



Enrollment Central Multipurpose Mobile Application

EDIT 732: Analysis and Design of Technology-Based Learning
Environments- Fall 2016

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Enrollment Central: Multipurpose Mobile Application



Presentation



Overview: Client and Concept (Aaron)
Contextual Inquiry and Analysis (Aaron & Vera)
Requirements and Modeling (Kari & Maimoona)
Design (Tracey)
Prototype and Pilot Test (Hosseini)

Client: Enrollment Central



Todd Diamond



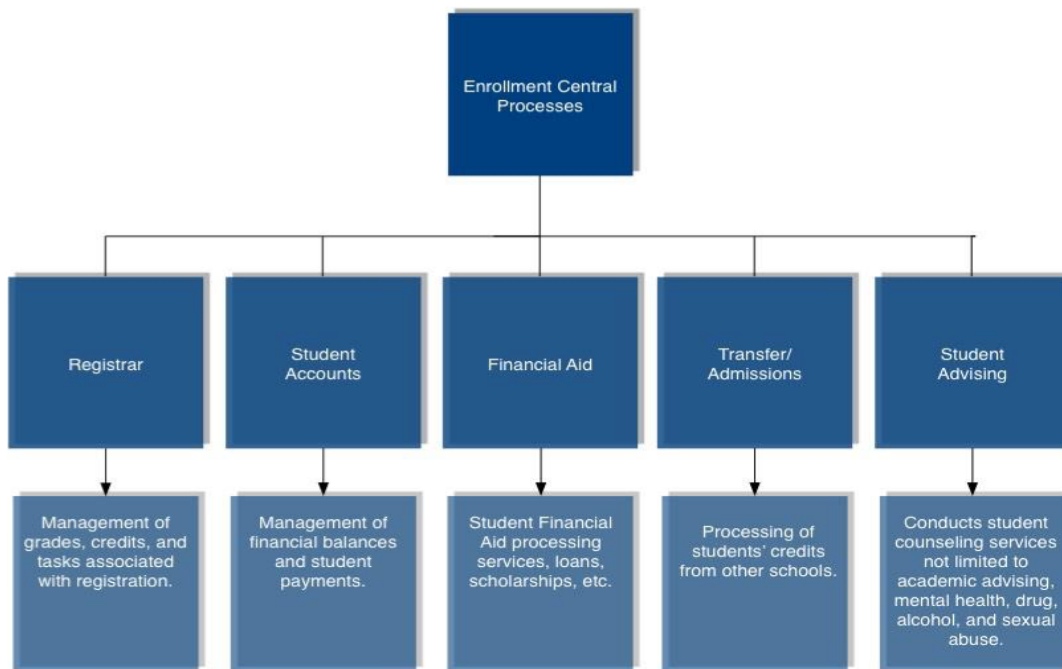
Chris Reed



Geetie Ansary

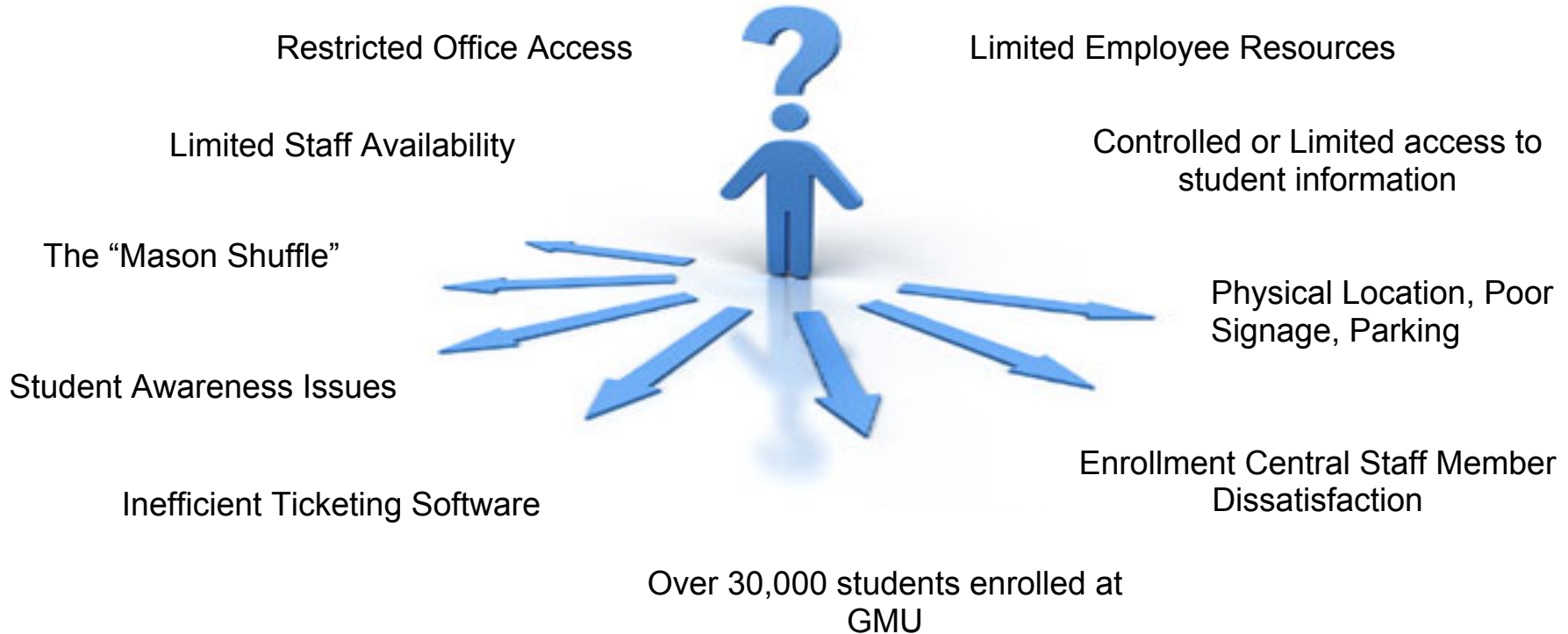
Enrollment Central (EC) provides comprehensive, coordinated, and efficient enrollment services delivery to prospective and enrolled students. There are currently three EC staff members who provide services at the Fairfax and Prince William County locations.

Current Practices



- Current and prospective students are referred to EC by various offices around both campuses for enrollment-related tasks.
- Enrollment Central covers Five Primary Areas.
- Approximately fifty separate enrollment related tasks/processes.
- On Average, EC Staff assist close to fifty students a day with increased activity in peak times of year.
- Students can visit the EC helpdesk locations or contact on the phone or through email.

Barriers and Performance Gaps



MASON
ENROLLMENT CENTRAL

A large, stylized black and white graphic of a lightbulb. The bulb's glass part contains a silhouette of a human brain. Inside the brain, various icons are placed in different regions: top left has a dollar sign (\$) and the equation $1+x=2$; middle left has a target symbol, the letters "ABC", and the equation $E=mc^2$; bottom left shows gears and the number "123"; top right features a sun and a flower; middle right includes musical notes and a small lightbulb icon; bottom right shows a heart and a leaf. The entire lightbulb graphic is centered at the top of the page.

Objectives

Objectives

- Define Enrollment Central processes.
- Create a mobile application that improves, supports and facilitates Enrollment Central processes.
- Integrate the EC application with the main application of GMU Mobile Mason Suite.
- Address EC staff and end user frustrations with current processes.
- Give students the capability to perform their various enrollment processes seamlessly.
- Make forms and paperwork processes more accessible for the students via the easy-to-follow guidance.
- Create an application that supports Enrollment Central's Mission.



Data Collection: Interviews

During group collaboration, the following list of final interview questions was developed:

- What are the frequently most asked questions?
- What percentage of questions do Admissions questions account for?
- Do you have any tasks that are more frustrating than others?
- What type of Financial Aid questions can you answer?
- Do students ever come in irate? If so, why?
- Is this attitude directed at you?
- What about the actual process and its efficiency?
- Are there any other areas where the process is broken?
- If you could deliver the best student experience, what would be an ideal addition to achieving it?
- How long have you both been here?
- Are there any other issues?
- Are there any other offices nearby?
- How is it structured?
- How would you describe your job roles?
- Do you have a manual or a guide?

Data Collection: Observations

Observation 1

Focus on the EC environment

Observation 2

Focus on the EC workflow processes

Observations

Observation form: the EC workflow process

Date _____

Name _____

Category	Student question/request	EC response
Transfers		
Admissions		
Financial Aid		
Student Accounts		
Registrar		
Other		

Observations: Data entry

Observation form: the EC workflow process

Date: October 5th, 2016

Time: from 3:00 p.m. to 4:00 p.m.

Category	Student question/request	EC response
Transfers	Missing credits (time spent at the EC: approximately 10 min.)	1) The student has 68 credits from NOVA. Only 52 appears on her transcript. 2) The student brought the filled out application form. 3) The EC member determined that the form was incorrectly filled out. 4) The EC member provided his guidance on the process of filling out the form. 5) The completed form was left by the student in the EC in order for the form to be submitted by the EC member to a transfer coordinator. 6) The student was informed that it may take up to a month to finalize the process. 7) The student expressed her intent to visit the EC again during the course of the month.
Admissions	Paperwork assistance (time spent at the EC: approximately 10 min.)	1) A student was unable to provide his G#. 2) The student's photo ID was used in order to determine his application status. 3) The student was informed that his admission depends on the course by course evaluation of the outside of the US credits earned and his NOVA transcript. 4) The receipt of the course by course evaluation was confirmed.

Survey

Q
This survey

1. Please select one of the following:
I am a: Student ☒ Parent ☐

2. What are you here for today?
Transfer/Admissions ☒ Student Accounts ☐

3. Have you used these Enrollment Services?
Yes ☒ No ☐

4. Did your visit require that you use a mobile app, if it had one?
Yes ☒ No ☐

5. Does your visit require that you use a mobile app with a camera?
Yes ☒ No ☐

6. Would you use a mobile app, if it had one?
Yes ☒ No ☐

7. Would you use a mobile app with a camera?
Yes ☒ No ☐

8. Would you use a mobile app if it showed your enrollment information?
Yes ☒ No ☐

Comments: _____

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8. Would you use a mobile app if it showed your enrollment information?
Yes ☒ No ☐

Comments: _____

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8. Would you use a mobile app if it showed your enrollment information?
Yes ☒ No ☐

Comments: Good service

Survey results

Please select one of the following categories:		Student	100%	
		Parent		
		Student Helper		
		GMU Staff		
		Other		
What are you here for:		Transfer Admission	60%	
		Registrar		
		Financial Aid		
		Student Account		
		Advising	20%	
		Other	20%	
Question:			YES	NO
Have you used these Enrollment Central services before?			100%	0%
Did your visit require that you complete one or more forms?			40%	60%
Does your visit require that you visit additional offices?			40%	60%
Would you use a mobile app, if it helped you with this task?			100%	0%
Would you use a mobile app with a map to find various offices at GMU?			100%	0%
Would you use a mobile app if it showed you what form to fill for this task?			100%	

Requirements Development Process: WAAD

732 Proj 3: Requirements ☆ Private

Emotional Requirements	Work activities Requirements	Functionalities
C.1: End frustration	A.1: Missing credits and incomplete form	A.6: Repetitive process/questions
A.7: EC get more Frustrating when dealing with financial aid issues.	A.2: collecting student's form manually for transformation to another offices.	A.8: Print and manually write directions on paper campus map
C.1: Worries about job security and defining need for EC as a department	A.3: EC staff serves multitasks.	B.1: Limited student account info on Mason computers
B.3: Empower students	A.4: Advertising and Exposure???	A.12: Admission is the most frequent questions (60-70%)
B.4: Student complaints regarding processes that are out of their control or have nothing to do with EC.	A.5: Certain offices such as the Transfer Admissions office requires card access to get there. So, students cannot be sent there.	A.15: Face-to-face interaction only. No work done via e-mail, phone and/or chat.
B.6: The EC is mistaken for the Information Desk	A.6: Repetitive process/questions	C.4: Searchable Process list (ex. Type in "transfer credits" and results yield relative info)
B.5: Surprise changes/charges to student accounts	A.7: EC get more Frustrating when dealing with financial aid issues.	C.5: Forms Repository (searchable, printable, editable)
Add a card...	A.8: limited authority EC staff has specifically in providing information	A.23: Electronic Forms Submission
	Add a card...	Add a card...

→ Brainstorming

Hossein

- Navigational Abilities:

- Show a map of campus with current location marked on it.
- Allow user to zoom in on any building to see what offices / stores / departments are inside it.
- Allow users to search for an item using an all inclusive search box.

Tracey

1. Users shall be able to utilize a navigational gps/map of George Mason University.

Rationale: There are currently gps/navigational mobile applications which lack the details necessary for students to use them as fully intended. Many of the processes involved with Enrollment Central require students to find key locations on campus. This navigational feature shall be detailed and accurate. Many of the processes involve the use of a paper map.

Note: The results of the user survey found that X% of students would use a navigation application.

(Aaron)

Requirement Category: Search Capability

- **Requirement Statement:** The application will provide a search function.

WAAD Node: Accessibility

Rationale: Currently students will have to meet with enrollment central in person to address a question and learn about what steps they need to take to resolve an issue.

Note: This relates to user frustration described in some interviews with staff and students.

Maimoona

Functional Requirements:

General Statement (1): Multipurpose app with an enrollment central office in it.

A. The accessibility of electronic forms, personal account.

Users can search Enrollment Central process options.

Users can access forms from a central repository.

Users can see their profile.

Users can select an Enrollment Central process.

Users can complete process associated forms.

Users can save and print associated forms.



Vera:

1) Requirement category: Knowledge management

Users can access forms from a central repository.

Users can submit forms to the proper department.

Users can access FAQ's about processes to alleviate unnecessary trips/calls/emails to EC.

Karij

1. Users shall be able to access, complete, and submit frequently used forms to the proper department. A-2, A-18, A-23, B-3, C-5, C-8, D-1
2. Users shall be able to search common activities (transfer credits, add/drop class, etc.) and find key information to start process. C-4
3. Users shall be able to easily find buildings, departments, and offices on the map. A-8, A-16, C-7, D-2

Requirements Development Process: Voting

Processes

- Users can search common activities (transfer credits, add/drop class, etc.) and find key information to start process. XXXXX
- Users can see their profile.
- Users can access forms from a central repository. XXXXX
- Users can complete and then review their completed forms. XXXXX
- Users can save and then print their completed forms. XXX
- Users can submit forms to the proper department. XXXXX
- Users can access FAQ's about processes to alleviate unnecessary trips/calls/emails to EC. XXXXX

App Capabilities

- The EC app will have Large and easy to read text, especially on a cell phone.X
- The EC App will be available as a module within the existing Mobile Mason suite.X XX
- The EC App will be advertised on the Enrollment Central website.XXX
- The Enrollment Central app will include relevant account information to include but not limited too; G#, Major/Minor, Dept. Contact info, Academic Advisor contact info. X

Map/Navigation

- Users can access a map of campus with their current location marked on it.
- Users can zoom in on any building to see what offices / stores / departments are inside it. XXXXX
- Users can search for a location using an all inclusive search box.XX
- Users can access a map dropdown with a list of all places on campus and when one of them is selected, the map will come up showing them their current location and the location of the selected place. X
- Users can map out their process needs on the navigational feature. XXXX

Please mark with an X when you have voted!

Aaron X

Hossein X

Kari X

Maimoona X

Tracey X

Vera X

Requirements Development Process: Requirement Statements



1. Requirement category: Knowledge management

1.1 Users can access forms from a central repository.

Rationale: Empowering users with the ability to obtain and manage key forms is a key one of the most logical and necessary features of the multipurpose application. This feature closely aligns with the tasks that are performed at Enrollment Central.

Note: When surveyed, 100% of users* admitted that this was important to them. WAAD notes A-2, A-18, A-23, B-3, C-5, C-8, [D-1](#).

Requirements: Instructional Strategy Alignment



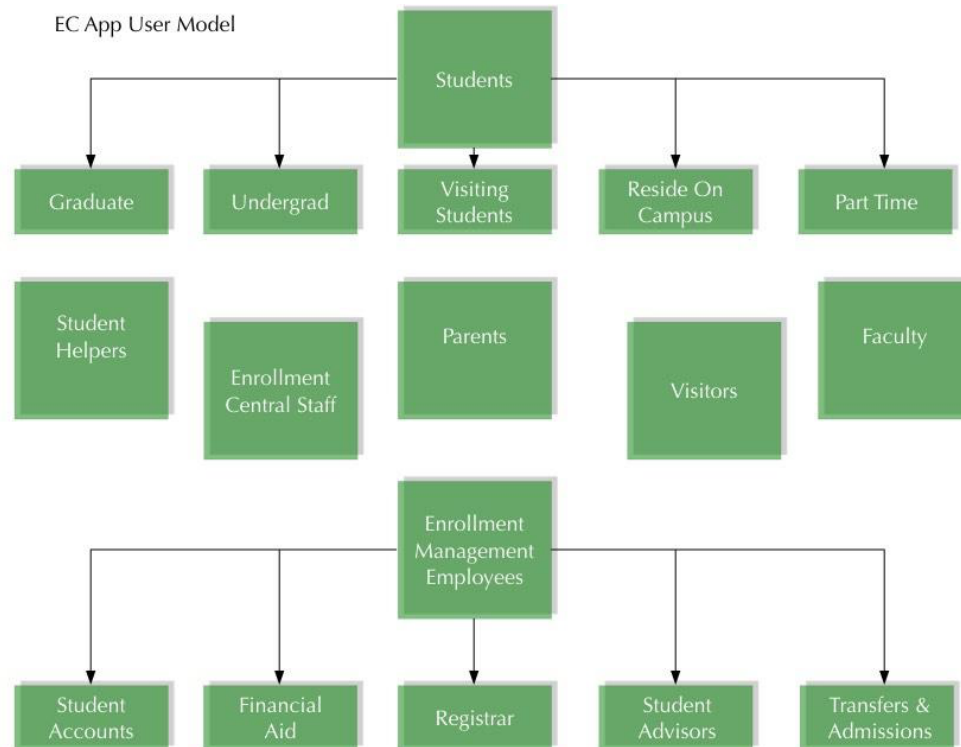
Performance Support (PS) Strategy:

Provides information, and access to information, at the moment it is needed.

- End-user support embedded within the user's workflow
- Contextual to the user by process, roles, and circumstances as they relate to Enrollment Central
- Tools which deliver necessary information at the moment of need
- Electronic Job Aids
- Fingertip Knowledge (eg. search feature, forms repository)
- Rapid Authoring Systems from Subject Matter Experts

Design Informing Models: User Model

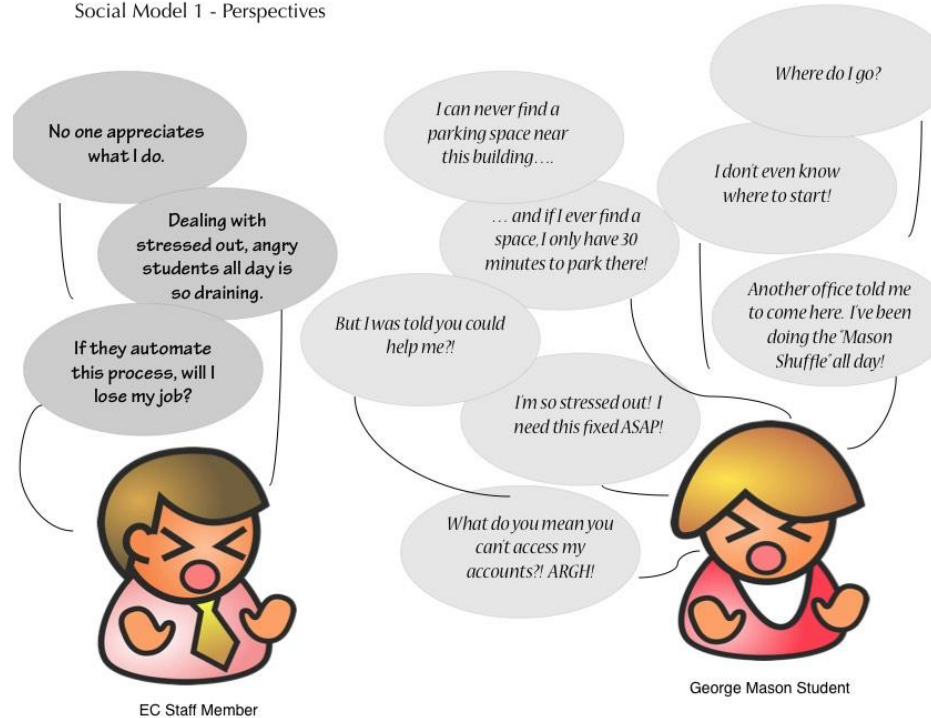
User Role/Sub Roles



Design Informing Models: Social Model (Emotions)

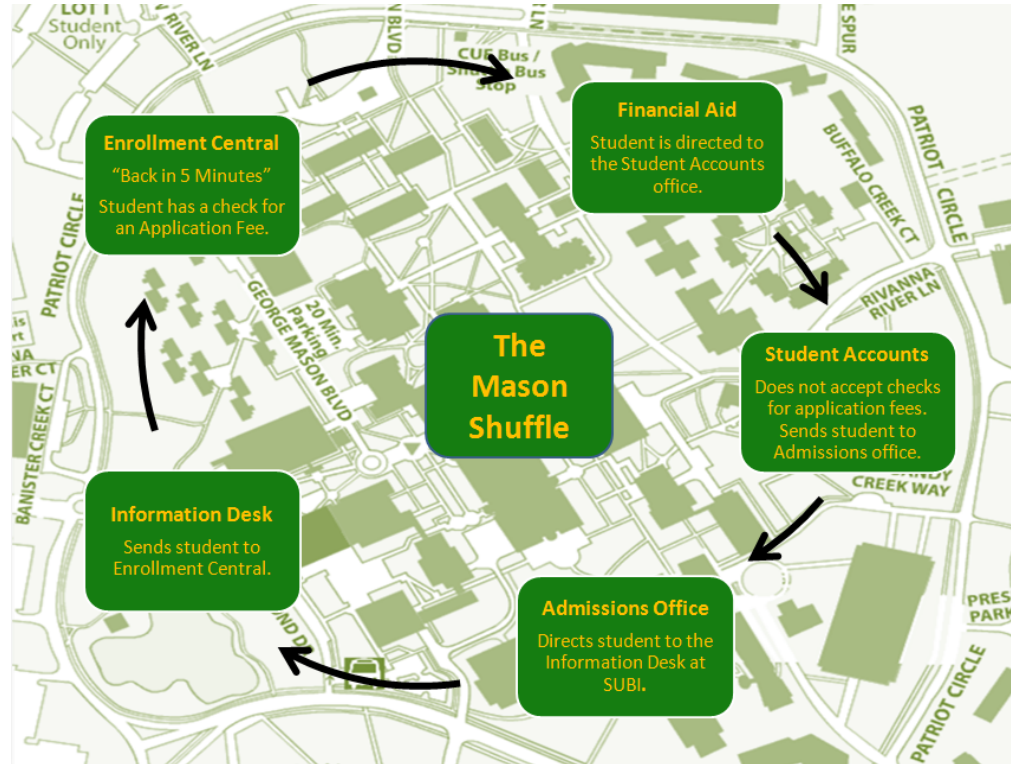
EC Staff Member

Social Model 1 - Perspectives

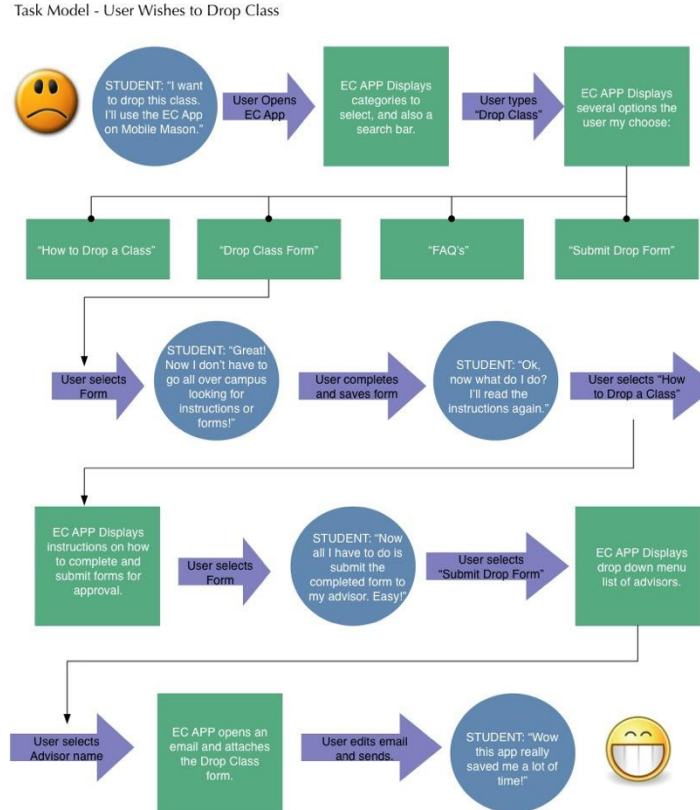


Design Informing Models: Usage Models

The Mason Shuffle



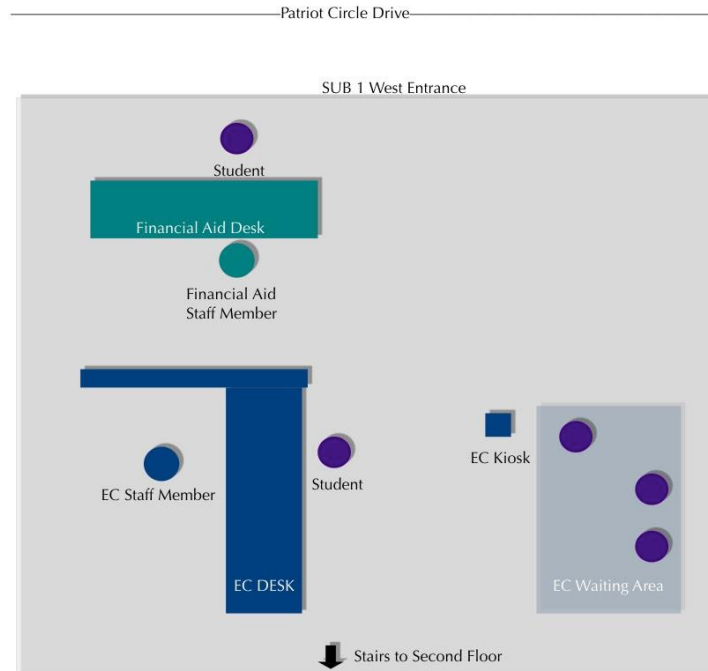
MASON
ENROLLMENT CENTRAL



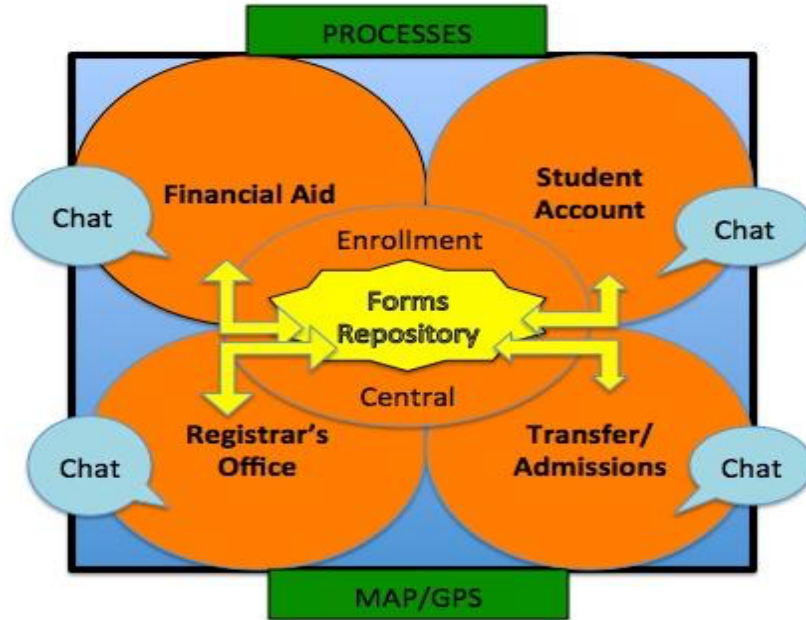
Design Informing Models: Working Environment Model

Model of physical environment

Environmental Model 1



Design Concept Statement



- Mobile Application
- User-friendly
- Supports & Facilitates Enrollment Central (EC) Processes
- Searchable EC Guide
- Mapping Capabilities
- Forms Repository
- Part of Existing Mobile Mason Application
- Tasks Relevant to Four Offices

User's Vs. Designer's Mental Model

User's Mental Model

- Mobile Application
- User-friendly
- Interactive
- 24/7 days Access
- Ability to view Student Profile
- Access to Forms and Processes
- Access to Map/GPS navigation
- Delivers Forms to Offices

Designer's Mental Model

- Sync with School's online systems
- Processes Align with 5 Offices and Their Duties
- Can fit within Existing GMU Mobile App
- Centralized Forms Repository
- Can Complete Forms within Application
- Availability of Multiple Tools to Complete Tasks
- Navigational Map with Descriptive Sites

- User's Mental Model Based Interviews and Survey: Used to Complete Processes & Tasks
- Designer's Mental Model Based on Analysis of All Data & Shows How Functionality Should Work

Conceptual Model

Conceptual Design GMU App

Interaction Perspective:

- 24/7 Mobile Application
- Easy to Use
- Student Profile Linked to Interactivity
- Push Notifications for Task Status
- Process Menu Options with Resources Attached to Enhance User Experience
- Navigational Map/GPS tied to all Process Tasks
- Forms Tied to All Process Task
- Forms Delivery & Management
- On-demand chat assistance

System Ecology Perspective:

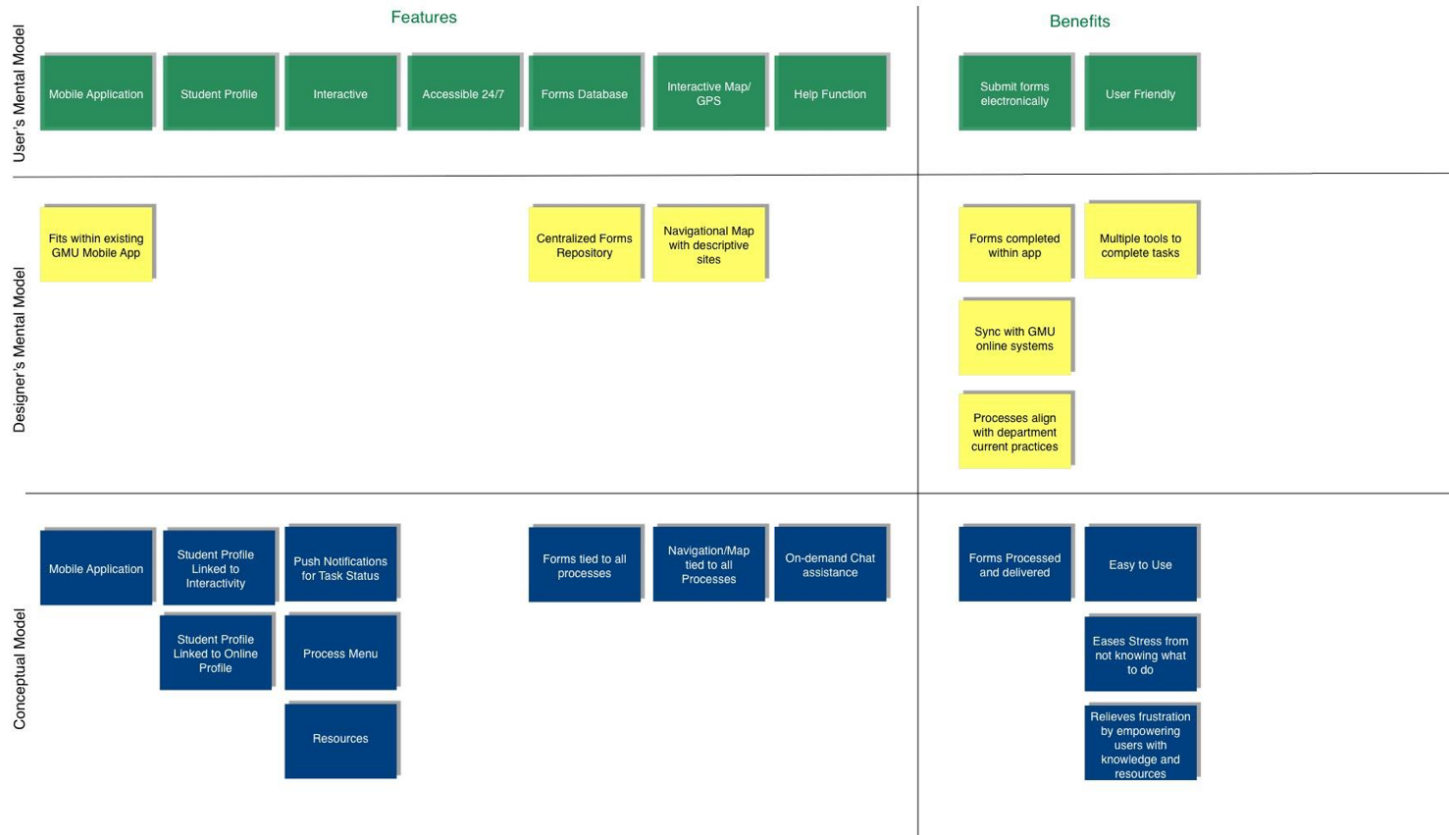
- Syncs with Student Profile
- Student Profile Syncs with Online Profile
- Online Profile Syncs with All Offices and Enrollment Central

Emotional Impact Perspective:

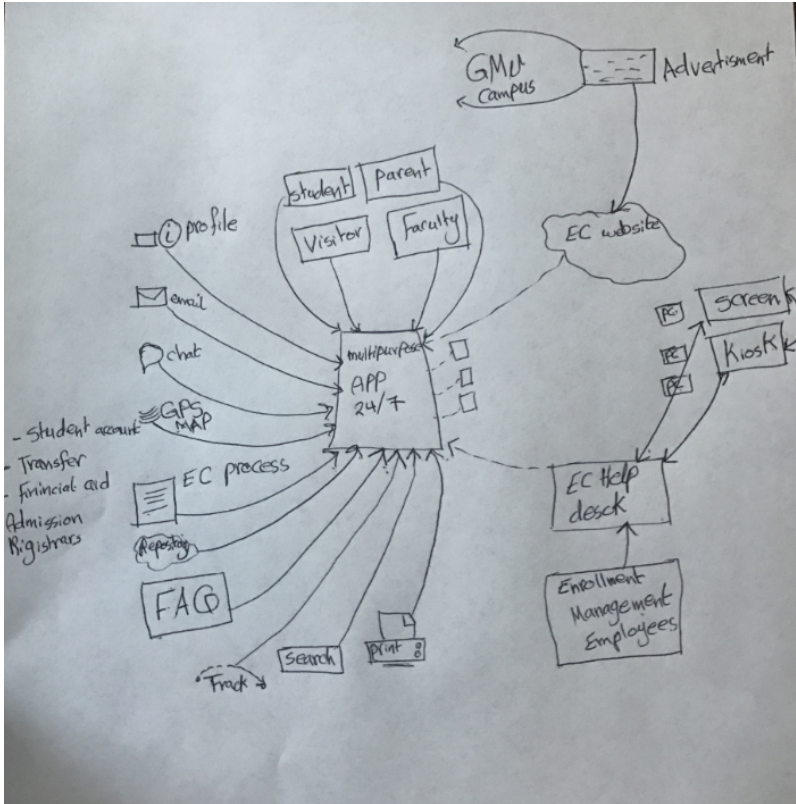
- Eliminates stress associated with not knowing what to do.
- Relieves frustration by empowering users with knowledge and resources.

- Marries the Needs of the User with Functionality of a File-Sharing Tool

Features & Benefits Aligned With User Values



Sketching: Conceptual Design & Ecological Perspective



Sketching: Interactive Perspective



- First year graduate Student



- Needs to figure out Where the SUB1 is Located.

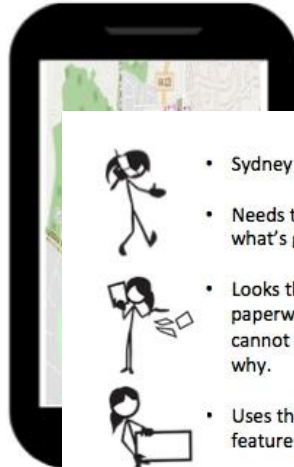


- Was wandering around trying to locate the bldg.

- Uses the GPS feature in the app.

- Finds the SUB 1 Bldg.

MEET SYDNEY



- Sydney calls home

- Needs to figure out what's going on.



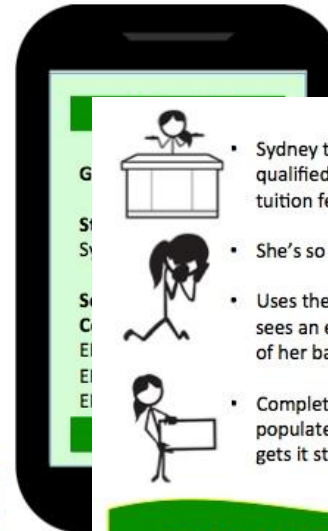
- Looks through her paperwork and cannot figure out why.



- Uses the the Profile feature in the app.

- Continues to My Balance and sees an explanation.

SYDNEY OWES MONEY



- Sydney thought she qualified for lower tuition fees.



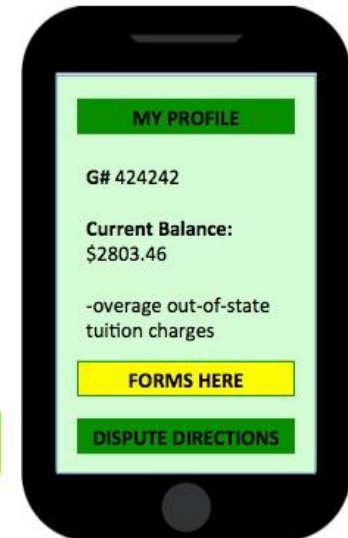
- She's so frustrated.



- Uses the app and sees an explanation of her balance.

- Completes pre-populated forms and gets it straight.

SYDNEY HAS OUT-OF-STATE FEES



MY PROFILE

G# 424242

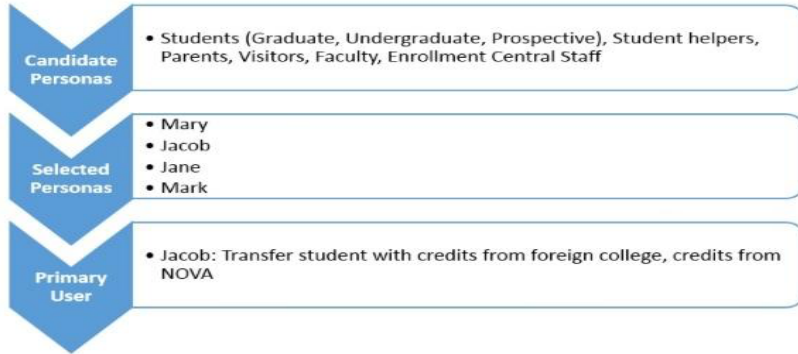
Current Balance:
\$2803.46

-overage out-of-state
tuition charges

FORMS HERE

DISPUTE DIRECTIONS

Design Personas

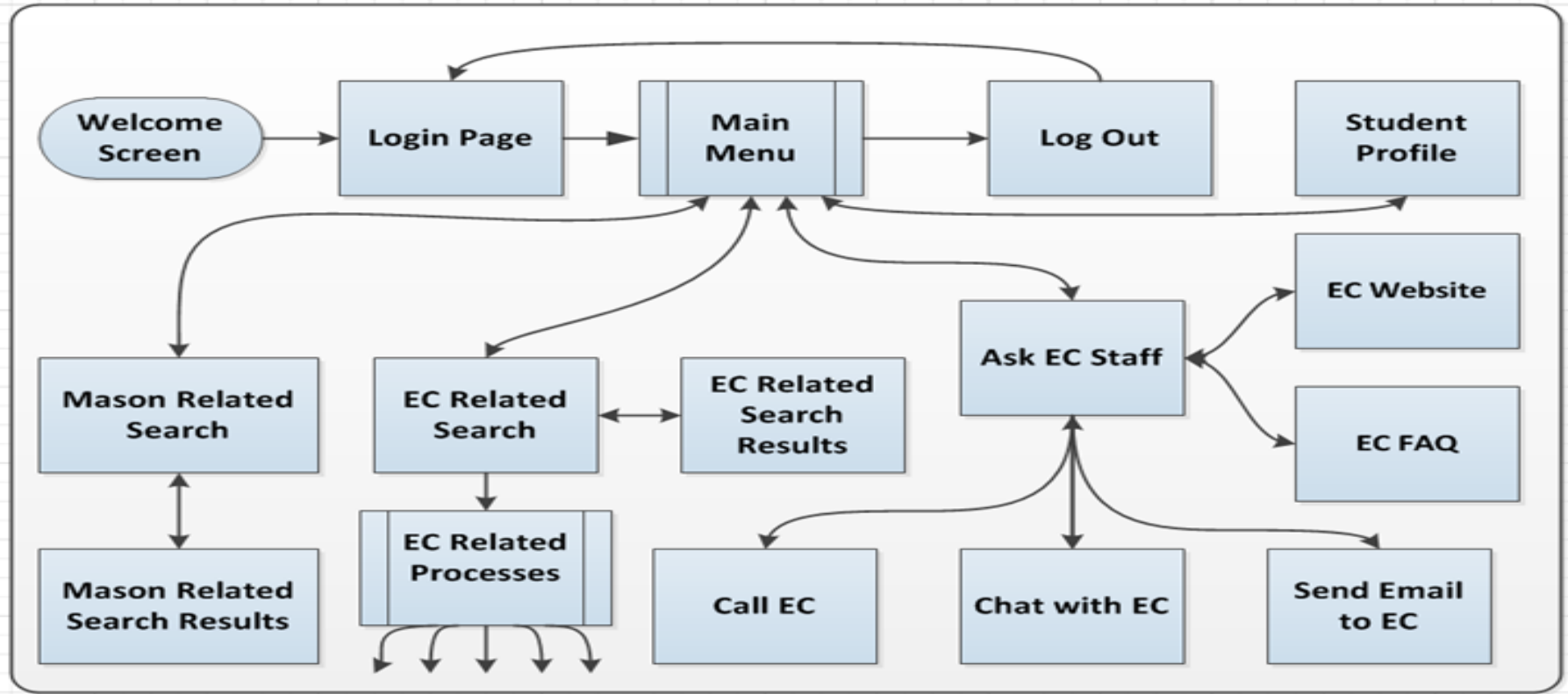


- Process of Designing Personas
- Work Roles & Sub Roles
- Candidate Personas
- Selected Personas

Prototype & Testing

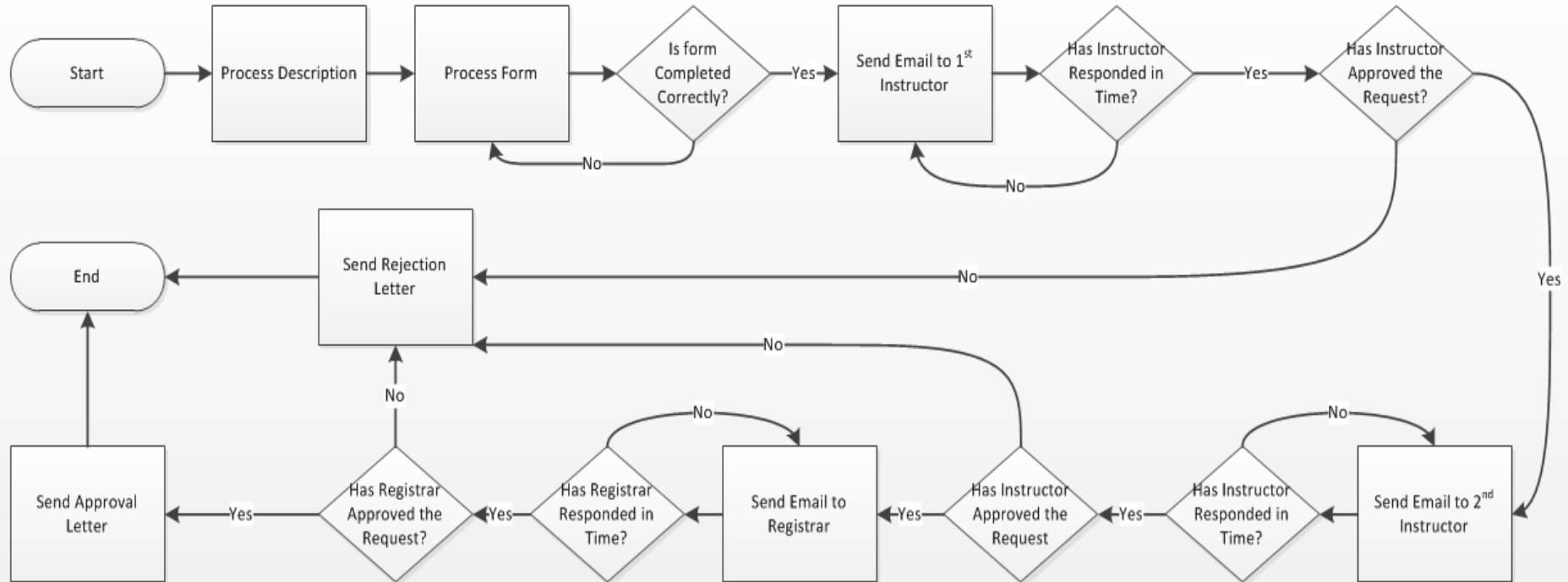
- Wire Frame & Workflow Overview
- Prototype Demo
- Pilot Test Results

Wire Frame & Workflow Overview

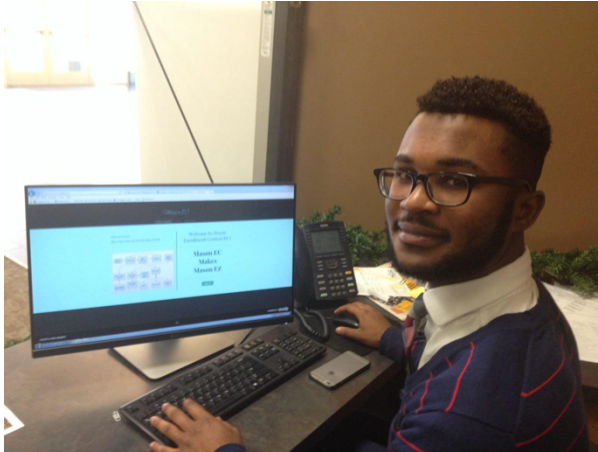


Sample Process Flow

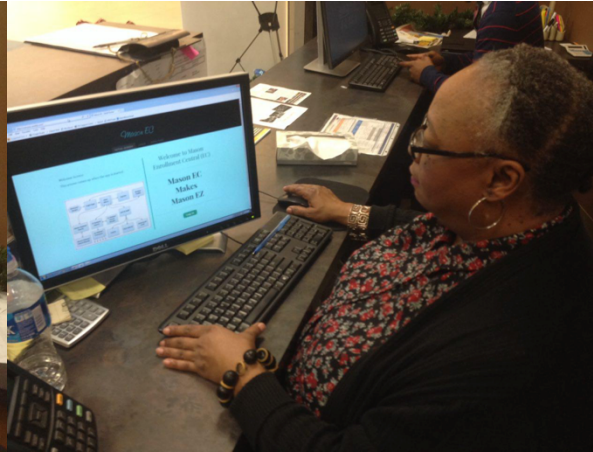
Process Flow: Course Time Conflict



Pilot Test Methods & Results



Student



Financial Aid Staff



Mason EC Staff

Pilot Test Methods

Observation:

- Facial Expression
- Body Language
- Time spent on Pages
- Navigational Issues

Post Test Interview:

- How intuitive was this app?
- What was confusing about this app?
- Was the process flow easy to follow?
- How helpful was this app in finding answers?
- Do you see any shortcoming in this app?
- How would you improve this app?

Pilot Test Results

Observation:

- No sign of stress
- Did not get stuck
- Did not ask any questions
- Quickly navigated
- Quickly followed scenarios

Feedback:

- Clean and clutter free
- Easy to use & navigate
- Intuitive
- Multiple search feature

Recommendations:

- Bring FAQ inside the app
- Make Cascading FAQ
- Similar app for other departments

Prototype Demo



Clickable Prototype URL

<http://masonec.weebly.com>