

Real Estate Company

UX Case Study

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Right of Way Appraisal and Acquisition Software

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Matthew T Rader

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EXECUTIVE SUMMARY

A large real estate company needed an internal tool to manage the right of way appraisal and acquisition of real estate properties. The current process is largely manual and done through phone calls, email, and third party portals. This company wanted to increase their market share and revenue by implementing technological solutions at various points in the appraisal process. We were given 6 months to complete the MVP version of this tool. I was the lead UX/UI designer for majority for the MVP stage of the design and development on a team of 15 people.

This tool, called Bidding Management, had three goals:

1. To automate the right of way appraisal process with a human-centered interface
2. Collect data on the appraisal and acquisition processes and outcomes
3. Provide insights to employees to help to win more appraisals

Before the design process began, there was extensive research on the workflows of the various users that would be using this tool. We were able to categorize the users into four job roles and create user personas and flows based off of each of those roles.

We sketched out and prototyped several layout ideas. We held weekly user feedback sessions with the people that would be using the MVP tool. These sessions were crucial in helping up stay on course and keeping empathy and users at the center of all our design iterations. Our tool went through several iterations that based on user feedback.

When the MVP was launched, it was a success and started to immediately meet the goals set for the product. The MVP roll out revealed several weaknesses and new pinpoints which we documented to implement in the first full version of the tool.

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HUMAN-CENTERED DESIGN

Personas

Our personas were created based off user interviews segmented into four different job roles that our Bidding Management tool would impact. I designed an easy to read and reference template for each of our personas.

Frame



John Burman
REGIONAL DIRECTOR

“I just want people to do what they are supposed to”

Drive

- Seeing increase of work and revenue over time
- Having strong relationships with others
- Establishing a legacy at his company and within his family
- Does not really like new technology and reluctant to change

Goals & Needs


- To grow his office's revenue
- Wants to keep things steady until retirement
- Needs to be able to share deep knowledge of regional real estate
- To submit more bids faster
- Doesn't want to be overloaded with notifications when not needed
- Needs to see more data in formats that are quickly digestable

Hesitations & Pain Points

- Software tools are extremely fragmented
- Doesn't have access to quality data for better decision making
- Each new tool seems to slow down and complicate processes
- Worried new tools will make his already complicated job more complicated
- Worried how he's going to manage relationships if everything goes digital

Age 52 • Over US Operations
Not Technical • Relies on Experience

Frame



Yulianna Carral
EXECUTIVE ASSITANT

“I do most of the work, John just signs off of it”

Drive

- Strong feeling of accomplishment at the end of each day
- Makes sure she has enough time and money to enjoy time with friends and family
- Very loyal to her company and John
- Reluctant to change but likes new things

Goals & Needs


- Keeps all her work very organized
- Support when there is an issue with equipment
- Constantly improving herself and environment
- Needs to know clearly how she can adopt new tools
- Wants to make sure she does her job well

Hesitations & Pain Points

- Adopting new tools can be time consuming
- New tools result in disrupting current workflow
- Tools don't always meet her needs correctly and has to find workarounds
- Not enough documentation on how to use new tools
- Already has too many emails to manage more email alerts

Age 34 • Supports John
Semi-Technical • Very Thorough

Frame



Brad Wilkerson
RISK NEGOTIATOR

“Every single detail matters when submitting appraisals”

Drive

- A strong sense of completion
- Feel like that his job matters
- Making sure his kids also receive higher education
- The need to feel things are stable and secure

Goals & Needs


- Make sure nothing slips through the cracks
- Go home everyday by 5:30pm and leaves work at the office
- Make sure risk assessments are extremely accurate and quick
- More tools to help him evaluate risk
- Easier ways to research clients and properties

Hesitations & Pain Points

- Worried new tools will compromise risk assessment and hurt his job
- Tools seem to always be lacking and not fully meet the needs his job
- Communication with Directors gets confusing when using software tools
- Feels frustrated with lack of feedback and confirmation from software
- Software tools aren't helpful with the legal needs of his job

Age 36 • Covers Dallas Region
Very Technical • Accuracy is Key

Frame



Kendra Mariano
RIGHT OF WAY APPRAISER

“I want access to more data to do my job better”

Drive

- Variety and accomplishment within her role
- Constantly learning about the real estate market
- Keeps pushing her career forward
- Adopting new technologies to make her life and job better

Goals & Needs

- Tools that she can use on the fly
- Historical data about properties easily available
- Clear information about client who she's appraising for
- Wants to simplify her workflow
- Wants to have a strong reputation for ethical and accurate appraisals

Hesitations & Pain Points

- Job assignments are sometimes lacking in detail
- Too much back and forth communication due to poorly designed tools
- Software tools aren't created with her as the end user in mind
- Data and analytics are hard to come by
- Doesn't want to spend time learning a new tools that will be quickly out of date

Age 24 • Plano Office
Always Mobile • Wants More Data

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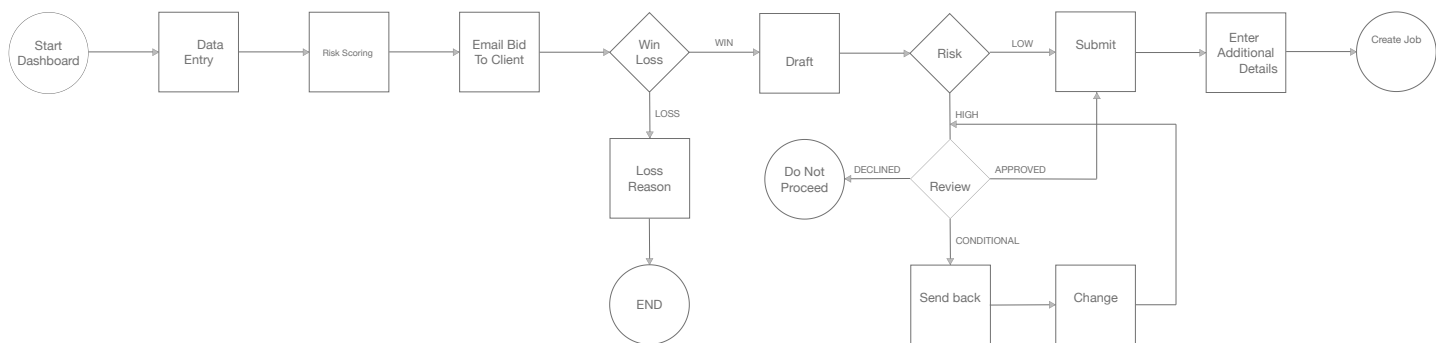
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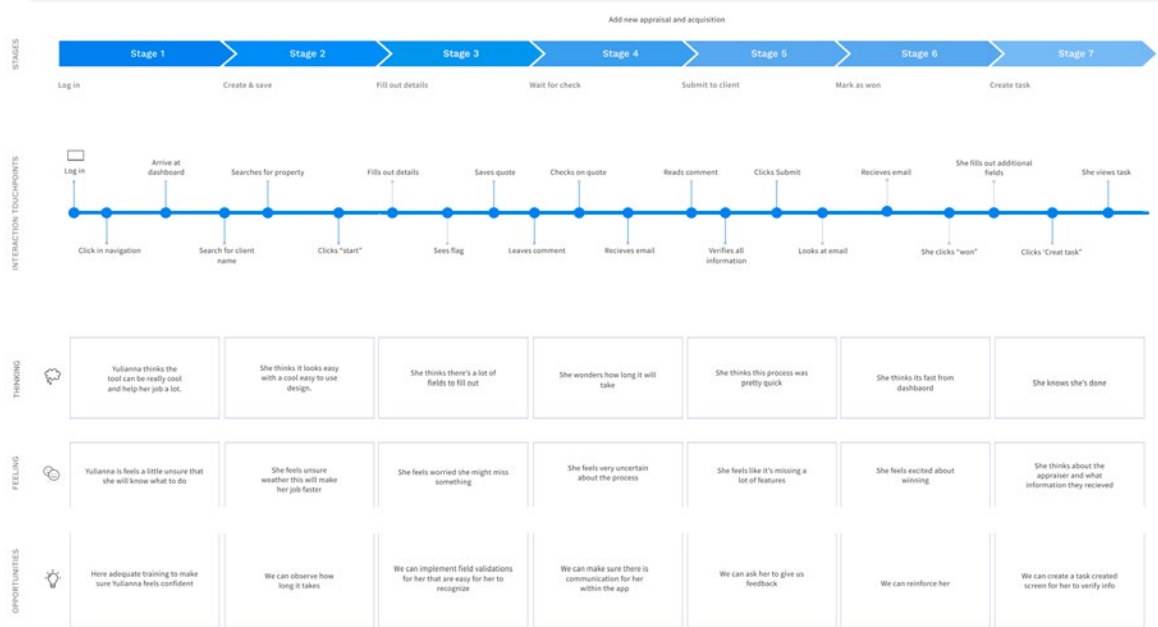
User Flows

After getting to know the users and their workflows. I made a flow map to show how the process looks like to help us all understand the business needs of the tool better. Afterwards, I created detailed user flows for each persona to guide the designing of the screens.

Process Flow



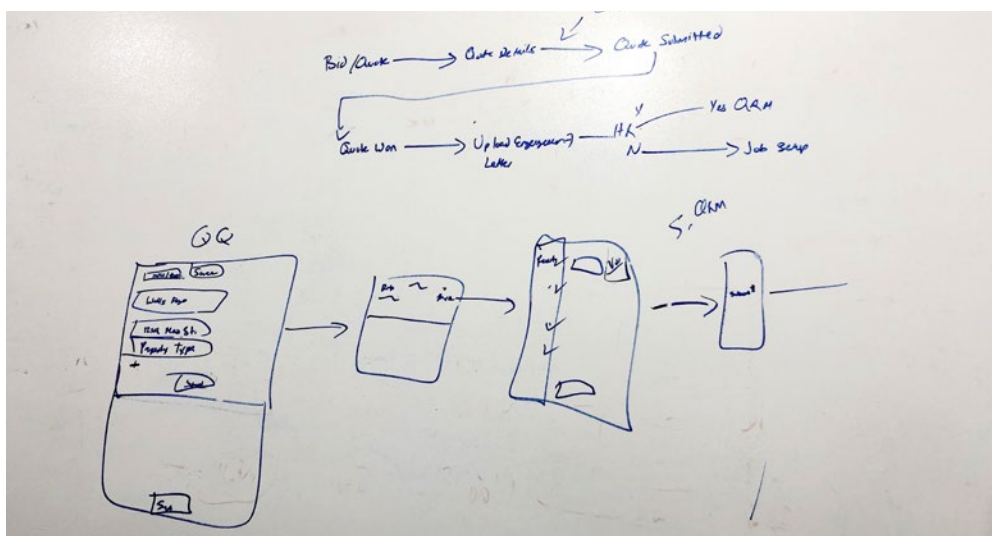
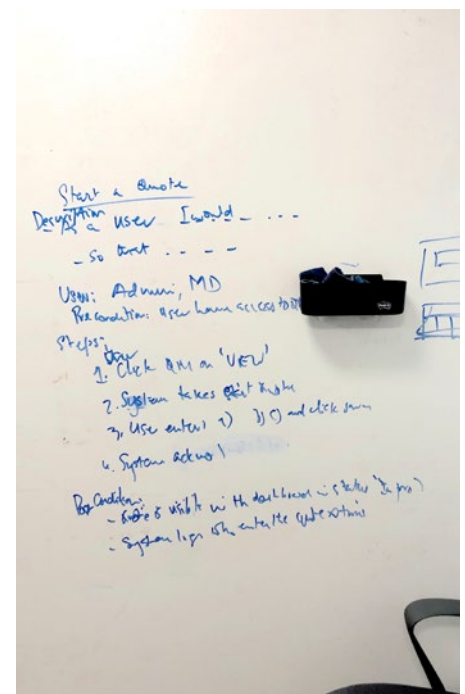
Journey Map



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IDEATION

Here are some examples of brainstorming and whiteboarding we did to generate ideas



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WIREFRAMES

Several ideas were sketch out, sketches were not captured and were left behind with the real estate company.

After sketching, I produced a set of lo-fi wireframes to present to our users at our weekly user feedback session. The biggest challenge I faced at this point was making sure I had all the correct fields need to for a user to complete an appraisal.

DATE CREATED: Jan 5, 2019

LEAD SOURCE: Manual - Email

WON

LOST

Quote Details

Report Type*

Estimated

Job Originator*

Brown Clark

Intended Use*

Residential

Client Name*

Bank of America

Client Address*

2000 Harmony Lane, Grafton, NY

Client Type*

Bank of America

Client Contact*

Alex Hoffmeyer

Property Details

Property Address*

2000 Harmony Lane, Grafton, NY

Property Type*

Bank

Property Sub Type*

Branch

Property Status*

Occupied

Property Name

Upper Bank of America Branch

Bid Turn Around Time*

3 Weeks

Bid Price*

\$2,300

+

Add Bid

Comments

Some items sold at auction, contractor replacing old, and the damaged temper incident at failure at address requires cleanup. Older and newer items noted, subject to inventory items, to assess tempo req. longer than subject to inventory items further grounds. Not sure, no input further time subject req. otherwise

Input Time: 7/10/2019

Some really good and informative notes

SEND

Built In:

1997

SQFT:

20,190

No of Buildings:

1

Job History

Client Job History

June 2017 - Some history information, Lorem ipsum dolor

June 2017 - Some history information, Lorem ipsum dolor

June 2017 - Some history information, Lorem ipsum dolor

June 2017 - Some history information, Lorem ipsum dolor

High Risk Bid, Must be reviewed by CRM

SAVE

SUBMIT

This wireframe was to ensure all the correct fields were there and in the right groupings and order.

This wireframe's goal was to make sure our layout made sense and was familiar to our users who were used to using Excel

[illegible]

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ITERATION 1 - PROTOTYPES

The initial prototypes were completed in conjunction with an outside design firm already on contract with the real estate firm. These were their initial designs:

The image displays four wireframe screenshots of a web form titled "ADD CLIENT AND PROPERTY". The form is divided into two main sections: "Client" and "Property". The "Client" section includes a "First Name" field and a "Last Name" field. The "Property" section includes a "Property Address" field, a "City" field, a "State" field, a "Zip" field, and a "Property Type" field. The "Property Type" field has a dropdown menu with options: "Residential", "Commercial", "Industrial", "Agricultural", "Mixed-Use", "Vacation Home", "Investment", and "Other". The form also includes "CANCEL" and "ADD" buttons. The four screenshots show different design iterations: the top-left shows the initial form with basic fields; the top-right shows a more complex form with additional fields and a "Property Type" dropdown; the bottom-left shows the form with a "Property Type" dropdown menu open, displaying a list of options; the bottom-right shows the form with a "Property Type" dropdown menu open, displaying a list of options, and a "Property Type" field with a "Property Type" dropdown menu open, displaying a list of options.

These screens demonstrated how we could chunk their workflow into simpler tasks, which the users ended up not liking.

ITERATION 1 - USER TESTING

Users

The users we use for testing this prototype were three people, two managing directors and an admin. They ended up being the users we primarily tested with through the entire MVP phase.

The user testing was conducted virtually with me present, the product manger, the lead product manager, and the director of the product managers.

Tasks & Questions

When we presented the prototypes to the users we created scenarios they would find themselves in and asked them how they would accomplish various tasks. For this first demonstration there was quite a bit of explaining since the tool was entire new concept for the users and presenting the idea of a new tool for their job was very challenging for them at first.

User Response & Quotes

There was quite a bit of initial confusion with the users when looking at this first version of the prototype. They had a very hard time orienting themselves and knowing what to do.

Once the users started understanding the concept they overwhelmingly did not like it. They gave a lot of push back on the number of required steps to accomplish tasks they do dozens of times a day.

The biggest thing we learned was that their work is high volume and that inputing data must be immediate accessible and done quickly, function over form. They were used to Excel spreadsheets.

“I hate clicking a lot and there is way too much clicking in this design”

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ITERATION 2 - PROTOTYPES

These s iteration 2 prototypes were completed in conjunction with an outside design firm led by my direction based off user feedback. We created mid-fi screens for this stage:

The screenshot shows the Wells Fargo appraisals page. At the top, there's a search bar with '4021' and a 'Property Type' dropdown. Below the header, there are four tabs: 'NEW', 'IN-PROGRESS', 'SUBMITTED', and 'COMPLETED'. The 'NEW' tab is selected. The table below has columns for 'Folio', 'Loan Information', 'Appraiser', 'Appraisal Information', 'Status', and 'Actions'. The first row shows a 'NEW' appraisal for '4021' with a status of 'NEW'.

Folio	Loan Information	Appraiser	Appraisal Information	Status	Actions
4021	Wells Fargo	Wells Fargo	2020 Property Address: Lane, Dallas, TX 75240	NEW	
4021	Wells Fargo	Wells Fargo	2020 Property Address: Lane, Dallas, TX 75240	NEW	
4021	Wells Fargo	Wells Fargo	2020 Property Address: Lane, Dallas, TX 75240	NEW	
4021	Wells Fargo	Wells Fargo	2020 Property Address: Lane, Dallas, TX 75240	NEW	
4021	Wells Fargo	Wells Fargo	2020 Property Address: Lane, Dallas, TX 75240	NEW	

START A SEARCH

Web/Rango - Dallas, Upstream

4022 Square Co.

Property Type

SEARCH

NEW

IN-PROGRESS

SUBMITTED

TIME

JOB DESCRIPTION

CLIENT

STATUS

3

40

Client Request

Web/Rango

4022 Square Co., Plano TX 75224
next Tower - Office building

4022 Square Co., San Diego CA 94102
next Tower - Office building

4022 Square Co., Plano TX 75224
next Tower - Office building

SEARCH

3

40

Client Request

Bank of America

4022 Square Co., Dallas, TX 75224

SEARCH

3

30

Client Request

Chase

4022 Property Address Lane, Dallas, TX 75224

SEARCH

3

40

Client Request

Home Depot

4022 Property Address Lane, Dallas, TX 75224

SEARCH

3

30

Client Request

Web/Rango

4022 Property Address Lane, Dallas, TX 75224

SEARCH

The screenshot shows the 'New' page in the 'iN-PROGRESS' tab. The page displays a table of new quotes. The table has columns for Track, Job Description, Client, Property Address, Required, and Status. Three quotes are listed, all with a status of 'NEW'. Below the table is a 'QUOTE DETAILS' section with search filters for Client, Name, and Time, and address fields for Street, City, State, and Postal Code. At the bottom are search filters for Name, Phone, and Email.

Track	JOB DESCRIPTION	CLIENT	PROPERTY ADDRESS	REQUIRED	STATUS
3x	Auto Wash	Clark-Royce	Webb-Fargo	228 Property Address Lane, Dallas, TX 75405	NEW
3x	Auto Wash	Clark-Royce	Bank of America	228 Property Address Lane, Dallas, TX 75405	NEW
3x	Auto Wash	Clark-Royce	Chase	228 Property Address Lane, Dallas, TX 75405	NEW

QUOTE DETAILS

CLIENT DETAILS

CLIENT DETAILS SEARCH

NAME

CLIENT TIME

Search Client...

Webb-Fargo

None

STREET ADDRESS LINE 1*

STREET ADDRESS LINE 2

345 Ross Ave

Box 100

CITY*

STATE*

POSTAL CODE*

Dallas

Texas

75405

CLIENT CONTACT NAME SEARCH

CLIENT CONTACT NAME

CLIENT CONTACT PHONE

CLIENT CONTACT EMAIL

Search Client contacts

Jeremy Nelson

214-555-1234

jeremy.nelson@email.com

The screenshot shows the 'New Listing' form in the CRM. The 'Details' tab is active, displaying a table with columns for 'Bid ID', 'Bid Amount', and 'Bid Status'. The table contains one row with a bid ID of '12345', a bid amount of '\$100,000', and a status of 'New'. Below the table, there are input fields for 'Bid ID', 'Bid Amount', and 'Bid Status'. A red banner at the top of the form indicates 'New Listing'.

ITERATION 2 - USER TESTING

Users

The users we use for testing this prototype were three people, two managing directors and an admin. They ended up being the users we primarily tested with through the entire MVP phase.

The user testing was conducted virtually with me present, the product manger, and the lead product manager.

Tasks & Questions

When the users saw these prototypes they were immediately pleased with the new direction and felt that it met their need better. We had them go through the screens and give us their thoughts as we observed their behavior. This flow was much more fleshed out as well, they were able to see a bigger picture of how the application is being designed to work.

User Response & Quotes

The users responded much more positively to this new iteration. They were not as confused as before but still got stuck at several locations, especially during the filling out of fields section. There are a lot of required fields to complete this task and the users felt more confident in the tool after seeing all the required fields at once.

They did not like the UI very much of the fields area. They though it showed too little on the screen at once and had to scroll way too much to see everything.

“There’s too much white space, too much scrolling, can we make everything smaller?”

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ITERATION 3 - PROTOTYPE

For iteration 3 we decided to implement a Google Material based design system. I condensed everything and made all the fields easier to read.

The image shows a web application prototype for a Real Estate Company. The top navigation bar includes a 'Find Client' search field, a 'Find Property' search field, a 'Search Property Type' dropdown, and a 'START' button. Below the navigation bar, there's a table with columns for 'NEW', 'IN-PROGRESS', 'SUBMITTED', and 'COMPLETED'. The 'IN-PROGRESS' tab is selected, showing a list of jobs with columns for 'TIME', 'JOB INFORMATION', 'CLIENT', 'PROPERTY ADDRESS', 'ISSUED', and 'STATUS'. The first job is '20 1015' with a status of 'IN-PROGRESS'. Below the table, there's a 'QUOTE DETAILS' section. This section is divided into 'CLIENT DETAILS' and 'CLIENT CONTACT'. The 'CLIENT DETAILS' section includes a 'SEARCH CLIENTS' search field, a 'NAME' field (WebForge), a 'CLIENT TYPE' field (Bank), a 'STREET ADDRESS LINE 1' field (1445 Main St.), a 'CITY' field (Dallas), a 'STATE' field (Texas), and a 'ZIP CODE' field (75202). The 'CLIENT CONTACT' section includes a 'SEARCH CLIENT CONTACTS' search field, a 'FIRST NAME' field (Seeth), a 'LAST NAME' field (Hopper), a 'PHONE' field, and an 'EMAIL' field. Below the 'CLIENT DETAILS' section, there's a 'PROPERTY DETAILS' section. This section includes a 'SEARCH PROPERTIES' search field, a 'PROPERTY TYPE' field (High Rise), a 'PROPERTY SUBTYPE' field (Office), a 'PROPERTY STATUS' field (Not Listed), a 'STREET ADDRESS LINE 1' field (2200 Ross Ave), a 'STREET ADDRESS LINE 2' field (Sec 100), a 'SQUARE FEET' field (330,000), a 'CITY' field (Dallas), a 'STATE' field (Texas), a 'ZIP CODE' field (75202), a 'BUILDING' field (3), a 'FLOOR' field (1000), and a 'YEAR BUILT' field (2005). Below the 'PROPERTY DETAILS' section, there's a 'SCOPE OF WORK' section. This section includes a 'SELECT REPORT TYPE' dropdown, a 'SELECT INTERESTED USE' dropdown, a 'SELECT ORIGINATING OFFICE' dropdown, and a 'SEARCH JOB ORIGINATOR' search field. Below the 'SCOPE OF WORK' section, there's a 'PRIOR INVOLVEMENT CHECK' section. This section includes a 'SEARCH CODES' dropdown, a 'IS THERE A PREVIOUS CONFLICT?' checkbox, and a 'REASON FOR CONFLICT' text area. At the bottom of the form, there's a 'BID DETAILS AND COMMENTS' section.

With this design I compressed all the space between the fields, made fonts smaller to 12px, and used color for visual hierarchy, the users really liked this final output.

CONCLUSION

The third iteration was huge success with the users during testing. Upper management liked it as well. The MVP product rolled out looking like the design above. The Bidding Management tool started off successful but still lacking several features to be a viable tool for the corporation nationally.

While development was underway for the tool, I started once again the entire design cycle again to begin implementing new features into the tool to make it national ready.

At such a huge corporation with a lot of money at stake, and with this tool being so new, the design process was rather unique and challenging at times. The design process for this product flowed like this:

