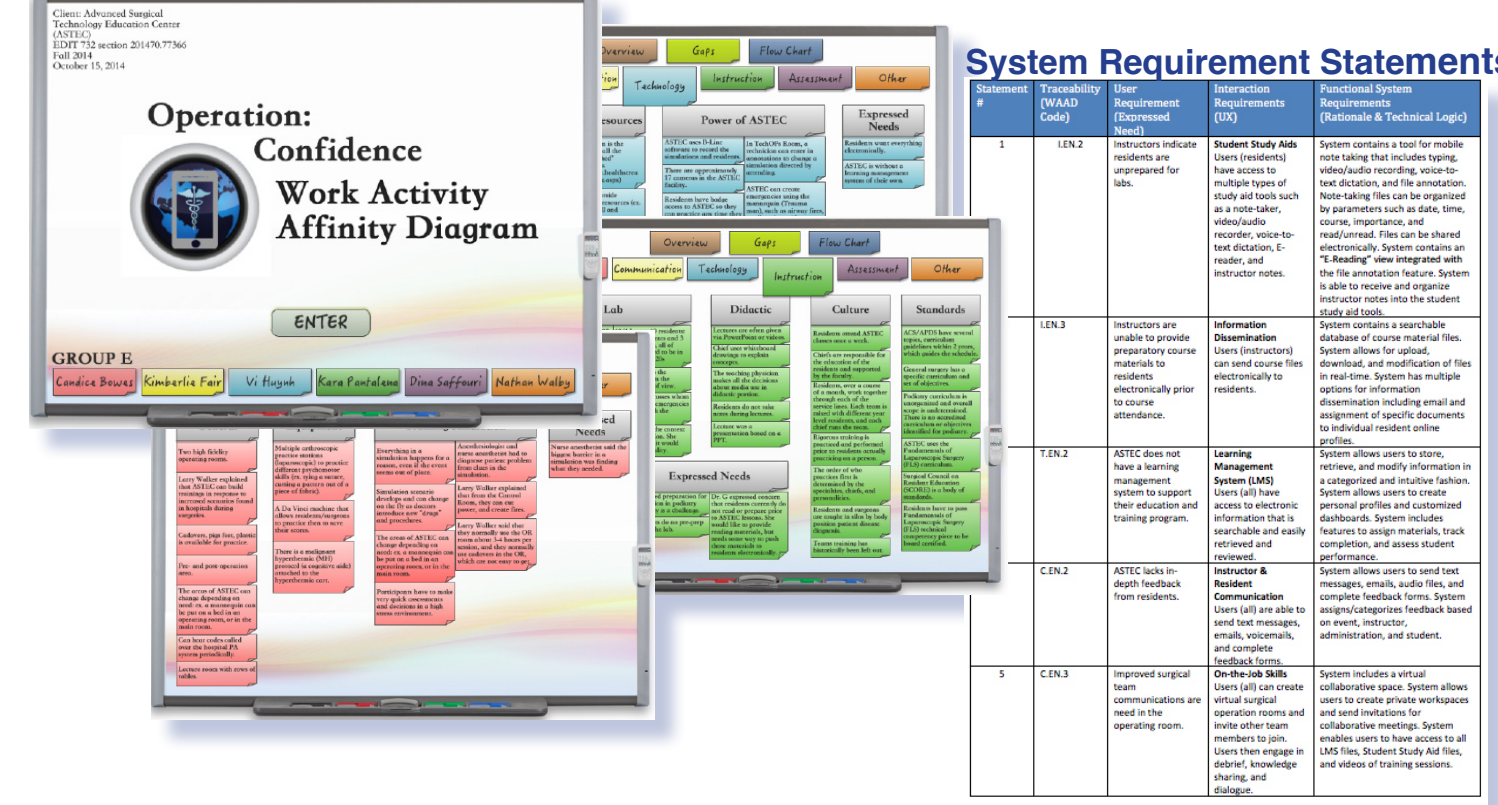
- The needs of residents to pass exams and to improve and hone surgical skills
- The needs of teaching staff to provide up-to-date information on techniques and materials, and to develop curriculum that supports the residents' needs
- The needs of ASTEC administration to provide quality education and support for the teaching staff and the residents that targets designated performance goals
- Feasible mobile design solutions focused on the needs of each stakeholder group

Data Collection Methodology

- Establish Key Questions
- Conduct Contextual Information Review
- Participate in On-site Observations
- Facilitate Focused Interviews



Work Activity Affinity Diagram

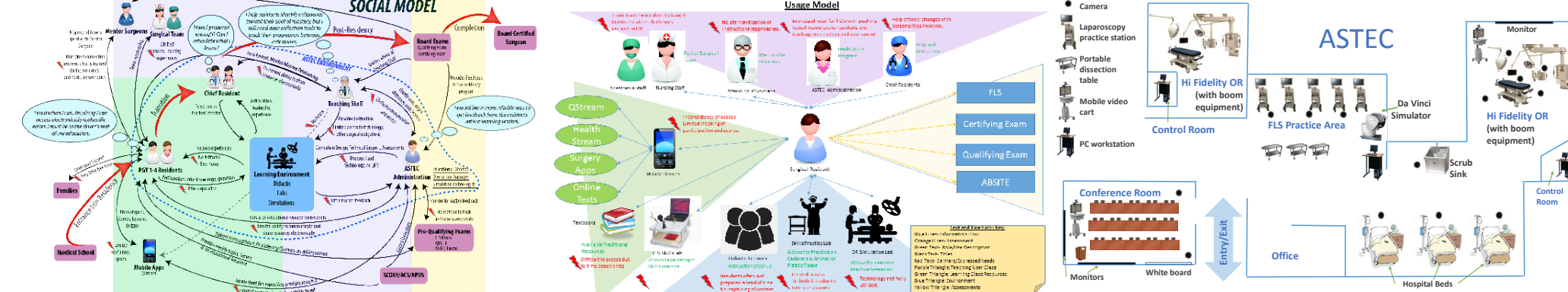


Scenes from ASTEC



In analyzing the data gathered during the contextual inquiry, we created a work activity affinity diagram, system requirement statements, and various models that express the data in different ways. All of this would guide the decisions made during the design phase.

Models



Social Model
The social model illustrates the social interactions between surgical residents, ASTEC personnel, and outside entities as they relate to the educational progression of residents.

Usage Model
The Usage Model depicts the many and varied ways ASTEC educates and trains surgical residents.

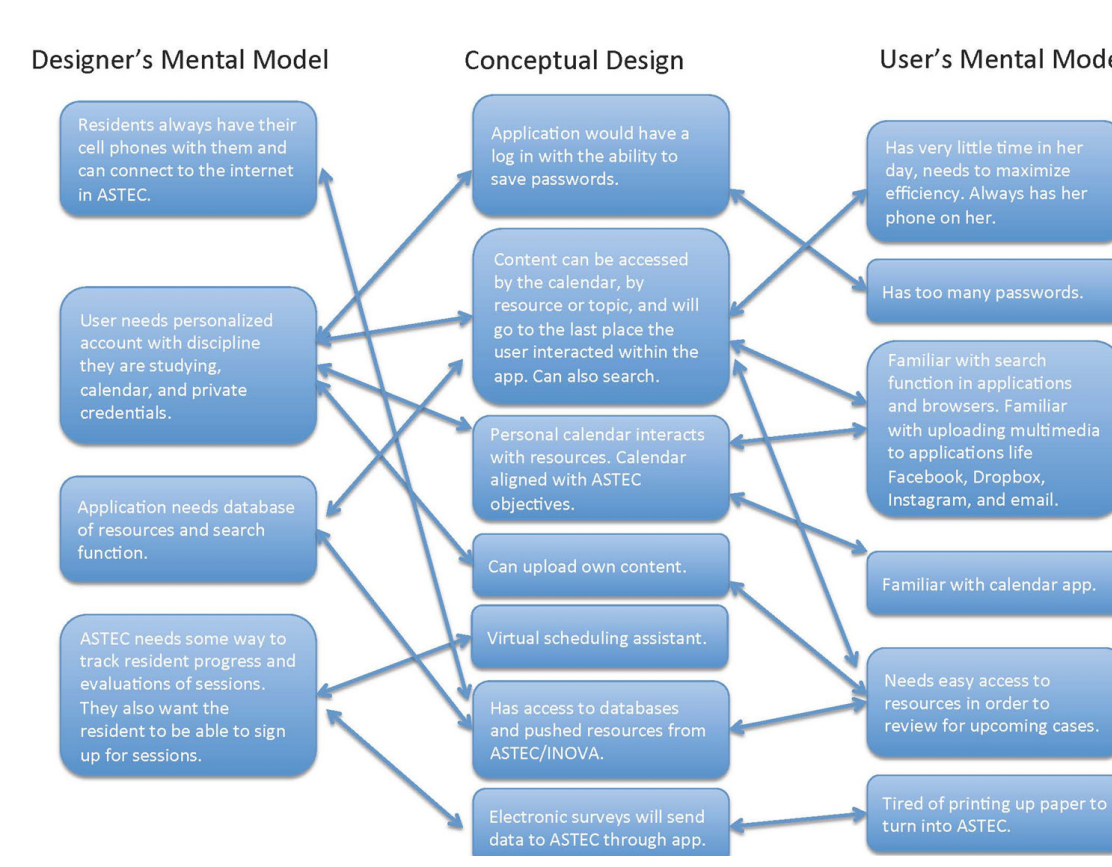
Working Environment Physical Model
The working environment physical model represents the physical setting of the work environment and how it does or does not support the work activity.

Design

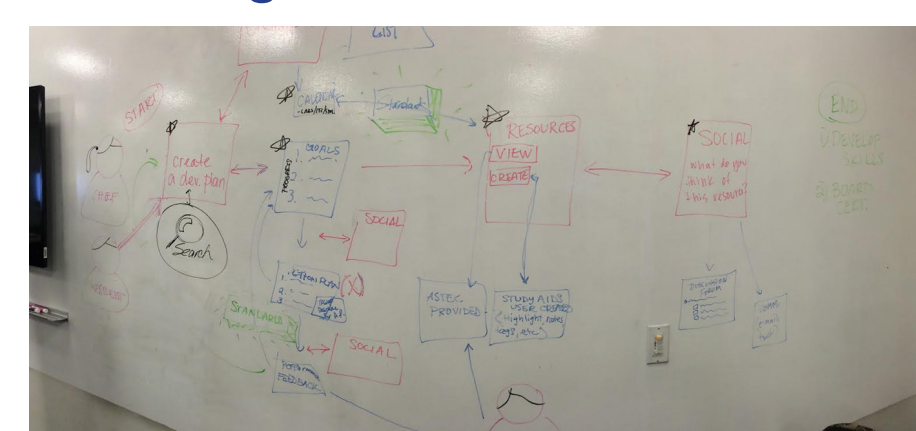
Primary Persona: Dr. Jane Blake

- Personal Life and Habits**
 - 33 years old
 - Married
 - Walks to work
 - Plays video games
- Professional Practice**
 - PGY-4 General Surgery Resident
 - Accesses SCORE curriculum on a weekly basis
 - Enjoys working with specialists in her field
 - Interested in mentoring younger residents
- Technology Use**
 - Has cell phone at all times
 - Too many passwords in her life
- Time Demands**
 - Works 80 hours a week
 - Little time for study

Mapping from Designer to User

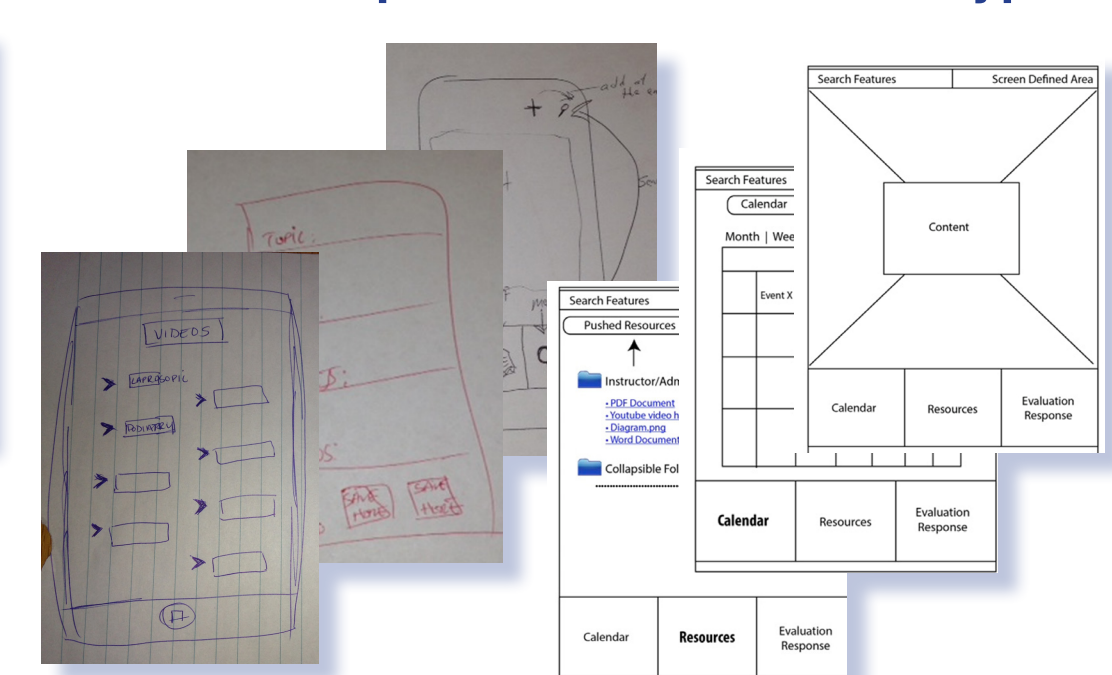


Sketching and Ideation



Using a whiteboard to create the initial designer's mental model, the team brainstormed content and usage needs drawing from the materials that we initially created and from insights that occurred during the whiteboard process.

From Paper to Wireframe Prototypes



Initial Prototype and Revisions



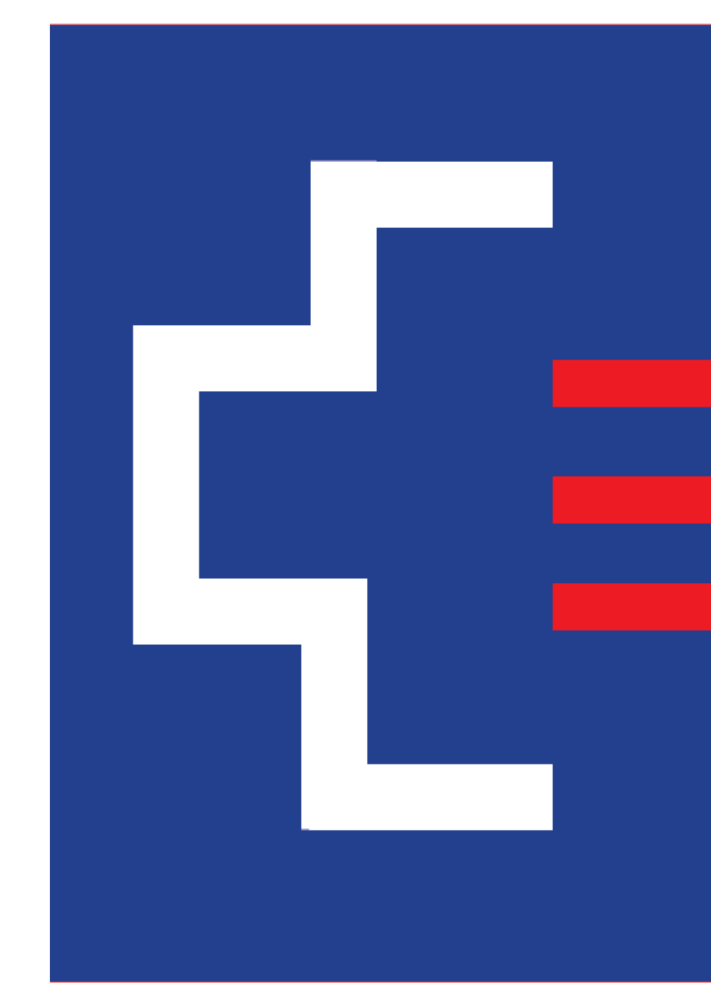
We developed a click-through, medium fidelity, "T" prototype for our mobile application: Resource Management System (RMS). RMS v1.0 was pilot tested to capture user experience, document user feedback, and identify any potential gaps in functionality or design. The project team will develop subsequent versions of the RMS mobile application by incorporating pilot testing data.

- Recommendations from the Initial Viewing**

 - Include the SCORE curriculum
 - Add a "Share" feature
 - "Search" feature for quick locating
 - Keep resources on the computer
 - Add evaluation form
 - Add a "Notes" feature

If you would like to test the initial prototype, enter the link below or scan the QR Code to the right.

<http://uipwp3.axshare.com/#c=2>



INOVA[®] ASTEC Resource Management System

Concept Statement

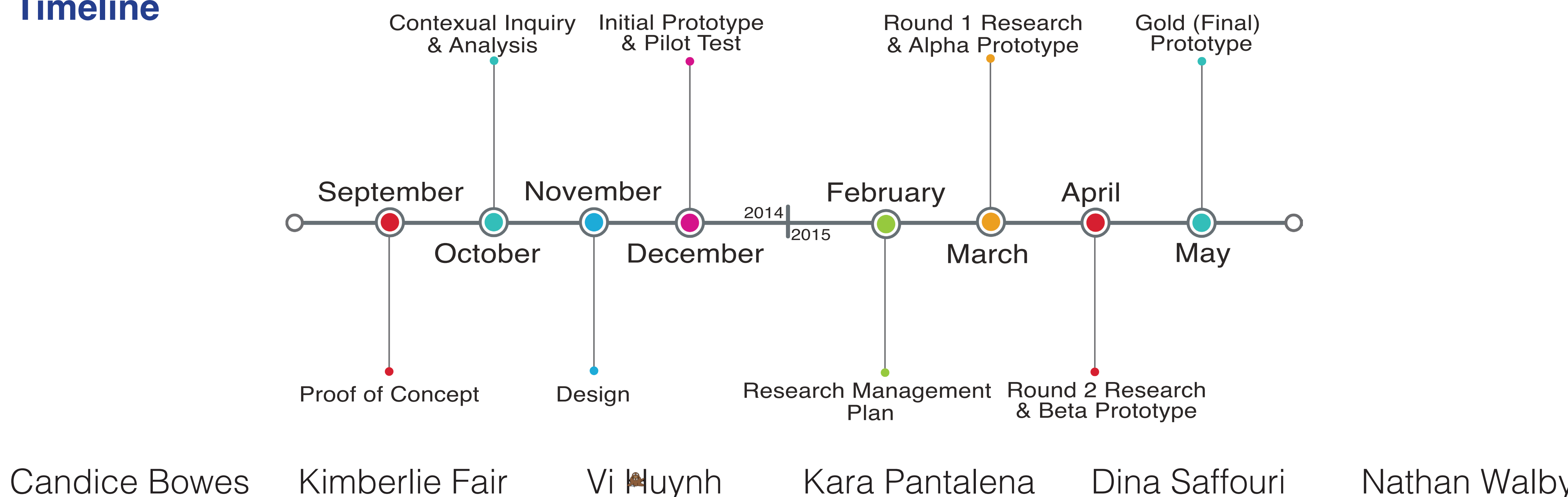
Resource Management System (RMS) is a robust mobile application that supports the professional and academic activities of surgical and podiatry residents at INOVA hospitals. RMS serves as a repository of selected resources identified by both residents and residency program instructors. These resources are essential for the development of industry-leading general surgeons and podiatrists. RMS includes additional features that enable residents to manage their time and responsibilities, to prepare for exams, and to give feedback to educators on how to improve the overall quality of education and training within the residency programs.

If you would like to test the **Resource Management System**, enter the link below or scan the QR Code to the right.

<http://g3b7hs.axshare.com/#c=2>



Timeline



Candice Bowes Kimberlie Fair Vi Huynh Kara Pantalena Dina Saffouri Nathan Walby

Round 1 Testing

Purpose Statement

The purpose of Round 1 of the user experience research is to determine how well the changes made in the alpha version of the RMS prototype address user confusion and concerns with the product. Round 1 will focus on task structure and logical flow within the application. Feedback from round 1 will inform prototype updates and methods used for round 2.

Research Goals, Objectives & Questions

Goals	Objectives	Research Questions
1. To identify what features/functions are most helpful to residents in planning learning tasks.	Determine if the cognitive affordances of the icons and button labels clearly convey their intended meaning.	Are the cognitive affordances of the icons and button labels clearly conveying their intended meaning? Do affordances allow the user to intuitively understand the purpose of the application and employ natural task-completion strategies?
2. To identify if physical actions (outlines) are visible and efficient for users.	Determine if the objects and button labels clearly convey their intended meaning. Determine if the font size, background, task and object color assignments are noticeable and legible.	Are users able to correctly manipulate targets within the application? Does the task screen show users what they expect? Do user expectations match how the task functions?
3. To identify a logical structure and flow of the application.	Determine if the structure and features of the app help user accomplish their intended actions. Determine if the task flow is intuitive.	Do cognitive affordances allow the user to access each planned task? Does the task screen show users what they expect? Do user expectations match how the task functions?

Tracking Data and Prototype Changes

App Feature	Current App Function	Type	Proposed Change	Priority	Timeline	Comments	Status
1 Home Screen	Control bar moved to the top	Design	Remove Control Bar	High	1/15/15	Control bar moved to the top	Complete
2 Menu	Menu items are not visible	Functional	Change menu items to be visible	High	1/15/15	Menu items are now visible	Complete
3 Tutorial	Not working from home	Functional	Change tutorial to be accessible from home	High	1/15/15	Tutorial is now accessible from home	Complete
4 Tutorial	Can't open screen	Functional	Change tutorial to be accessible from home	High	1/15/15	Tutorial is now accessible from home	Complete
5 Calendar (Main View)	Showing different colors for different events	Design	Change colors to be consistent	High	1/15/15	Colors are now consistent	Complete
6 Calendar (Main View)	Calendar too small	Functional	Change calendar to be larger	High	1/15/15	Calendar is now larger	Complete
7 Calendar (Main View)	Calendar too small	Functional	Change calendar to be larger	High	1/15/15	Calendar is now larger	Complete
8 Calendar (Main View)	Calendar too small	Functional	Change calendar to be larger	High	1/15/15	Calendar is now larger	Complete
9 Calendar (Main View)	Calendar too small	Functional	Change calendar to be larger	High	1/15/15	Calendar is now larger	Complete
10 Calendar (Main View)	Calendar too small	Functional	Change calendar to be larger	High	1/15/15	Calendar is now larger	Complete
11 Resources	1 user added cannot be added	Design	Change resource to be accessible	High	1/15/15	Resource is now accessible	Complete
12 Resources	Resources are not visible	Functional	Change resources to be visible	High	1/15/15	Resources are now visible	Complete
13 Resources	Resources are not visible	Functional	Change resources to be visible	High	1/15/15	Resources are now visible	Complete
14 Resources	Resources are not visible	Functional	Change resources to be visible	High	1/15/15	Resources are now visible	Complete
15 Announcements	Announcements are not visible	Functional	Change announcements to be visible	High	1/15/15	Announcements are now visible	Complete
16 Announcements	Announcements are not visible	Functional	Change announcements to be visible	High	1/15/15	Announcements are now visible	Complete

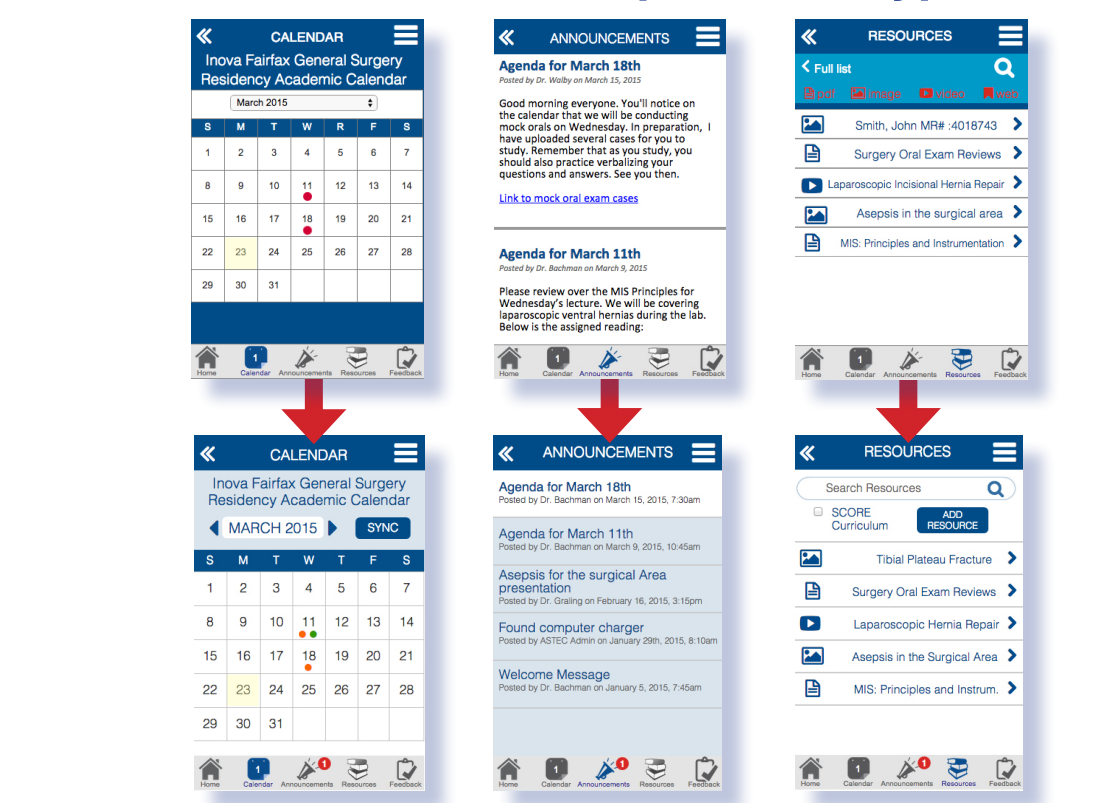
If you would like to test the alpha prototype used in round 1, enter the link below or scan the QR Code to the right.

<http://q8wva4.axshare.com/#c=2>

RMS Core Features and Functions for Testing

- Login
 - Create Profile
- Tutorial
 - Access Month View
 - Access Day View
 - Add Event
 - Access a Resource within an Event
- Resources
 - Access Resources
 - Upload Resource
 - View Resource
- Evaluation
 - Access Pending Session Evaluations
 - Select a Pending Evaluation
 - Submit
- Search
 - Access Search the Web
 - Add Resource from Search the Web
 - Access Search Resources
- Announcements

Revisions to the Alpha Prototype



Round 2 Testing

Purpose Statement

Our goal for this phase of the project was to collect additional feedback on task flow and emotional experience. Round 2 user experience research focused on the fine-tuning stage of the user experience design and included a look at the user interface as best practice changes were incorporated in the Beta prototype. We also needed clarification on how the users want the resources presented, both initially and in a resource search.

If you would like to test the beta prototype used in round 2, enter the link below or scan the QR Code to the right.

<http://qxawad.axshare.com/#c=2>



- Round 2 Testing Structure**

 - Pre-Test Survey
 - Scenario Question
 - Interview Questions
 - A/B Test
 - SUS Survey

Research Goals, Objectives & Questions

Goals	Objectives	Research Questions
1. To identify what "stickiness" and user attitudes toward the RMS mobile application.	Determine if the RMS is pleasing to use.	Do users enjoy using the application? Is the application useful?
2. To identify what features/functions are most helpful to residents in planning learning tasks.	Determine if the cognitive affordances of the icons and button labels clearly convey their intended meaning.	Are the cognitive affordances of the icons and button labels clearly conveying their intended meaning? Do affordances allow the user to intuitively understand the purpose of the application and employ natural task-completion strategies?
3. To identify a logical structure and flow of the application.	Determine if the structure and features of the app help user accomplish their intended actions. Determine if the task flow is intuitive.	Do cognitive affordances allow the user to access each planned task? Does the task screen show users what they expect? Do user expectations match how the task functions?

A/B Test and Results



Comments during Testing

"I would use this frequently"
"When I download, I usually organize by topic"
"Easy to navigate"
"Love the linking between pieces, like calendar to resources or announcements page to resources"

- Suggestions for Improvement**
- "Folders for organization with search features."
 - "Make accessible for iPad and computer."
 - "Systems-based resources organization."
 - "Ability to email or save the resources ex. articles, videos to our computer."
 - "Ability to get alerts sent to email or text message for upcoming events."
 - "Option in calendar to see all lessons as a list for the year instead of giving month by month."