

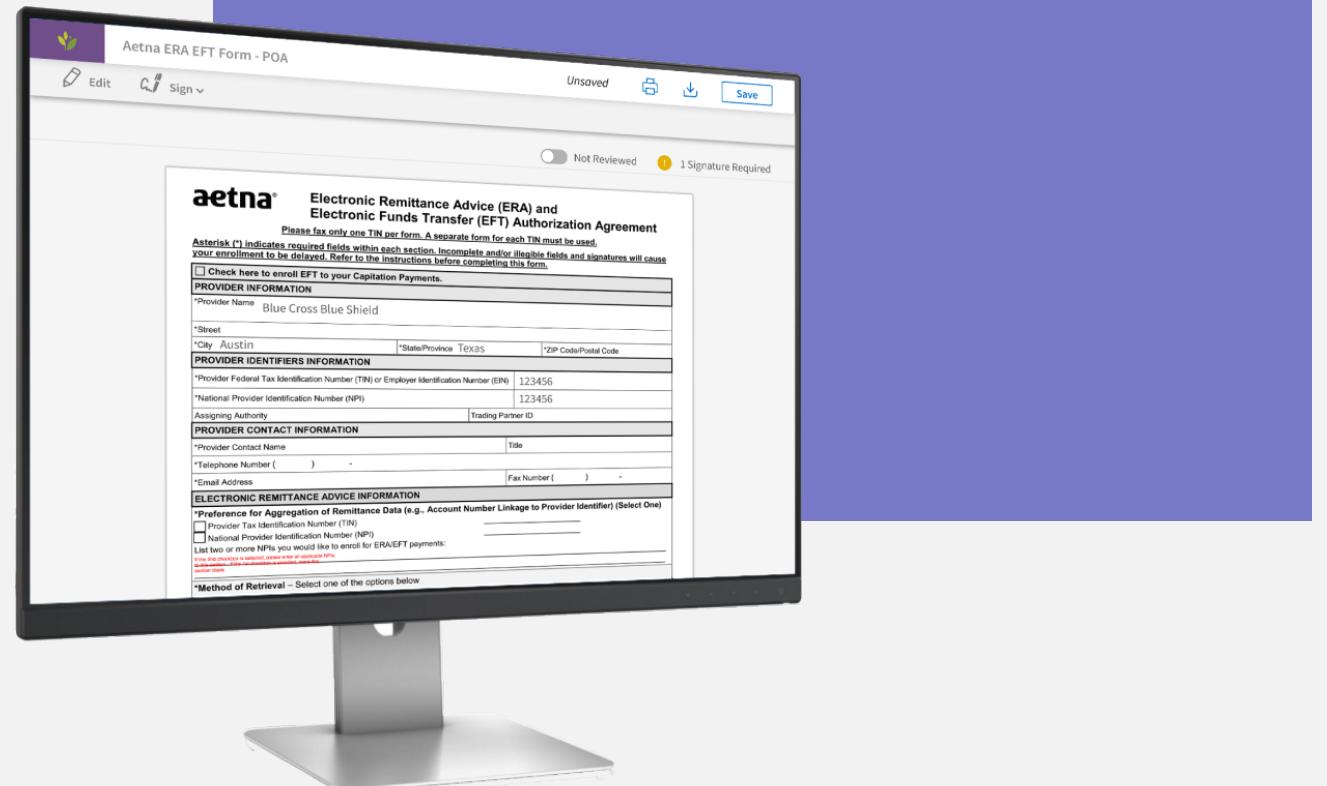
Jeremy's Portfolio

Jeremy Chen

The University of Texas at Austin

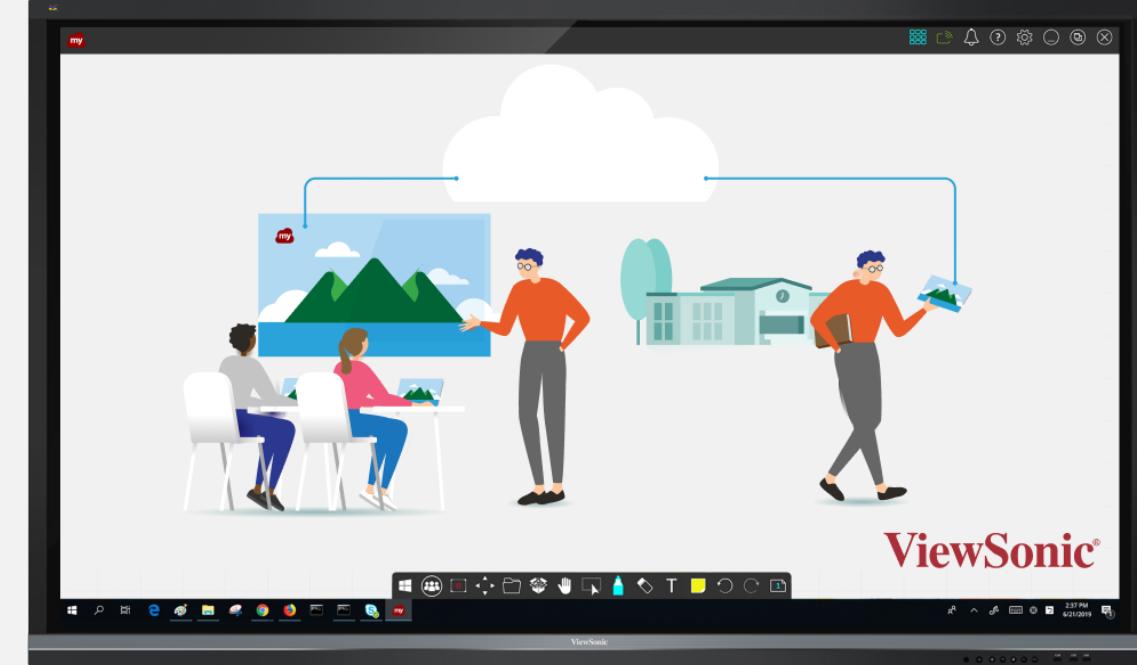
Master, User Experience Design

athenahealth Internship



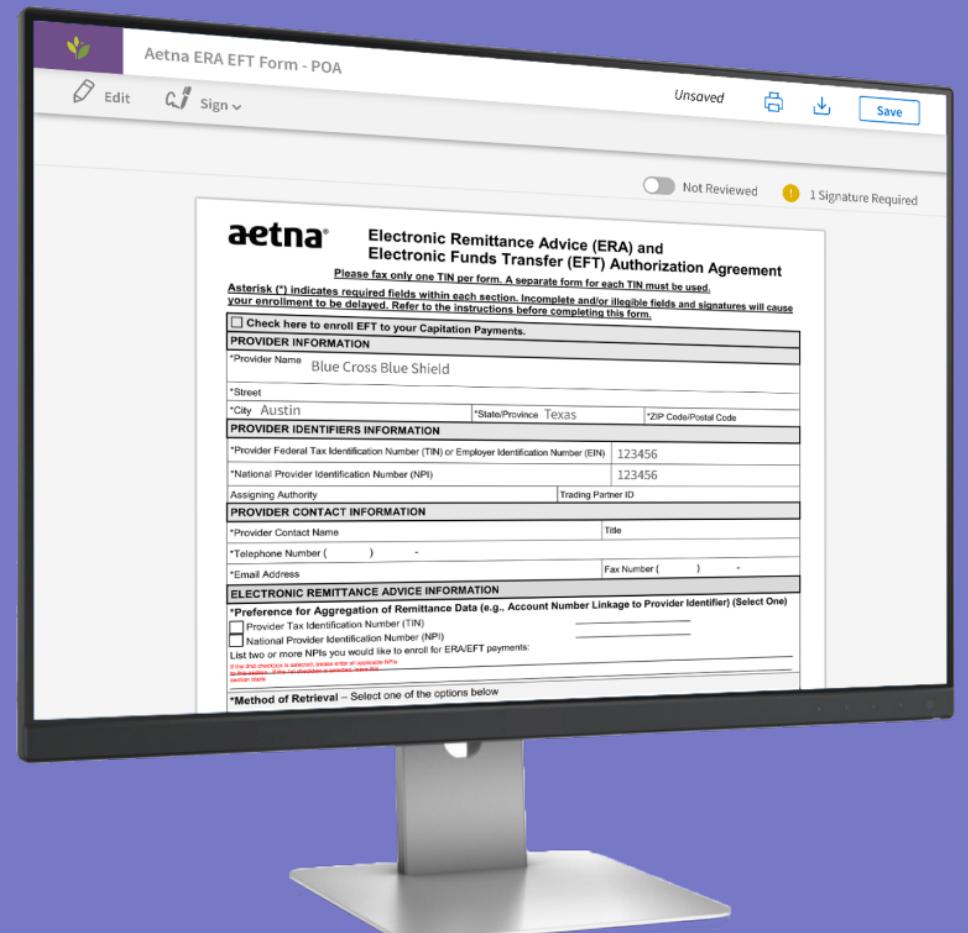
Web Application
agile, Scrum

ViewSonic Internship



Web Application
early-stage product development

athenahealth Internship

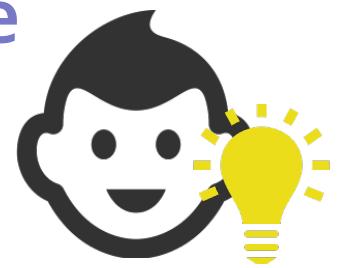


What is my role?

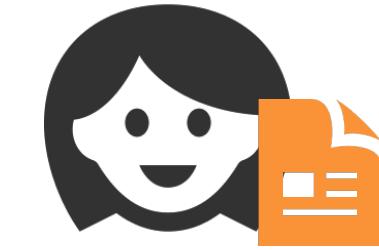
As an embedded SCRUM UX designer, I work closely with the Product Owner and Developers to implement a functionality into the software.

My SCRUM team

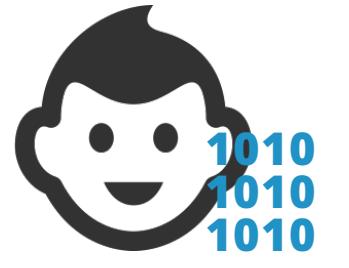
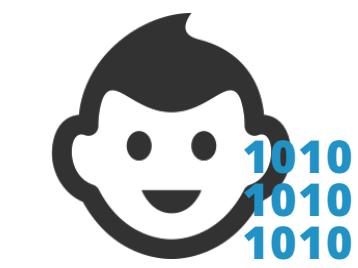
Me



UX Designer



Product Owner



3 Developers

What is the challenge?

Hey athena! I want to transfer money electronically with my payer.



Providers

1
→



long process by the internal team

4
→

We have filled out the form and signed it for you. Your request has been completed.

Hey payer! We want to transfer money electronically with you.



Payers

2
→

3
←

No problem!
Please fill out this form to meet our requirements, and make sure you sign it.

Build the right thing

Why?

Why does the problem matter to the company and users?

Why?

The Value of Solving the Problem

Because of functionality limitations the software has, enrollment operation teams are forced to work outside of the software to sign payer application forms.

2 mins

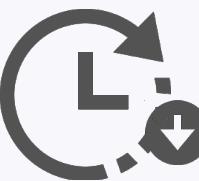
to process a form.

This lack of functionality is highly inefficient; it took an average of

The Value for the company



Reduce the cost of printing enrollment forms

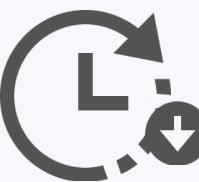


Decrease the time of processing the forms

The Value for health providers



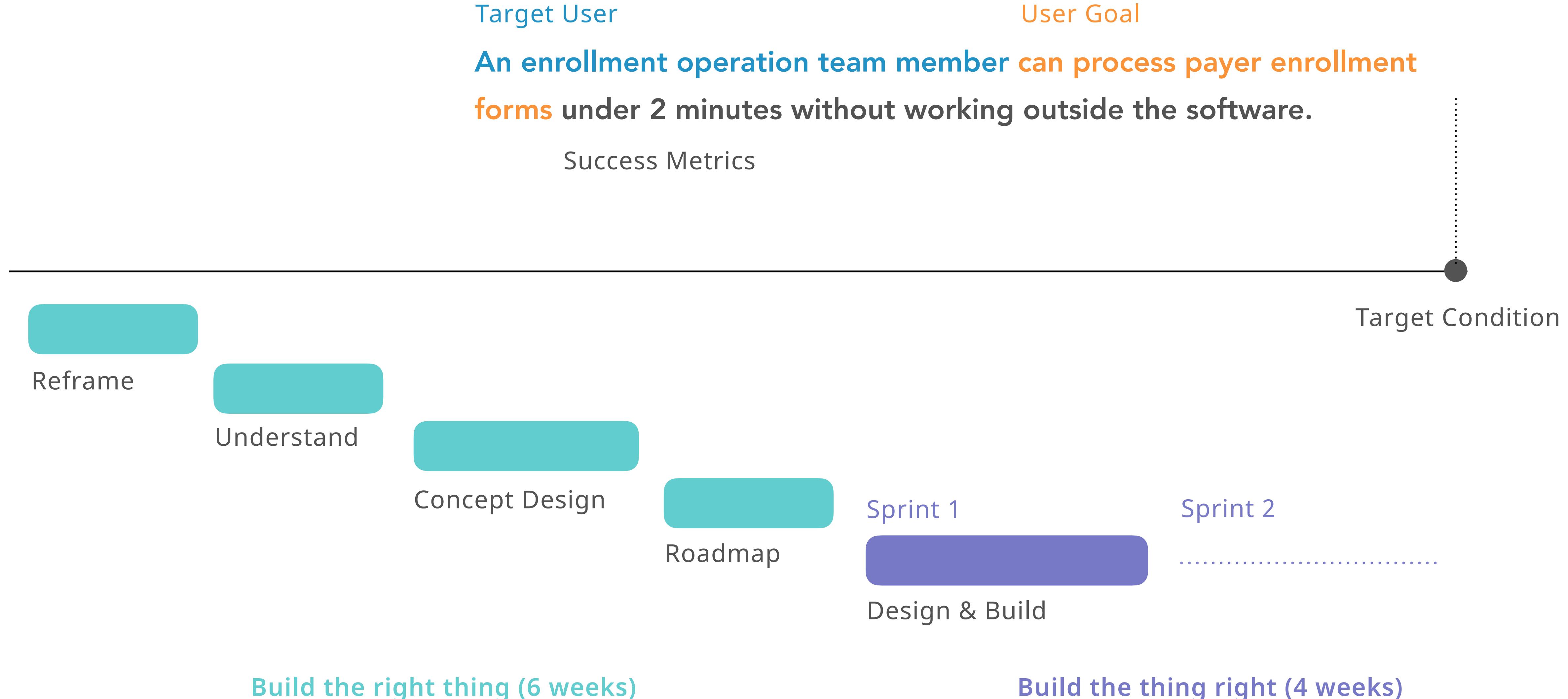
Decrease the time of setting up the connection with Payers



Decrease the time of processing the forms

Why?

Project Kickoff



Why?

Research Plan

Enrollment e-sign user research

Objective:
The purpose of the study is to answer the hypotheses we have and understand the difficulties Ops users have when signing enrollment form.

Background:
We know that our current form signature process is not well designed. The process is complicated and time-wasting for both Ops team and clients in athenaNet. To validate our hypothesis, we would like to narrow our focus on Ops team and interview them to validate and answer our research questions.

Research Questions:
Understand Ops team usage and perceptions around the enrollment form and signing tools within athenaNet:

- What are the concerns and difficulties Ops have before/during/after signing a form?
- How does e-sign compare to their current workflow?

Question & Hypotheses:

	IMPORTANCE
We think that Ops teams suffer difficulties when signing the form <ul style="list-style-type: none">- What are the current process of signing form?- What are the difficulties they have before/during/after signing the form?- How do Ops users locate the place to sign their signature?- How do Ops users know which signature type to use?- How do Ops users know that there are tasks waiting to complete?	Critical
We think that e-sign could improve the current workflow for Ops team <ul style="list-style-type: none">- How does e-sign fit and improve the current workflow?- How does e-sign solve Ops teams' need?	Critical
We think that Ops team need to locate the signed document <ul style="list-style-type: none">- What is the current process of finding signed document?	Critical
We think that our clients have a hard time to complete the enrollment task <ul style="list-style-type: none">- What are the difficulties our clients have when completing the enrollment tasks?	Useful

Importance Key:

- **Critical:** We cannot proceed (or proceed without causing user/athena harm) without this information.
- **Useful:** This information would be helpful in ensuring success, but it's not preventing progress.
- **Nice to know:** This information would be informative, but we don't need it to proceed.

Participant Profile:

- Ops team who help clients to sign the enrollment application form (e.g. for EDI, ERA, and EFT)
- It can be a subject-matter expert

Target User

Primary User: athenahealth Enrollment Operation Team

Secondary User: athenahealth Clients

Assumption 1

We think that our users suffer difficulties when processing the form

Assumption 2

We think that electronic signature function (e-sign) could improve the current workflow for our users

Build the right thing

Where?

Where does our target user suffer difficulties?

Where?

User Interviews

Why did I conduct user interviews?



User Interviews

Validate
→

Assumption 1

We think that our users suffer difficulties when processing the form

How many users did I interview?



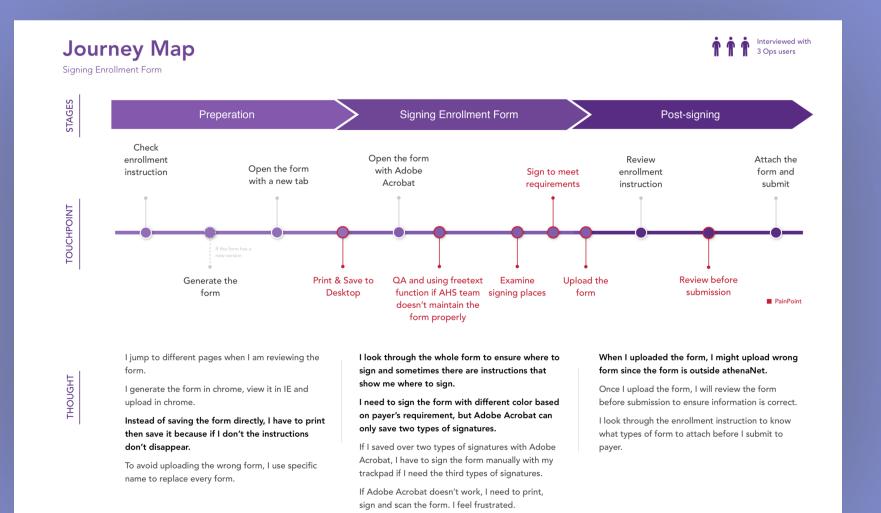
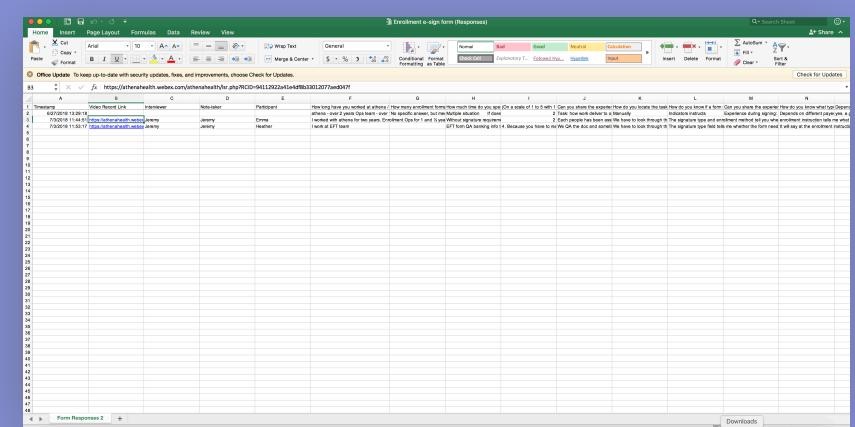
Key Questions

- Can you share the experience that you have during the last time when you are signing the enrollment form?
- What did you do to meet the payer's requirements?
- What happens if there is a problem with the enrollment form?

What will the workflow be?

Synthesis

- Excel Sheet
- Journey Map



Where?

User Interviews - Journey Map

How do our users process enrollment forms?

Color  : 3 of 3 interviewees have this problem



Download the form
from the software to
the local desktop



Edit the form



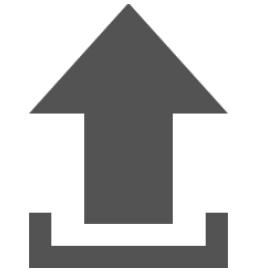
Print the form
(If needed)



Sign the form



Scan the form
(If needed)



Upload the form

Hard to know where
to sign

Afraid of uploading
the wrong form

Hard to know how
many signatures are
required

Where?

User Stories

As an

Enrollment Operation Team Member

I want to

edit the form and know where on the form I need to sign so that the form is edited and signed correctly the first time.

I want to

ensure that a reviewed and signed payer application form is stored in the software so that I can know that I sent the right form, and this form can be accessed at a later date.

I want to

change color signatures so that I can meet payer's requirements.

Build the right thing

What?

What concepts are we building to meet user needs?

What?

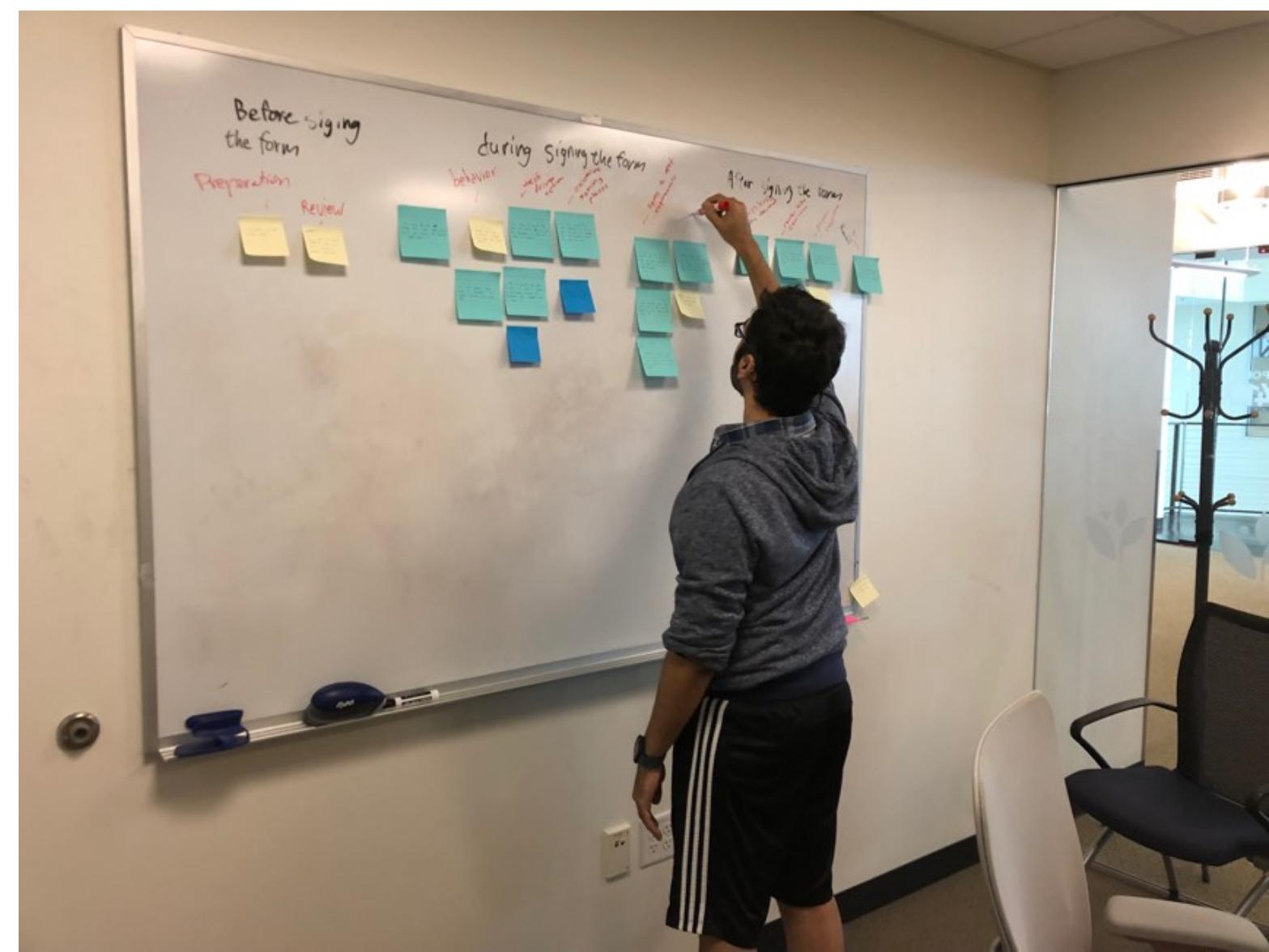
Design Ideation

What is the purpose of this design ideation workshop?

The purpose of this ideation workshop is to ideate HMW statements that meet our user needs and bring our HMW statements to a more concrete concept considering about business, technology and user.

My role

I am a facilitator who helps my teammates to generate wild ideas!



Ideation Workshop

What?

Concept

User Stories

As an enrollment operation team member, **I want to edit the form and know where on the form I need to sign**, so that the form is edited and signed correctly the first time.

As an enrollment operation team member, **I want to ensure that a reviewed and signed payer application form is stored in the software**, so that I can know that I sent the right form, and this form can be accessed at a later date.

As an enrollment operation team member, **I want to change color signatures**, so that I can meet payer's requirements.

Features



An indicator shows where and how many signatures are required



Adobe Sign



Pop-up a notification when the document is stored



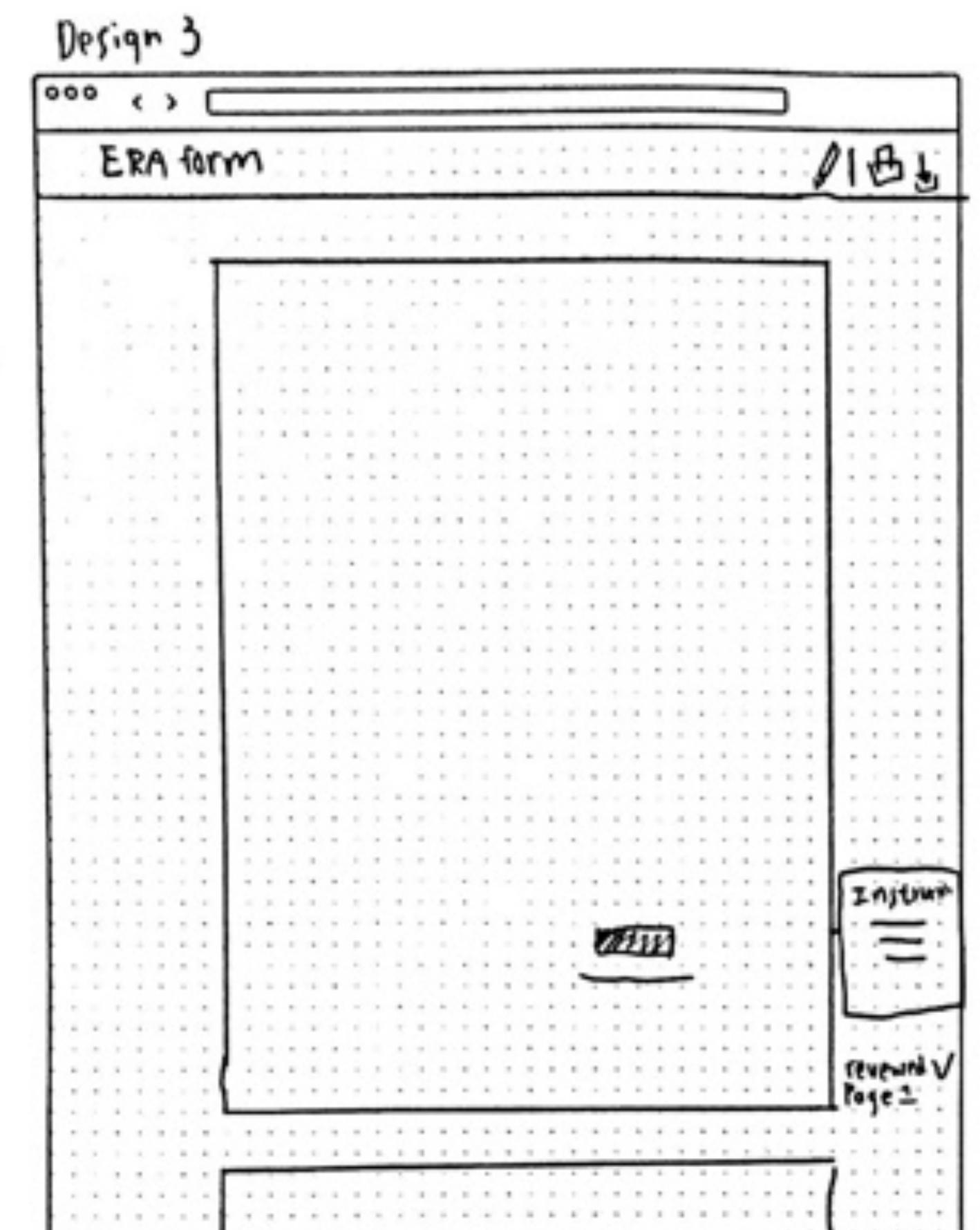
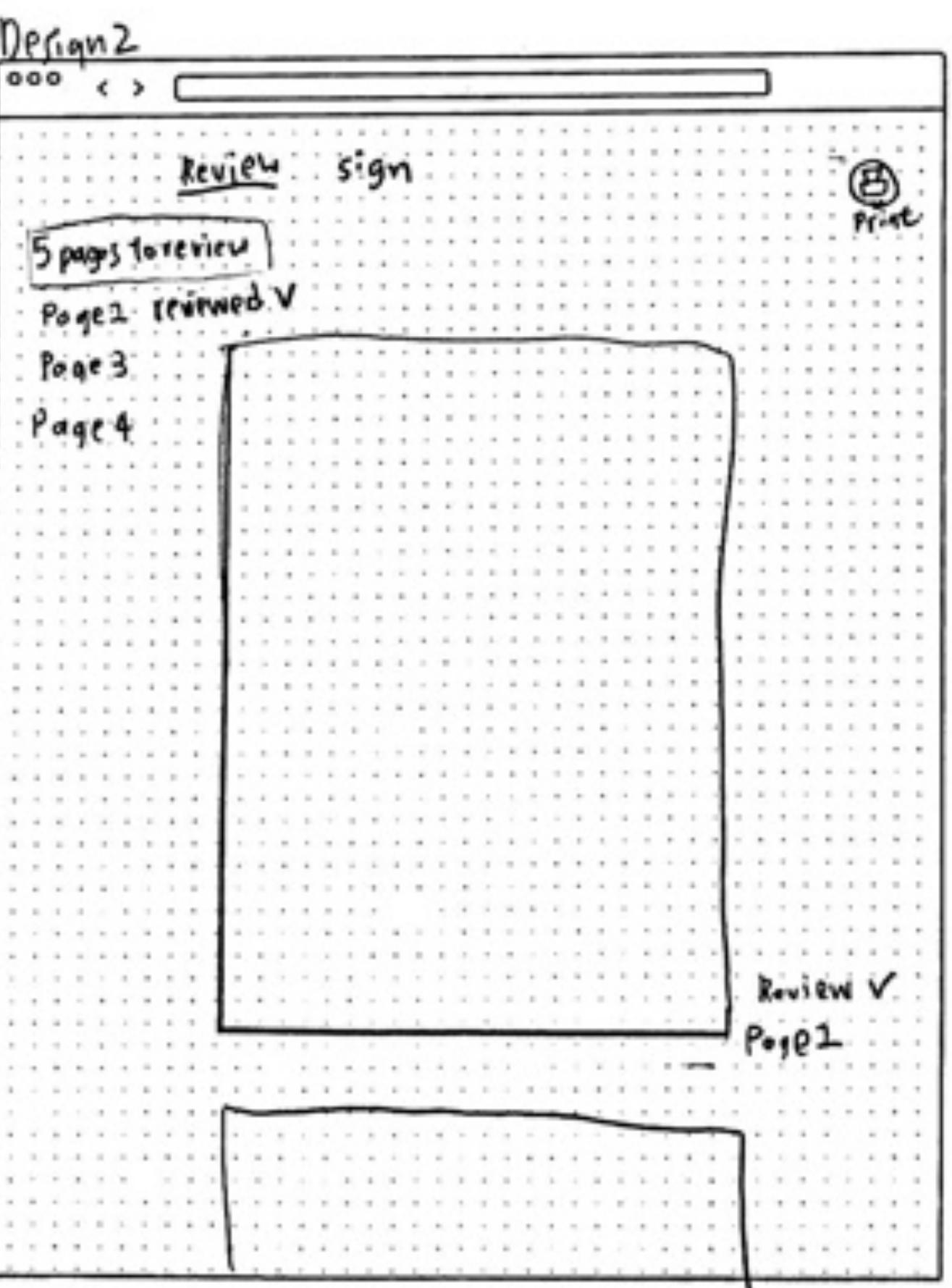
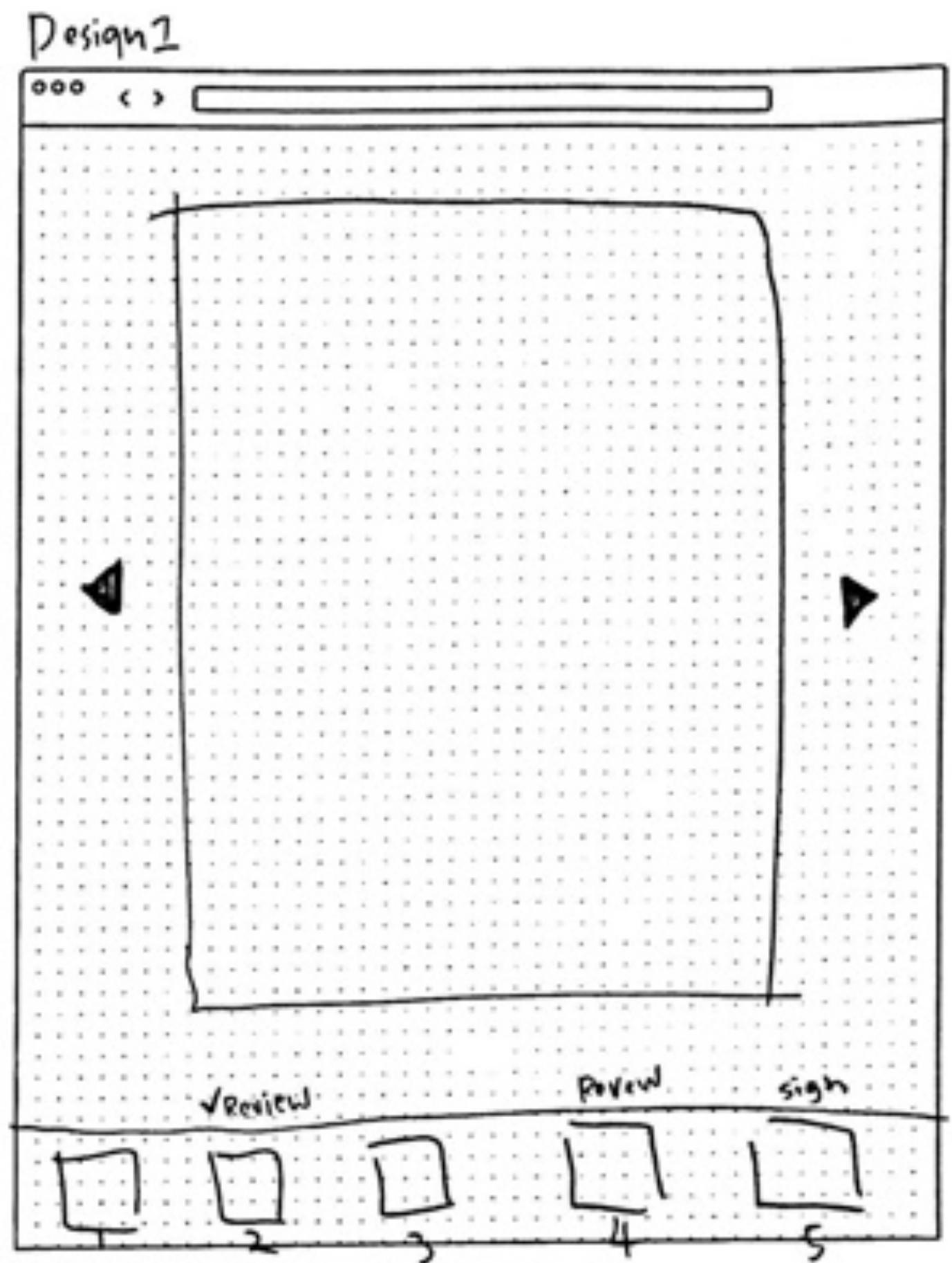
Review Function



Adobe Sign

What?

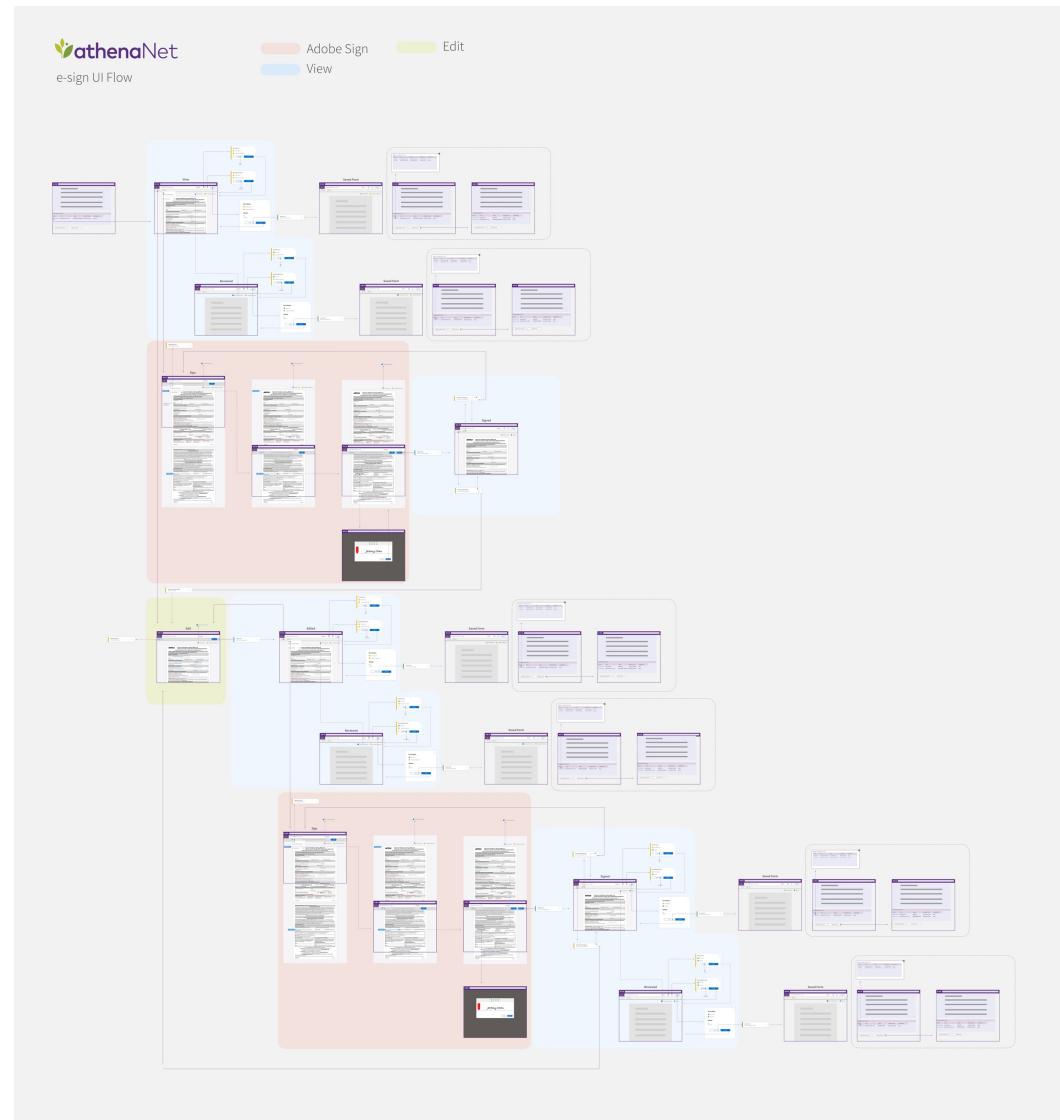
Paper Sketching



What?

UI Flow

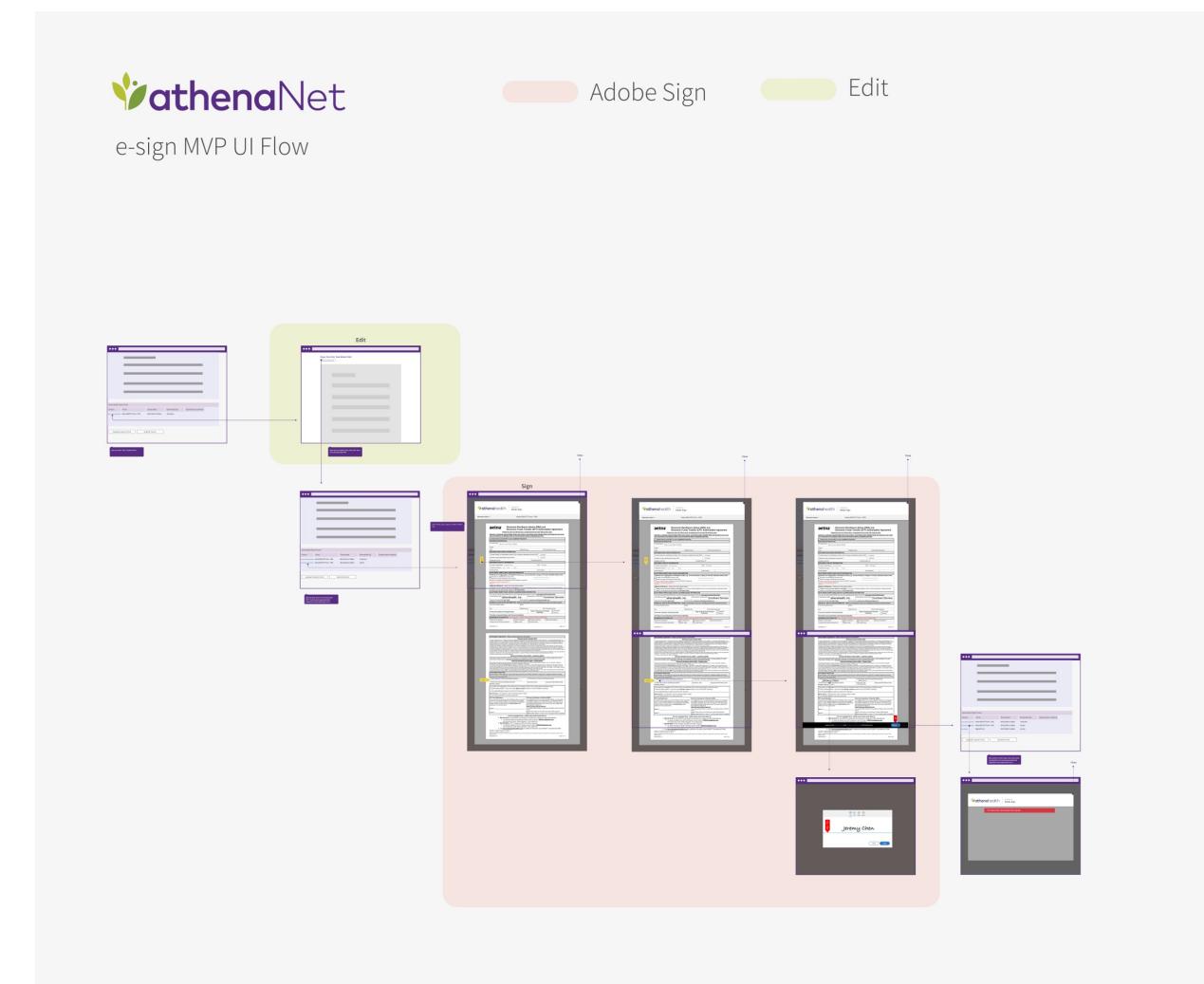
I designed two version of UI flow. One is the ideal flow that provides a vision for the future. The other one is an MVP version that our dev can easily implement to meet limited time frame and see the impact of implementing electronic-signature functionality.



Future Version

Future Version:

- ? An indicator shows where and how many signatures are required
- i Pop-up a notification when the document is stored
- checkmark Review Function



MVP Version

MVP:

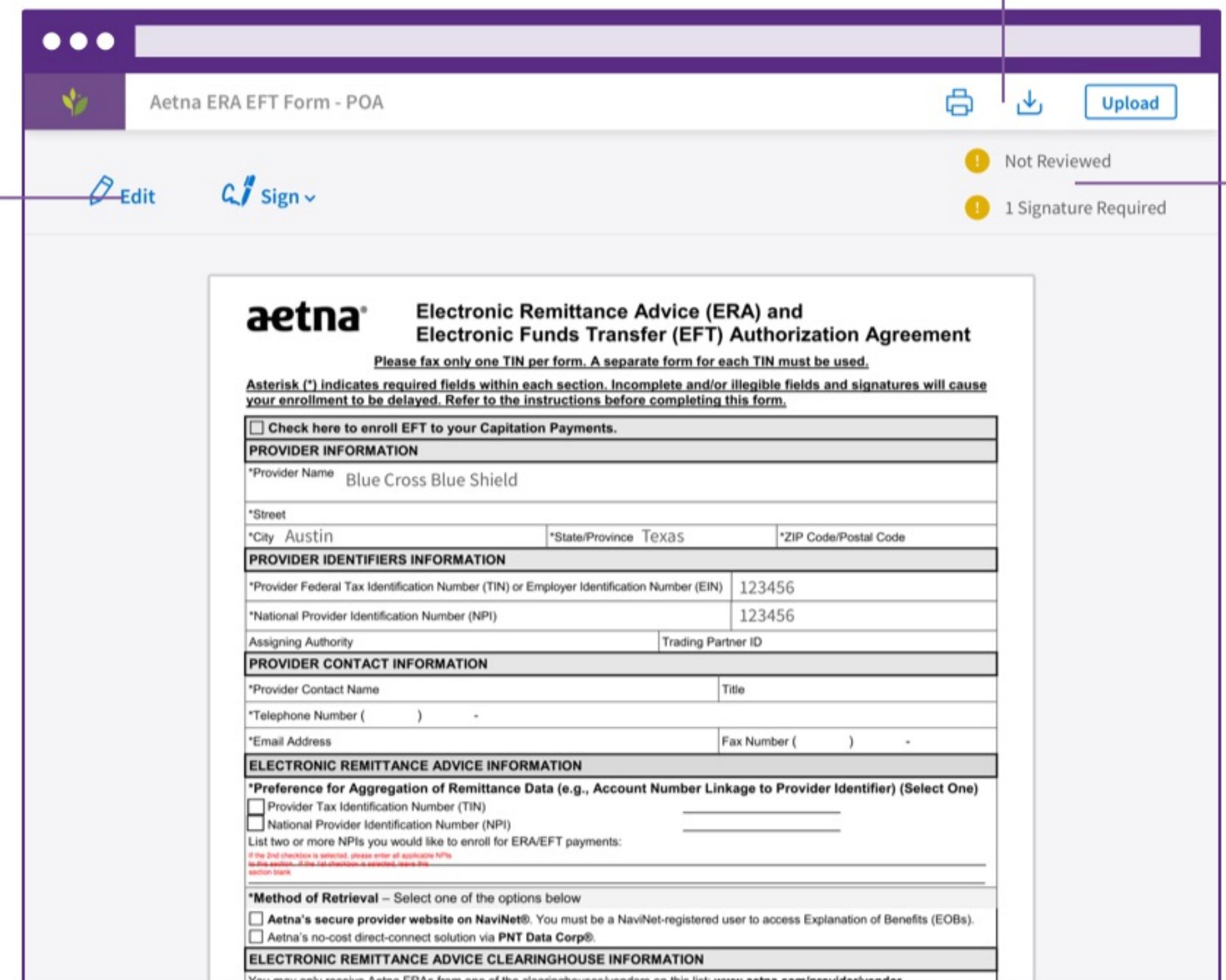


Adobe Sign

What?

Prototype

Clean and simple design, which users can easily know how to use those tools



The screenshot shows a web-based form titled "Aetna ERA EFT Form - POA". At the top, there's a purple navigation bar with three dots on the left, a logo on the right, and icons for print, download, and upload. Below the bar, there are buttons for "Edit" and "Sign". To the right of the "Sign" button, there are two status indicators: "Not Reviewed" with a yellow exclamation mark icon and "1 Signature Required" with a blue info icon. The main content area contains the Aetna logo and the title "Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement". It includes instructions about faxing and required fields. The form is divided into sections: "PROVIDER INFORMATION", "PROVIDER IDENTIFIERS INFORMATION", "PROVIDER CONTACT INFORMATION", "ELECTRONIC REMITTANCE ADVICE INFORMATION", and "ELECTRONIC REMITTANCE ADVICE CLEARINGHOUSE INFORMATION". Each section contains various input fields like text boxes and dropdowns, with some fields marked with asterisks (*) indicating they are required.

A globe navigation bar that users can print, download and upload the form

A clear indicator tells the user that whether this form been reviewed and how many signatures are required.



Build the thing right

How?

How are we going to evaluate our solution?

How?

Stakeholder Review

What is the purpose of this stakeholder review?

Alignment is necessary to build the right thing. Stakeholder review (design review) is a crucial way of gathering internal feedback to iterate the UI. We iterate rapidly and increase fidelity as we move towards a pilot.

Recommendation:
Fixed navigation bar helps users quickly select the tool they want

Aetna ERA EFT Form - POA

Not Reviewed
1 Signature Required

Upload

Edit Sign

aetna® Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement

Please fax only one TIN per form. A separate form for each TIN must be used.

Asterisk (*) indicates required fields within each section. Incomplete and/or illegible fields and signatures will cause your enrollment to be delayed. Refer to the instructions before completing this form.

Check here to enroll EFT to your Capitation Payments.

PROVIDER INFORMATION

*Provider Name: Blue Cross Blue Shield

*Street: Austin

*City: Austin *State/Province: Texas *ZIP Code/Postal Code: 123456

PROVIDER IDENTIFIERS INFORMATION

*Provider Federal Tax Identification Number (TIN) or Employer Identification Number (EIN): 123456

*National Provider Identification Number (NPI): 123456

Assigning Authority: Trading Partner ID

PROVIDER CONTACT INFORMATION

*Provider Contact Name: _____ Title: _____

*Telephone Number: _____ - _____

*Email Address: _____ Fax Number: _____ - _____

ELECTRONIC REMITTANCE ADVICE INFORMATION

*Preference for Aggregation of Remittance Data (e.g., Account Number Linkage to Provider Identifier) (Select One)

Provider Tax Identification Number (TIN)
 National Provider Identification Number (NPI)

List two or more NPIs you would like to enroll for ERA/EFT payments:
If the 2nd checkbox is selected, please enter all applicable NPIs to this section. If the 1st checkbox is selected, leave this section blank.

*Method of Retrieval – Select one of the options below

Aetna's secure provider website on Navinet®. You must be a Navinet-registered user to access Explanation of Benefits (EOBs).
 Aetna's no-cost direct-connect solution via PNT Data Corp.

ELECTRONIC REMITTANCE ADVICE CLEARINGHOUSE INFORMATION

Recommendation:
The word “upload” is confusing. Where do I upload?

Recommendation:
We have to consider about the situation if Adobe Sign isn't working.

Recommendation:
We need to have the function of adding freetext because sometimes some magic words do not appear inside the form.

How?

Stakeholder Review

New Changes

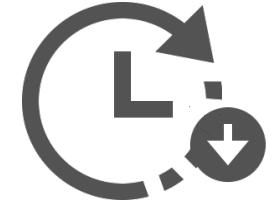
The screenshot shows the Aetna ERA EFT Form - POA interface. At the top, there is a purple header bar with three dots on the left, the form title 'Aetna ERA EFT Form - POA' in the center, and status indicators 'Unsaved' and 'Not Reviewed' on the right. Below the header is a toolbar with icons for 'Edit' (pencil), 'Sign >' (document with signature), and 'Save' (disk). The main content area contains the 'aetna® Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement'. It includes sections for 'PROVIDER INFORMATION', 'PROVIDER IDENTIFIERS INFORMATION', 'PROVIDER CONTACT INFORMATION', and 'ELECTRONIC REMITTANCE ADVICE INFORMATION'. The 'Save' button is highlighted with a green arrow pointing to it from the text 'Change: Replace the word "Upload" by "Save"'.

Change:
Fixed tool bar

Change:
Replace the word
"Upload" by "Save"

How?

Define the Success Metrics



Unit Time Reduction

Reduce the time of signing per enrollment form to 30 seconds



Risks Reduction

90% of Enrollment application forms are filled out/signed in the software by the enrollment Operation team, and 10% are filled out/signed outside the software



Usability Success Metrics

- The measurement of "Intention To Use" is higher than 4.0.
- The measurement of "Meets The Requirement" is higher than 4.0.
- The measurement of "Perceived Usefulness" is higher than 4.5.

How?

RITE Usability Testing

Why did I conduct usability testing?



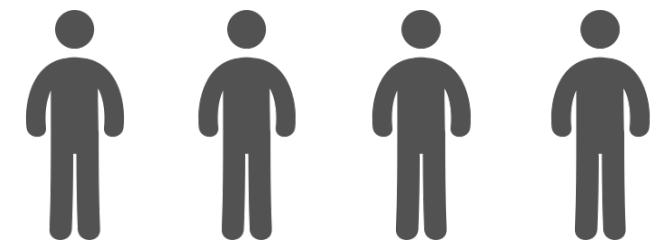
Validate →

Usability Testing

Assumption 2

We think that electronic signature function (e-sign) could improve the current workflow for our users

How many users did I test?

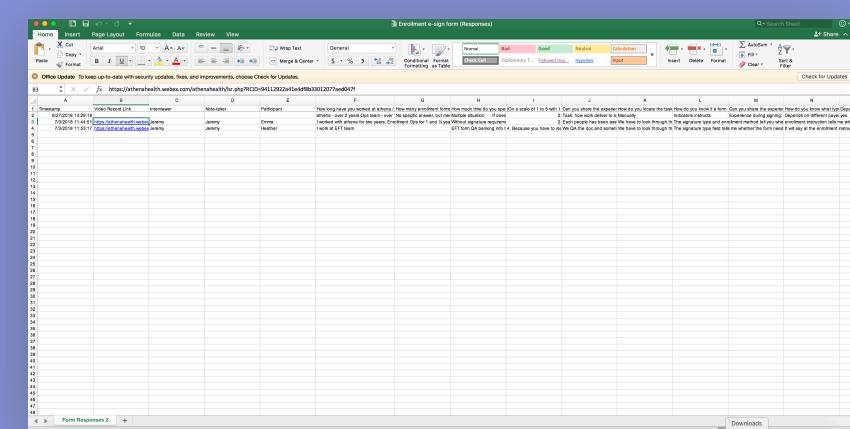


Key Scenarios

- Editing the form
- Signing the form
- Adobe Sign isn't working

Synthesis

- Excel Sheet



How?

RITE Usability Testing

Iteration 1

Takeaway:
I thought that the label “Place Signature” is confusing. Do I place a signature here?

Takeaway:
The fixed tool bar lets me select the tool I want.
However, at first I have a hard time to find this tool bar.

Takeaway:
I can't see the indicator when she entered signing mode.



Intend to Use:	4 / 5
Meet Requirements:	3 / 5
Usefulness:	4.5 / 5
Completed Time:	1min

1: Strongly Disagree; 5: Strongly Agree

How?

RITE Usability Testing

New Changes

Change:
Fixed tool bar
at the top

The screenshot shows a web-based form titled "Aetna ERA EFT Form - POA". At the top, there is a purple header bar containing a logo, the title, and several icons for editing, saving, and printing. Below this is a white toolbar with buttons for "Edit", "Sign", "Save", and "Cancel". A message "I agree to the Terms of Use and Consumer Disclosure of this document" is displayed above the main content area. The main content area contains sections for "Provider Information", "Provider Identifiers Information", "Provider Contact Information", and "Electronic Remittance Advice Information". Each section has various input fields for provider details like name, address, and contact information. At the bottom, there is a section for "Method of Retrieval" with two checkboxes. The entire form is framed by a thick purple border.

Change:
Change the indicator
bar's location and add a
toggle for reviewed
indicator

How?

RITE Usability Testing

Iteration 2

Aetna ERA EFT Form - POA

Unsaved

Done Editing

Reviewed by jchen

1 Signature Required

aetna® Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement

Please fax only one TIN per form. A separate form for each TIN must be used.

Asterisk (*) indicates required fields within each section. Incomplete and/or illegible fields and signatures will cause your enrollment to be delayed. Refer to the instructions before completing this form.

Check here to enroll EFT to your Capitation Payments.

PROVIDER INFORMATION

*Provider Name: Blue Cross Blue Shield

*Street:

*City: Austin *State/Province: Texas *ZIP Code/Postal Code:

PROVIDER IDENTIFIERS INFORMATION

*Provider Federal Tax Identification Number (TIN) or Employer Identification Number (EIN): 123456

*National Provider Identification Number (NPI):

Assigning Authority: Trading Partner ID

PROVIDER CONTACT INFORMATION

*Provider Contact Name: Title:

*Telephone Number: -

*Email Address: Fax Number: -

ELECTRONIC REMITTANCE ADVICE INFORMATION

*Preference for Aggregation of Remittance Data (e.g., Account Number Linkage to Provider Identifier) (Select One)

Provider Tax Identification Number (TIN)

National Provider Identification Number (NPI)

List two or more NPIs you would like to enroll for ERA/EFT payments:
If the 2nd checkbox is selected, please enter an applicable NPIs
to this section. If the 3rd checkbox is selected, leave this
section blank

*Method of Retrieval – Select one of the options below

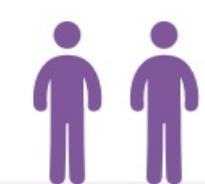
Aetna's secure provider website on NaviNet®. You must be a NaviNet-registered user to access Explanation of Benefits (EOBs).

Aetna's no-cost direct-connect solution via PNT Data Corp®.

ELECTRONIC REMITTANCE ADVICE CLEARINGHOUSE INFORMATION

Takeaway:

I do not know I need to click "Done Editing" to exit edit mode.



2 Ops users

Intend to Use: 4.5 / 5

Meet Requirements: 3.5 / 5

Usefulness: 5 / 5

Completed Time: 40sec

1: Strongly Disagree; 5: Strongly Agree

How?

RITE Usability Testing

New Changes

Aetna ERA EFT Form - POA

Unsaved

Edit Sign Done Editing

Not Reviewed 1 Signature Required

aetna® Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement

Please fax only one TIN per form. A separate form for each TIN must be used.

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*Provider Federal Tax Identification Number (TIN) or Employer Identification Number (EIN): 123456

*National Provider Identification Number (NPI):

Assigning Authority: Trading Partner ID

PROVIDER CONTACT INFORMATION

*Provider Contact Name: [redacted] Title: [redacted]

*Telephone Number: [redacted] - [redacted]

*Email Address: [redacted] Fax Number: [redacted] - [redacted]

ELECTRONIC REMITTANCE ADVICE INFORMATION

*Preference for Aggregation of Remittance Data (e.g., Account Number Linkage to Provider Identifier) (Select One)

Provider Tax Identification Number (TIN)

National Provider Identification Number (NPI)

List two or more NPIs you would like to enroll for ERA/EFT payments:
If the 2nd checkbox is selected, please enter all applicable NPIs
to this section. Only 1st checkbox is required, leave the
section blank.

*Method of Retrieval – Select one of the options below

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Aetna's no-cost direct-connect solution via PNT Data Corp®.

ELECTRONIC REMITTANCE ADVICE CLEARINGHOUSE INFORMATION

Change:
Increase the color contrast between viewing and editing or signing model

Final Delivery

Prototype

Edit the form

The screenshot shows the Adobe Sign interface for editing the "Aetna ERA EFT Form - POA". The top bar includes standard window controls (red, yellow, green), a purple header bar with a leaf icon, the document title "Aetna ERA EFT Form - POA", and status indicators "Unsaved", "Save", "Print", "Download", and "Sign". Below the header, there are "Edit" and "Sign" buttons, and status icons for "Not Reviewed" and "Signature Required". The main content area displays the "aetna® Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement". The form includes instructions: "Please fax only one TIN per form. A separate form for each TIN must be used." and "Asterisk (*) indicates required fields within each section. Incomplete and/or illegible fields and signatures will cause your enrollment to be delayed. Refer to the instructions before completing this form.". The form is divided into sections: "PROVIDER INFORMATION" (Provider Name: Blue Cross Blue Shield), "PROVIDER IDENTIFIERS INFORMATION" (City: Austin, State/Province: Texas, ZIP Code/Postal Code: 123456; National Provider Identification Number (NPI): 123456), "PROVIDER CONTACT INFORMATION" (Provider Contact Name, Title, Telephone Number, Email Address, Fax Number), and "ELECTRONIC REMITTANCE ADVICE INFORMATION" (Preference for Aggregation of Remittance Data (e.g., Account Number Linkage to Provider Identifier) (Select One): Provider Tax Identification Number (TIN) or National Provider Identification Number (NPI); List two or more NPIs you would like to enroll for ERA/EFT payments; Method of Retrieval: Aetna's secure provider website on NaviNet® or Aetna's no-cost direct-connect solution via PNT Data Corp®). The "ELECTRONIC REMITTANCE ADVICE CLEARINGHOUSE INFORMATION" section is partially visible at the bottom.

Features:



Adobe Sign



Pop-up a notification when the document is stored

Final Delivery

Prototype

Sign the form

The screenshot shows the Adobe Sign interface for the "Aetna ERA EFT Form - POA". The top bar includes standard window controls (red, yellow, green), the document title, and status indicators (Unsaved, Print, Download, Save). Below the title, there are "Edit" and "Sign" buttons. On the right, there are status icons: a grey circle for "Not Reviewed" and a yellow circle with an exclamation mark for "1 Signature Required". The main content area displays the "aetna" logo and the title "Electronic Remittance Advice (ERA) and Electronic Funds Transfer (EFT) Authorization Agreement". It includes instructions: "Please fax only one TIN per form. A separate form for each TIN must be used." and "Asterisk (*) indicates required fields within each section. Incomplete and/or illegible fields and signatures will cause your enrollment to be delayed. Refer to the instructions before completing this form.". The form is divided into several sections: "PROVIDER INFORMATION" (Provider Name: Blue Cross Blue Shield), "PROVIDER IDENTIFIERS INFORMATION" (City: Austin, State/Province: Texas, ZIP Code/Postal Code: 123456; National Provider Identification Number (NPI): 123456), "PROVIDER CONTACT INFORMATION" (Provider Contact Name: Jeremy Chan, Title: Manager), and "ELECTRONIC REMITTANCE ADVICE INFORMATION" (Preference for Aggregation of Remittance Data (e.g., Account Number Linkage to Provider Identifier) (Select One): Provider Tax Identification Number (TIN) or National Provider Identification Number (NPI)). There is also a note: "List two or more NPIs you would like to enroll for ERA/EFT payments: If the 2nd checkbox is selected, please enter all applicable NPIs to this section. If the 1st checkbox is selected, leave this section blank."

Features:



Adobe Sign



Pop-up a notification when the document is stored

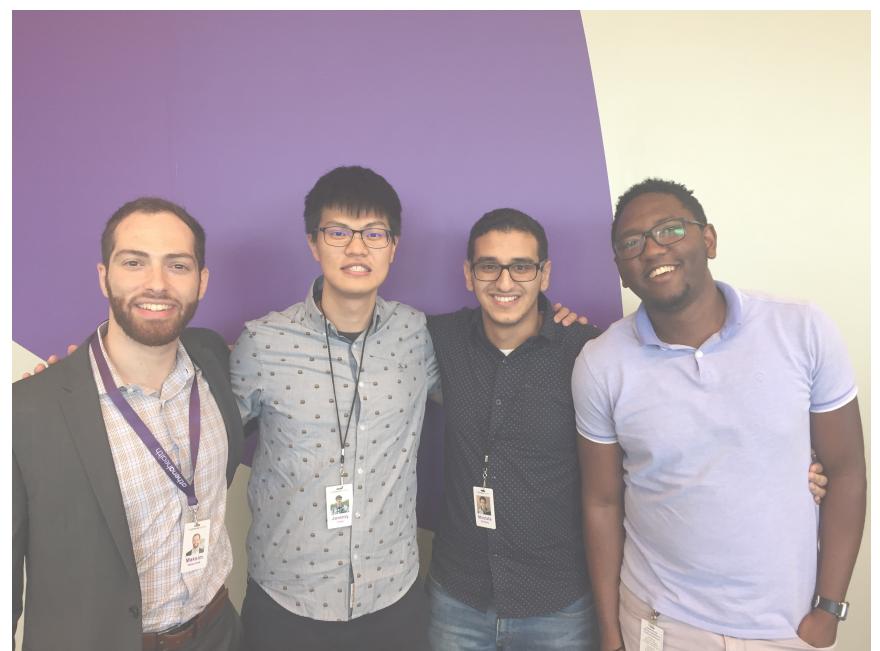


An indicator shows where and how many signatures are required

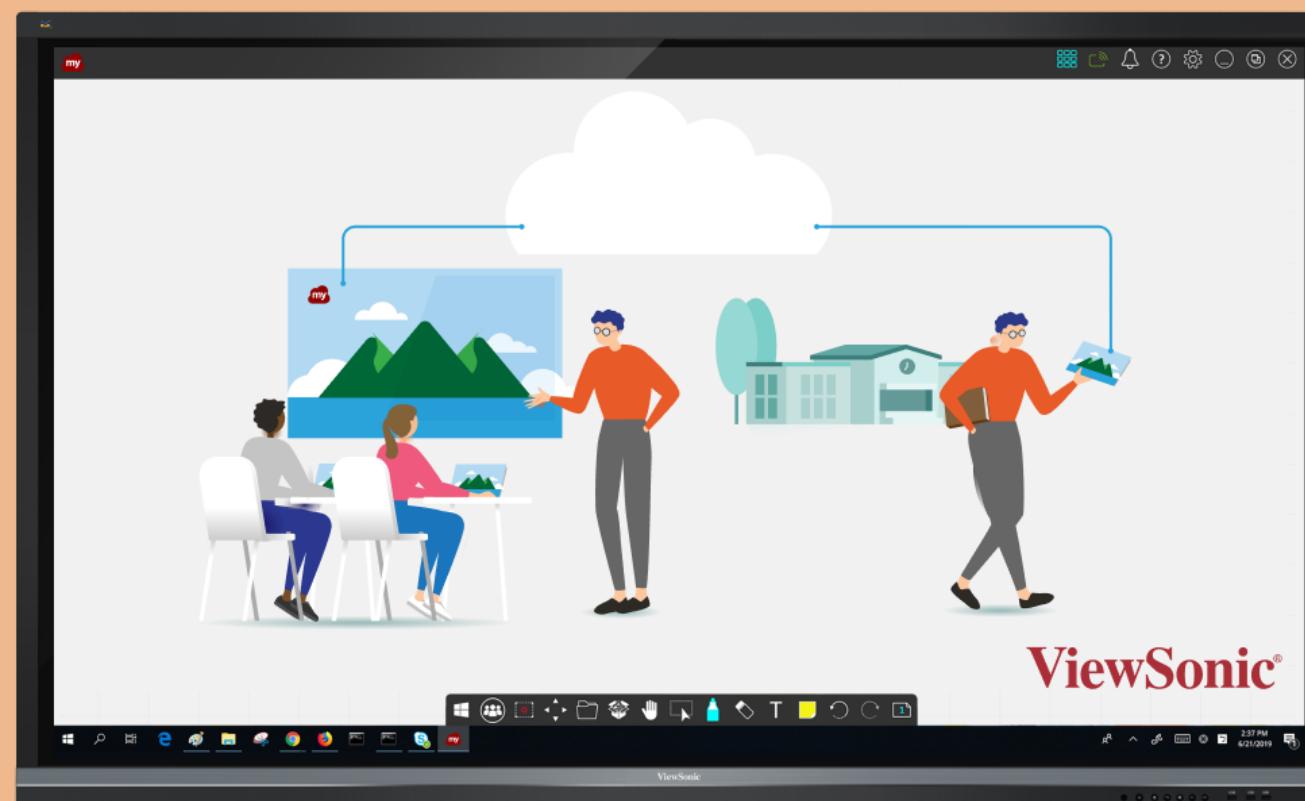


What I learned

- Collaborate effectively with SCRUM teams including Product Owner, Engineers, and Designers in an agile environment
- Support every step of the user experience from concept to execution
- Translate user insights into concepts and user journeys, and visualize design ideas using sketching, UI flows and prototypes
- Incorporate user research and usability testing to iterate on and improve design solutions



ViewSonic Internship

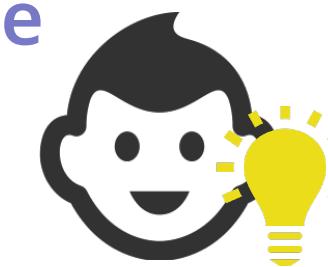


What is my role?

As a UX designer, I planned, defined scope and UI of this early-stage product. I worked collaborating on ideation, and worked individually on research, synthesizing, wireframing and prototyping.

My team

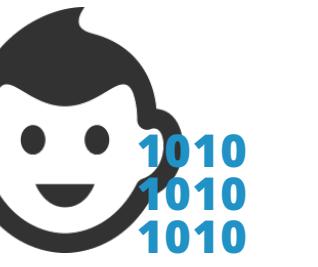
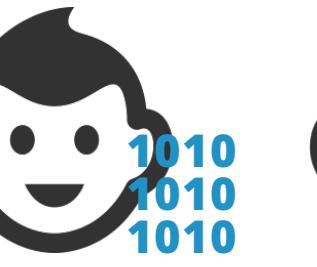
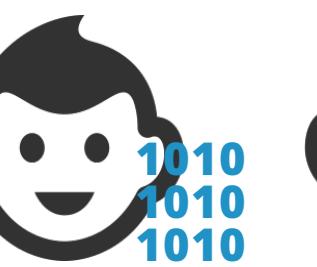
Me



UX Designer



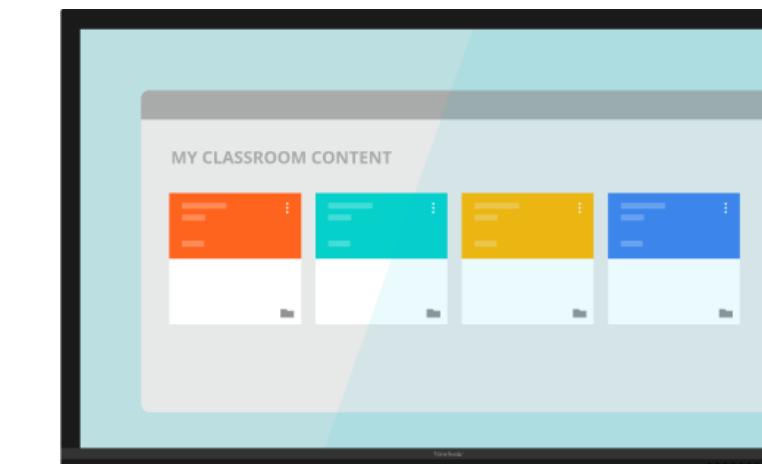
Product Manager



4 Developers

What is the challenge?

ViewSonic would like to expand their market to the education industry by merging its interactive white board with **new SaaS-based Classroom web application that helps teachers to achieve student success.**



MVP

However,

The Current MVP of Classroom web application is built based on assumptions.

Build the right thing

Why?

Why does the problem matter to the company and users?

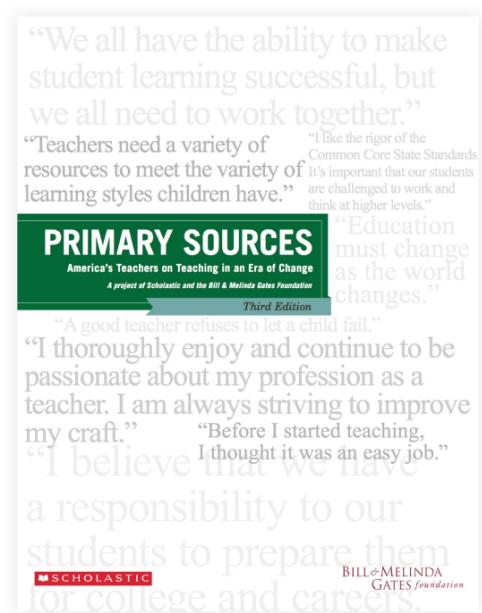
Why?

Desktop Research

Why did I conduct desktop research?

By conducting desktop research, it helps me to get deep knowledge about the education problem space

Literature Review



Primary Sources Report from Scholastic surveyed more than 20,000 public school teachers



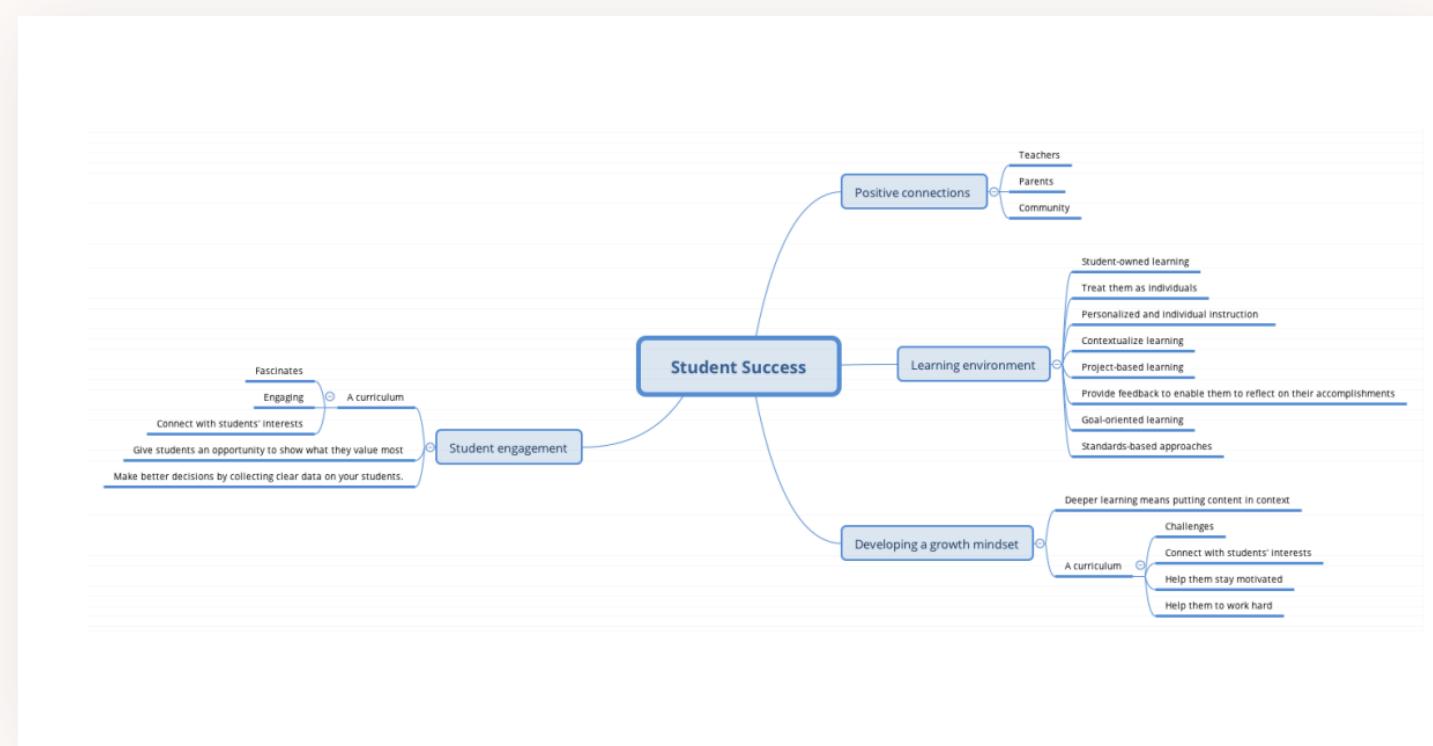
Academic research that helps anyone rethink high school.

Key Insights

- To achieve student success, teachers have to prepare high-interest class material to engage students.
- Most of the teachers report using websites to find or share lesson.

Synthesis

- Mind Mapping



Why?

The Value of Solving the Problem

A study from SCHOLASTIC states that the most effective way to prepare high-interest classroom materials is taking feedback and advices from experienced colleagues.

However,

90% of teachers spend most of their time disciplining students.

80% of teachers would like to spend more time to collaborate with colleagues.

The Value for the company



Consistent product ecosystem



Increase the revenue

The Value for teachers



Help students to reach individual achievements



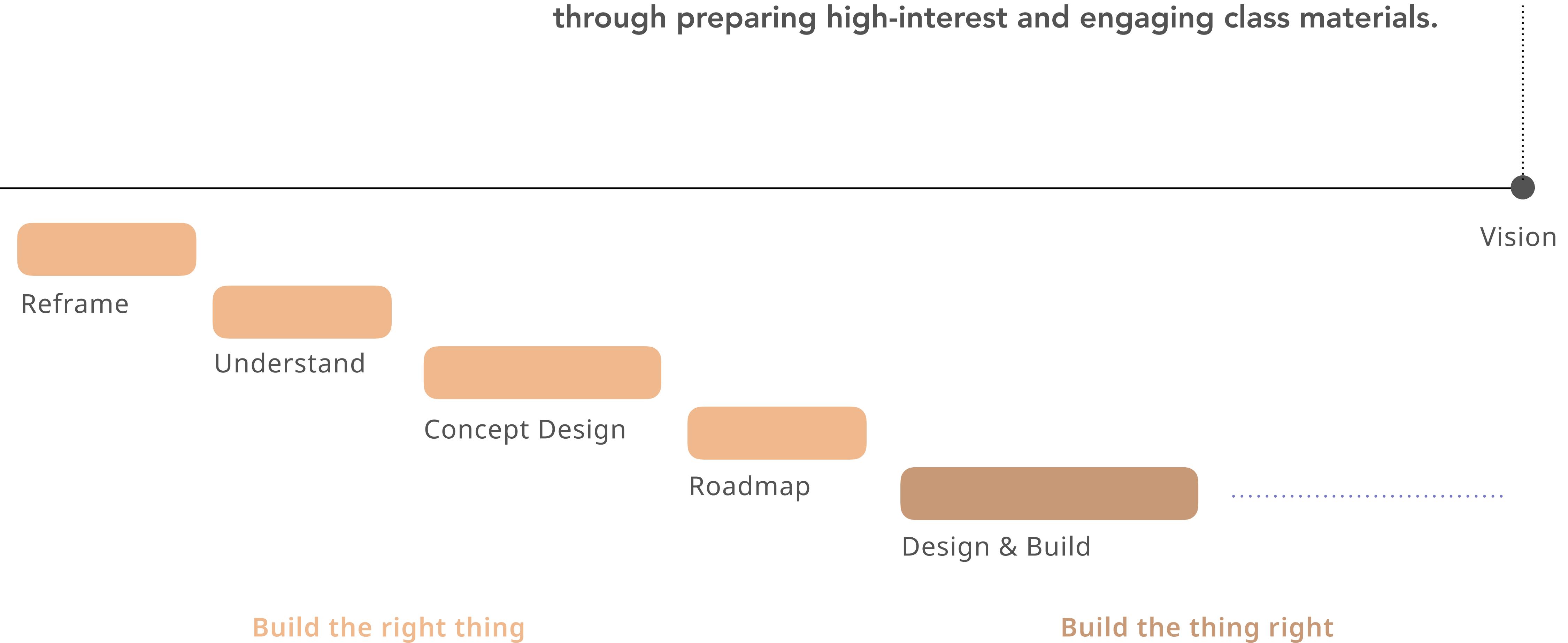
Easily prepare classroom materials

Why?

Project Kickoff

Target User User Goal

A K-12 teacher can help students to reach individual achievements
through preparing high-interest and engaging class materials.



Why?

Research Plan

myViewBoard Classroom | Research Plan
Prepared by Jeremy Chen (UX Design Intern) | Jan 2019

[Introduction and Background](#)
[Approach](#)
 [Research Questions/Hypotheses](#)
 [Research Methods](#)
 [Research guides and materials](#)
[Deliverables](#)
[Timeline](#)
[References](#)

[Introduction and Background](#)
[Project Plan](#)

Approach

Research Questions/Hypotheses

The number of research questions and their level of detail will vary based on the scope of your project and research. There should be a dedicated section for the research questions or hypotheses.

QUESTION/HYPOTHESIS	IMPORTANCE
We think teachers have a hard time to prepare lesson plan efficiently: <ul style="list-style-type: none">• What are the difficulties or experience they have when preparing a lesson plan?• How do they measure the impacts of their lesson plan?• How do they get suitable resources to prepare a lesson plan?	Critical
We think teachers are struggling to help a student achieve success: <ul style="list-style-type: none">• What are the experiences they have when teaching in the class?• What are the activities they want to avoid during teaching?	Critical

Target User

Primary User: K-12 Teachers

Assumption 1

We think teachers have a hard time to prepare lesson plan efficiently.

Assumption 2

We think your Classroom web application help teacher to increase student engagement.

Build the right thing

Where?

Where does our target user suffer difficulties?

Where?

User Interviews

Why did I conduct user interviews?



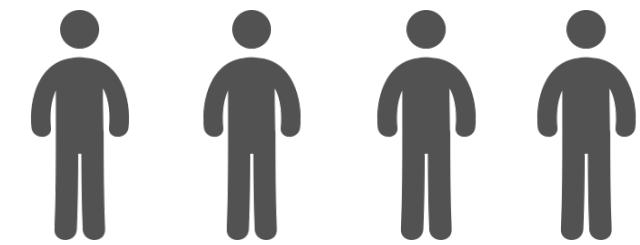
User Interviews

Validate
→

Assumption 1

We think teachers have a hard time to prepare lesson plan efficiently.

How many users did I interview?

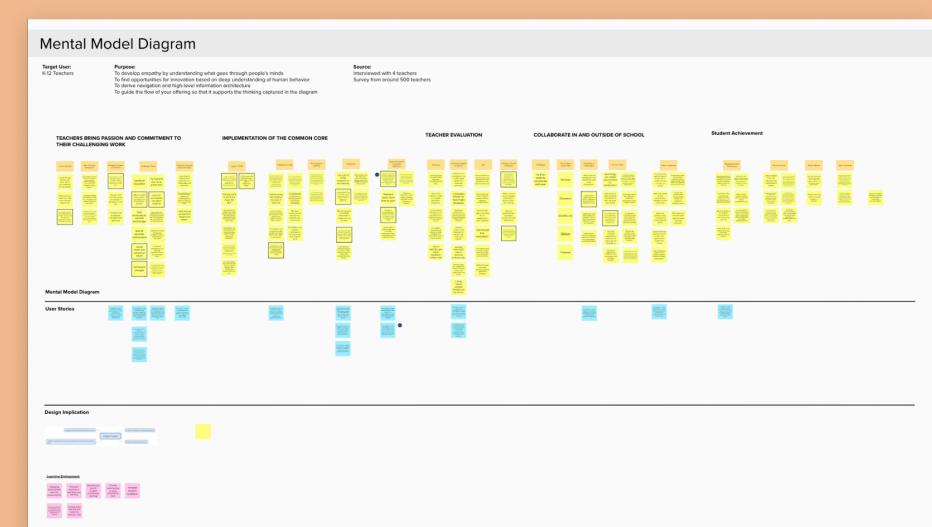


Key Questions

- What are your experience of preparing a course? How do you feel about it?
- What did you do to engage students during class?
- How do you feel about your current way of achieving student success?

Synthesis

- Mental Model Diagram



Where?

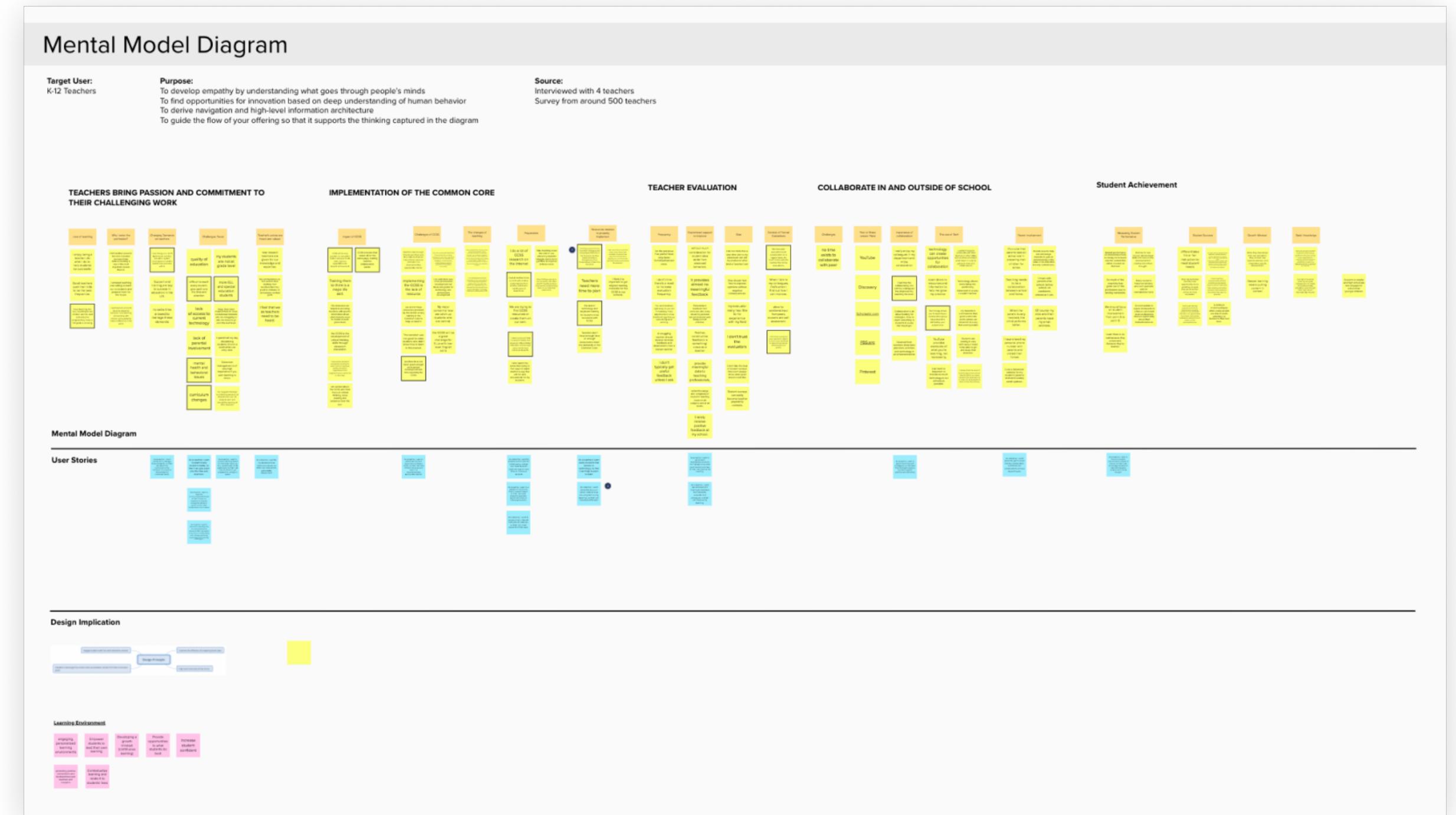
User Interviews - Mental Model Diagram

Objective

- To develop empathy by understanding what goes through people's minds.
- To find opportunities for innovation based on deep understanding of human behavior.

Tool

- Mural



Where?

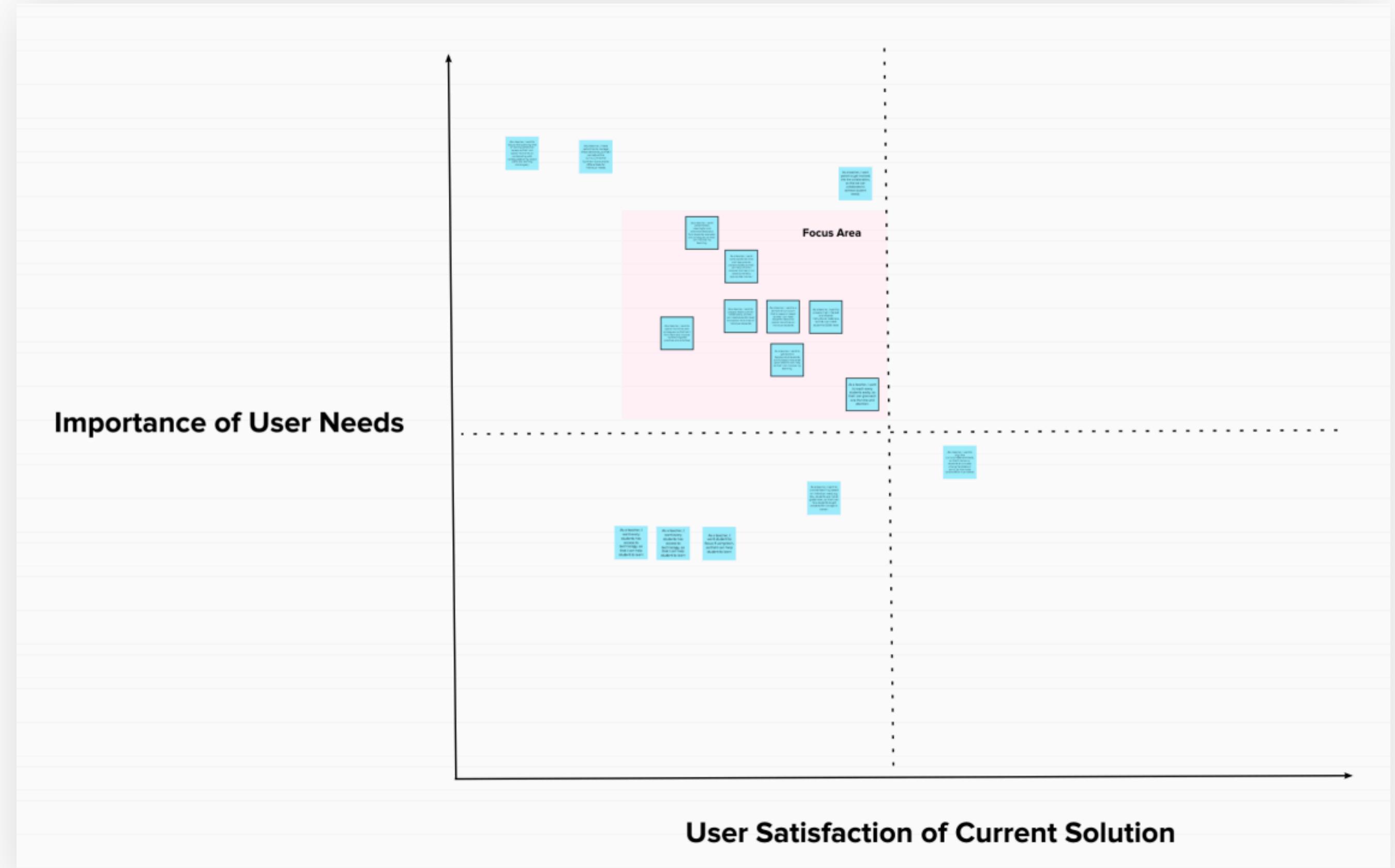
Prioritize User Needs

Objective

- Prioritize user needs based on importance and satisfaction framework.

Tool

- Survey
- Mural



User Need

Where?

User Stories

As a	Teacher		
I want to	create and prepare high-interest and leveled lesson materials	so that	I can meet student's need and spend more time on individual students.
I want to	have personalized and meaningful feedback from students, evaluator and colleagues	so that	I can improve my teaching.
I want to	reach every students easily	so that	I can give each students the time and attention.

Build the right thing

What?

What concepts are we building to meet user needs?

What?

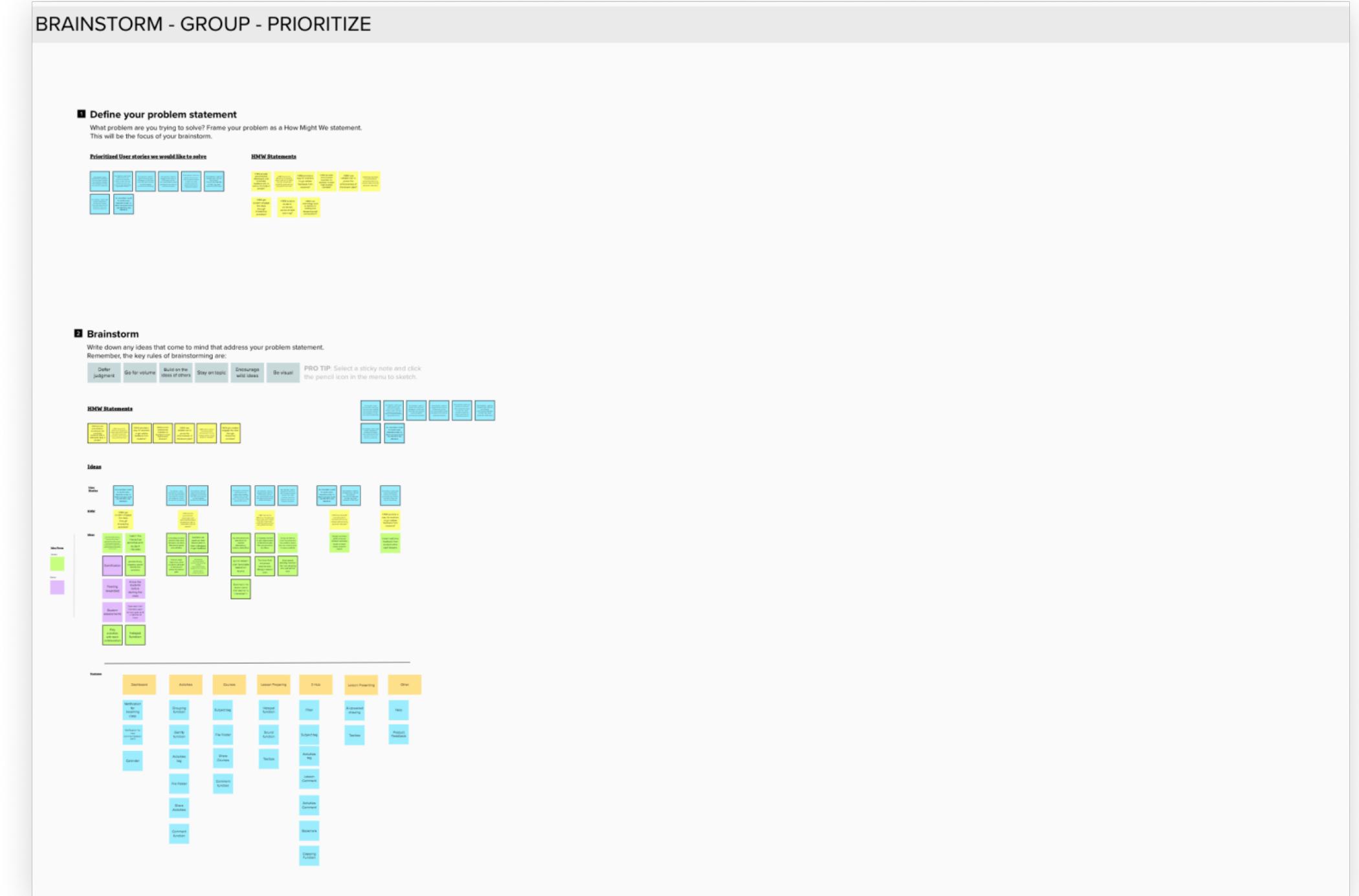
Design Ideation / Define MVP

What is the purpose of this design ideation workshop?

The purpose of this ideation workshop is to ideate HMW statements that meet our user needs and bring our HMW statements to a more concrete concept considering about business, technology and user. The outcome of this workshop would have a feature list and a first version MVP for future release.

My role

I am a facilitator who helps my teammates to generate wild ideas!



What?

Concept

User Stories

As a teacher, I want to **create and prepare high-interest and leveled lesson materials**, so that I can meet student's need and spend more time on individual students.

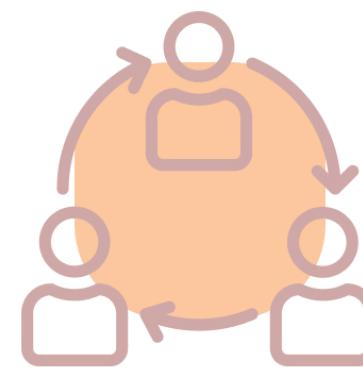
As a teacher, I want to have **personalized and meaningful feedback from students, evaluator and colleagues**, so that I can improve my teaching.

As a teacher, I want to **reach every students easily**, so that I can give each students the time and attention..

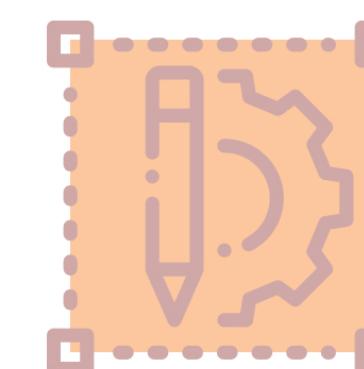
Features



Create lesson materials and interactive activities to engage students



Share lessons with colleagues to get meaningful comments and advices



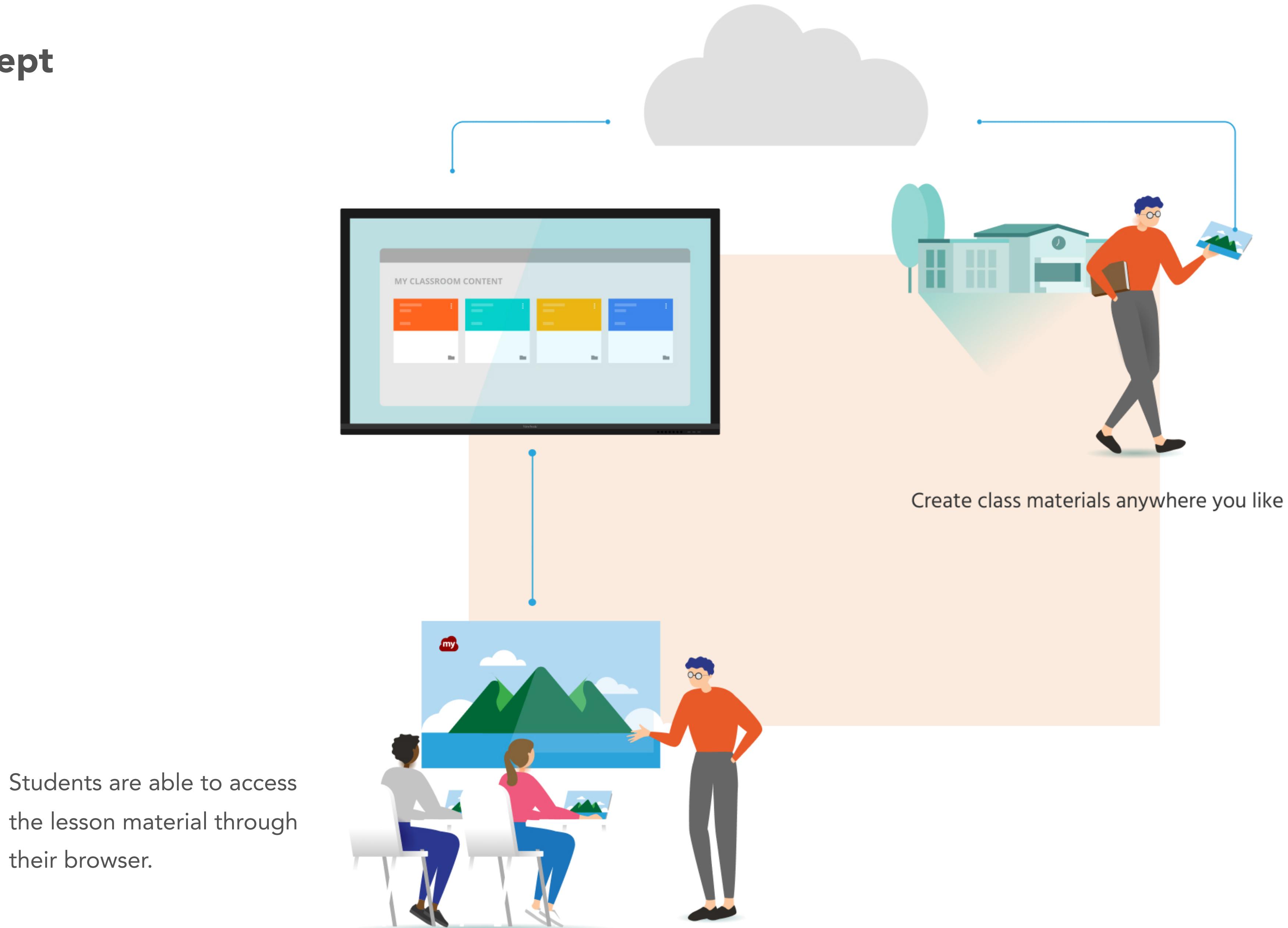
Allow students to interact with classroom content in real time from any location



Share and learn how to create lessons by E-Hub, a curated library for teachers

What?

Concept



What?

Information Architecture



What?

Wireframing

This wireframe shows a dashboard interface for managing courses. On the left is a sidebar with 'Courses' selected. The main area is titled 'Courses' and contains a grid of 12 course thumbnails. A red 'Add Course' button is located in the top right corner. The navigation bar at the top includes 'Search', a notification bell, and a user profile for 'Jeremy Chen'. A bottom navigation bar has tabs for 'Teaching', 'Draft' (which is highlighted in red), and 'Archived'.

Create a Course

This wireframe shows the 'Info - Course' page for a class named 'Basic Agricultural Science' with class code 'INF250K'. The page includes sections for 'Course Description', 'Standards', and a 'Comments' section. There are 'Edit' and 'View All' buttons for each section. A 'start teaching' button is located at the top right. The navigation bar at the top includes 'Search', a notification bell, and a user profile for 'Jeremy Chen'. A bottom navigation bar has tabs for 'Home', 'Plan' (which is highlighted in red), 'Lessons', 'Activities', 'Classwork', 'People', and 'Files'.

Info - Course

This wireframe shows the 'Info - Lesson' page for the same class. It features a large area for lesson content with a dashed border. A red '+ Create Lesson' button is located in the top right corner. The navigation bar at the top includes 'Search', a notification bell, and a user profile for 'Jeremy Chen'. A bottom navigation bar has tabs for 'Lessons' (which is highlighted in red), 'Home', 'Plan', 'Activities', 'Classwork', 'People', and 'Files'.

Create a Lesson

This wireframe shows the 'Edit Lesson Material' screen. On the left is a toolbar with icons for text, images, and other media. The main area is a large, blank white space for editing. At the bottom is a navigation bar with arrows and the text '2/2 < >'.

Edit Lesson Material

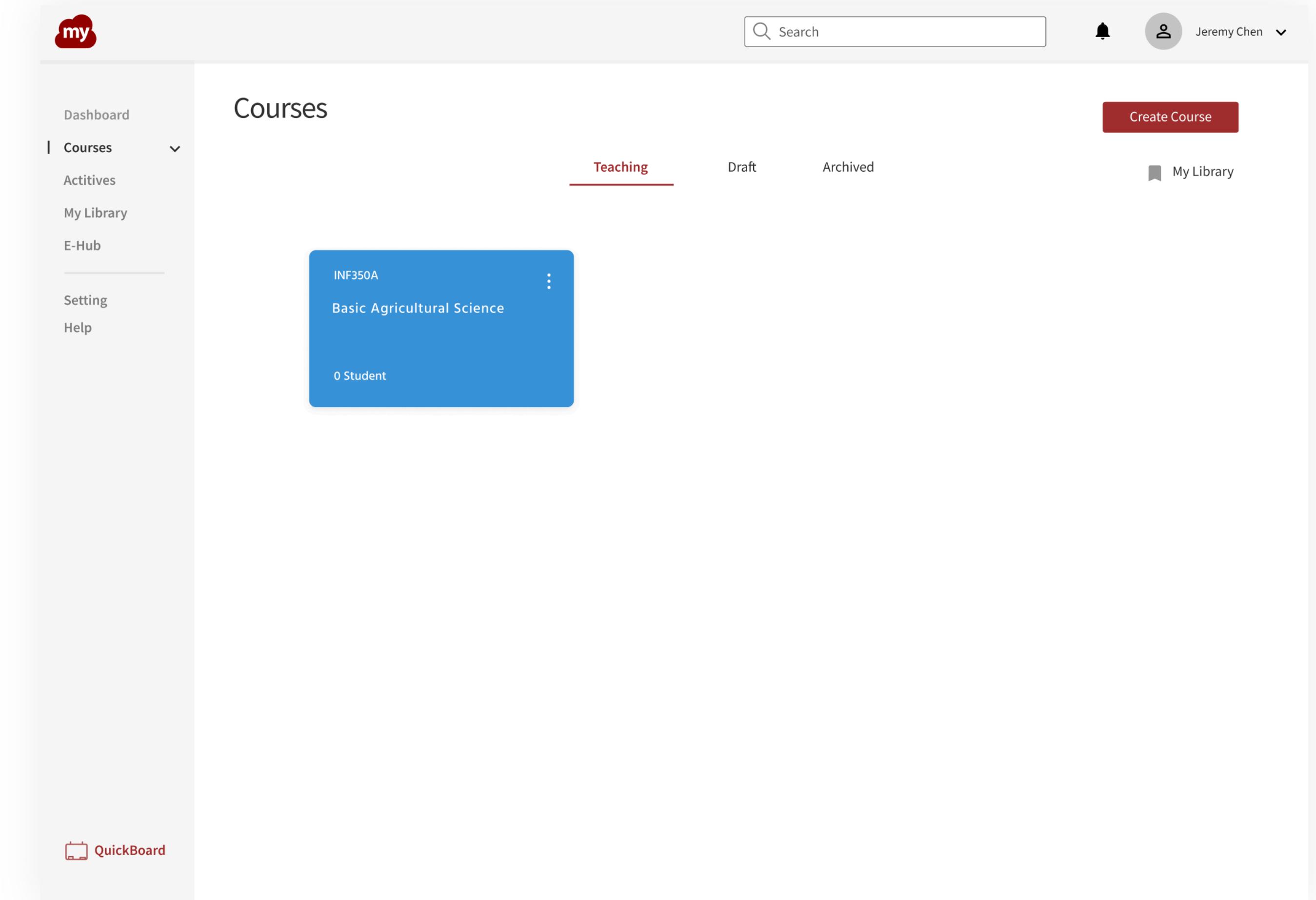
This wireframe shows the 'Info - Activity' page for an activity titled 'Make a Number' (GAPPS 3-4). It includes sections for 'Activity URL' (with a link to 'https://www.mathaground.com/make_a_number.html'), 'Activity Image' (a small circular icon), and a 'Previous Activity' button. The navigation bar at the top includes 'Search', a notification bell, and a user profile for 'Jeremy Chen'. A bottom navigation bar has tabs for 'Dashboard', 'Courses' (which is highlighted in blue), 'Activities', 'My Library', 'E-Hub', 'Setting', and 'Help'.

Info - Activity

What?

Prototype

Prototype 1.0



The screenshot shows a web-based course management system interface. At the top, there is a header with a search bar, a notification bell icon, and a user profile for "Jeremy Chen". On the left, a sidebar menu includes "Dashboard", "Courses" (selected), "Activities", "My Library", "E-Hub", "Setting", and "Help". Below the sidebar is a "QuickBoard" icon. The main content area is titled "Courses" and features three tabs: "Teaching" (selected), "Draft", and "Archived". A red "Create Course" button is located in the top right of this section. In the center, there is a card for a course titled "INF350A Basic Agricultural Science" with "0 Student". To the right of the card is a vertical ellipsis (...). The overall design is clean with a light gray background and blue highlights.



Build the thing right

How?

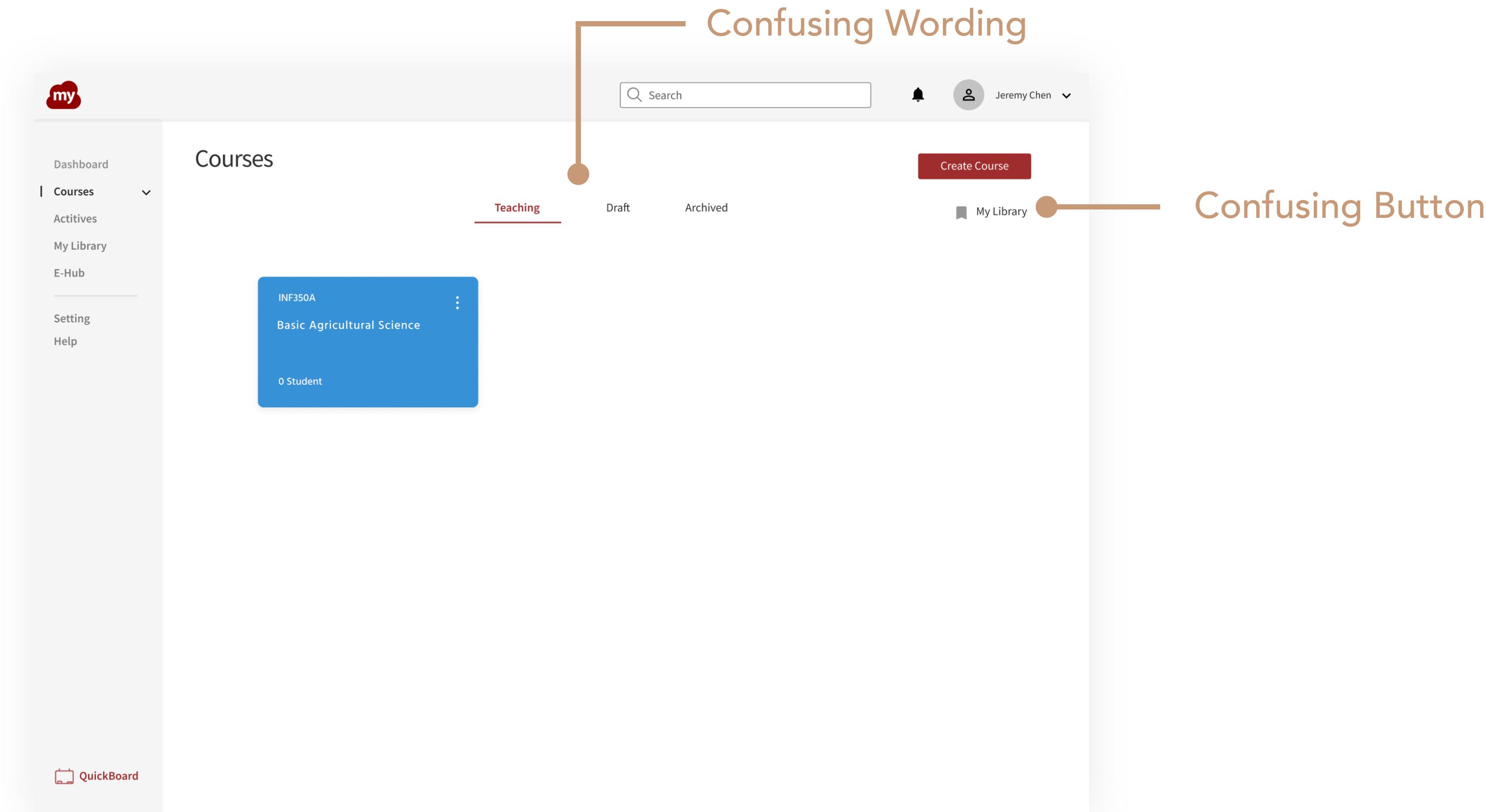
How are we going to evaluate our solution?

How?

Stakeholder Review

What is the purpose of this stakeholder review?

Alignment is necessary to build the right thing. Stakeholder review (design review) is a crucial way of gathering internal feedback to iterate the UI. We iterate rapidly and increase fidelity as we move towards a pilot.



How?

Stakeholder Review

New Changes

Change the word to "Published"

The screenshot shows the 'Courses' section of the myViewBoard™ Classroom interface. On the left, a sidebar menu includes 'Dashboard', 'Courses' (selected), 'Activities', 'My Library', 'E-Hub', 'Setting', and 'Help'. Below the sidebar is a 'QuickBoard' button. The main area displays a course card for 'Basic Agricultural Science' (ABC123) with '0 Student'. Above the course card are three filter tabs: 'Published' (underlined in red), 'Draft', and 'Archived'. A vertical orange line with a circular arrow at the bottom points from the 'Published' tab towards the text 'Change the word to "Published"'.

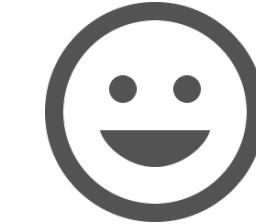
How?

Define the Success Metrics



Register

By the end of year, we would like to reach 10,000 registered schools.



User Satisfaction

NPS Score is higher than 9.0



Usability Success Metrics

- The measurement of "Intention To Use" is higher than 4.0.
- The measurement of "Meets The Requirement" is higher than 4.0.
- The measurement of "Perceived Usefulness" is higher than 4.5.

How?

Usability Testing

Why did I conduct usability testing?



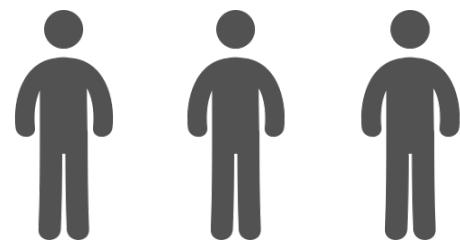
Validate →

Usability Testing

Assumption 2

We think your Classroom web application help teacher to increase student engagement.

How many users did I test?



Key Scenarios

- Creating a course
- Create a lesson
- Prepare a course from E-Hub
- Sharing a course with colleagues

Synthesis

- Excel Sheet

Response	Count	Percentage
Very Satisfied	1	100%
Satisfied	0	0%
Neutral	0	0%
Dissatisfied	0	0%
Very Dissatisfied	0	0%

How?

Usability Testing

Iteration 1

Finding:

3 of 3 participants think it is not necessary to have an information pages for lesson.

The screenshot shows the 'Basic Agricultural Science' course dashboard. The 'Lessons' tab is selected. Two lessons are listed: 'Lesson 1: Providing for the Needs of People' and 'Lesson 2: Thinking Like a Scientist'. Each lesson card includes a 'Lesson Plan' link, a 'Class Material' link, a 'Start Teaching' button, and an 'UNPUBLISHED' toggle switch. A red arrow points from the 'Lessons' tab in the top navigation bar down to the 'Lessons' tab in the main content area. The left sidebar contains links for Dashboard, Courses (selected), Activities, My Library, E-Hub, Setting, and Help. A 'QuickBoard' icon is at the bottom.

Info - Course

The screenshot shows the 'Basic Agricultural Science' lesson detail page for 'Lesson 1'. The 'Lessons' tab is selected. The page includes sections for 'General', 'Summary', 'Main Objectives', and 'Time Frame'. Under 'General', there is a 'Edit' button. The 'Summary' section states: 'Students will define agriculture and the agriculture industry. Students will look at agriculture throughout history in addition to naming and describing the three major areas in the agricultural industry.' The 'Main Objectives' section lists three goals. The 'Time Frame' section indicates '2 class periods of 45 minutes each'. A 'QuickBoard' icon is at the bottom.

Info - Lesson

How?

Usability Testing

New Changes

The screenshot shows the myViewBoard Classroom interface. On the left, there's a sidebar with 'Dashboard', 'Courses' (selected), 'Activities', 'My Library', 'E-Hub', 'Setting', and 'Help'. Below the sidebar is a 'QuickBoard' button. The main area displays a course titled 'Basic Agricultural Science' (Class Link) under 'ABC123 Grade 3 Science'. The navigation bar includes 'Home', 'Plan', 'Lessons' (selected), 'Activities', 'People', and 'Files'. There are buttons for 'Teaching Preview', 'Start Presenting', and a 'DRAFT' toggle. A 'Create Lesson' button is also present. The 'Lessons' section lists 'Lesson 1: Providing for the Needs of People' with a 'Teaching Preview' button, a 'Start Presenting' button, a 'DRAFT' toggle, and a more options menu. Below the lesson card, it says 'No Slides'. At the bottom, there's a dashed box with a 'Create Lesson' button.

New Changes:

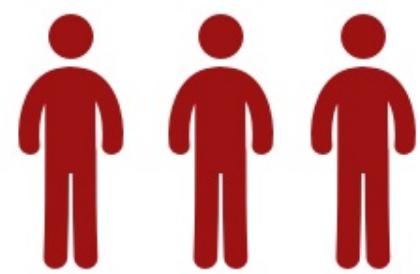
Delete the information page and visualize the lesson material(slides)

How?

Usability Testing

Result

Participants



Teacher

Usefulness

1: strongly disagree, 5: strongly agree

4.4 / 5

Meets Requirements

1: strongly disagree, 5: strongly agree

4.2 / 5

Intend to Use

1: strongly disagree, 5: strongly agree

4.1 / 5

Tasks

Create a course

Create a lesson

Create an activity

Prepare a course from E-Hub

Sharing a Course to E-Hub

Success Rate

__ of 3 participants success

3 / 3

3 / 3

2 / 3

2 / 3

3 / 3

Average difficulty

1:very difficult, 7:very easy

7

7

5.8

6

7

Quotes

"The tool is self-explanatory. Everything is straight forward. I am struggling for the first time, because I still have the past workflow of using Canvas."

"I like the sharing function that helps me to get feedback from teachers."

"I truly appreciate the tool included a curated library which I don't need find additional resources to prepare my lessons"

Final Delivery

Prototype

Create a course

The screenshot shows the myViewBoard Classroom interface. At the top, there are three colored dots (red, yellow, green) and the text "myViewBoard™ Classroom". On the right, there is a user profile for "Jeremy Chen" with a bell icon. Below the header, the word "Dashboard" is displayed in a large font. To the right of the dashboard title is a red button labeled "Start Presenting". On the left side, there is a sidebar with the following menu items: "Dashboard" (which is selected and highlighted in red), "Courses", "Activities", "My Library", "E-Hub", "Setting", and "Help". In the main content area, under the heading "Upcoming Courses", it says "No upcoming courses". Below this, there is a section titled "Calendar" with a subtitle "April 18 - April 24". The calendar grid shows the days of the week from Monday to Sunday, with each day labeled with its date (e.g., "18 MON", "19 TUE", etc.) and a small mouse cursor icon above the grid. At the bottom left of the main content area, there is a small icon of a whiteboard and the text "QuickBoard".

Features:

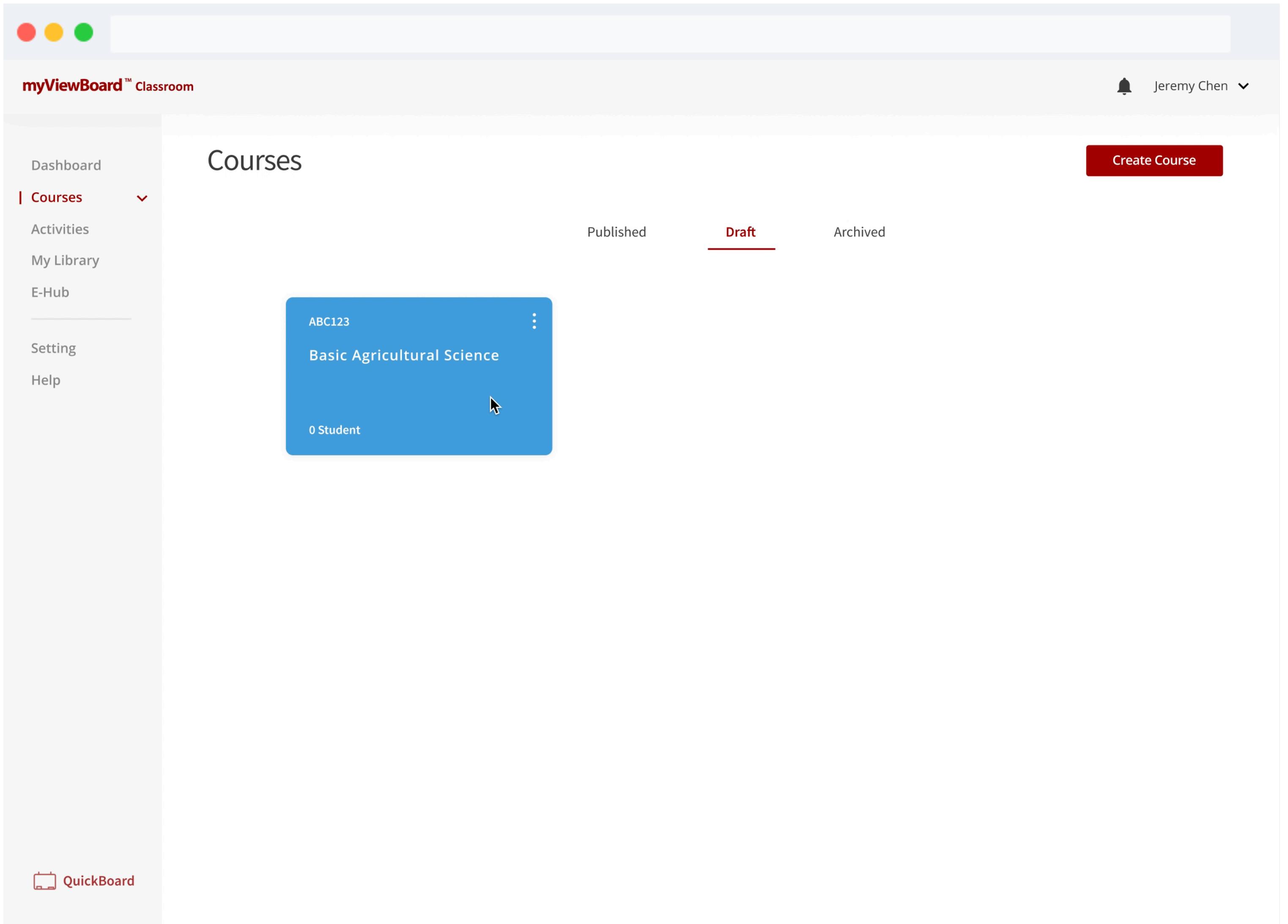


Create lesson materials
and interactive activities
to engage students

Final Delivery

Prototype

Create a lesson material



The screenshot shows the myViewBoard™ Classroom interface. At the top, there are three colored dots (red, yellow, green) and the text "myViewBoard™ Classroom". On the right, there is a user profile for "Jeremy Chen" with a dropdown arrow. Below the header, the word "Courses" is displayed in large letters. To the right of "Courses", there is a red button labeled "Create Course". On the left, a sidebar menu includes "Dashboard", "Courses" (which is selected and highlighted in red), "Activities", "My Library", "E-Hub", "Setting", and "Help". The main content area is titled "Courses" and shows three filter tabs: "Published", "Draft" (which is underlined in red), and "Archived". A course card for "Basic Agricultural Science" is visible, showing the code "ABC123", the title "Basic Agricultural Science", and "0 Student". A cursor arrow points towards the three-dot menu icon next to the course card.

Features:



Create lesson materials
and interactive activities
to engage students

Final Delivery

Prototype

Share a lesson material to get feedback from colleagues

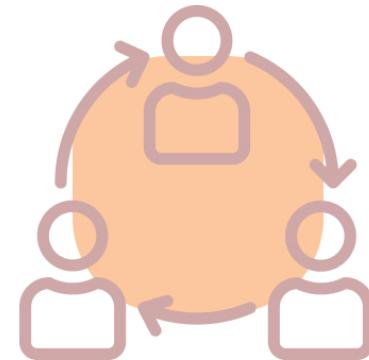
The screenshot shows the myViewBoard Classroom interface. At the top, there are three colored dots (red, yellow, green) and the text "myViewBoard™ Classroom". Below that is the title "Lesson 1 : Providing the Needs of People". To the right are buttons for "Teaching Preview", "Start Presenting", and a message icon. On the far right, it says "Jeremy Chen".

The main content area displays a slide titled "Lesson 7: XXXXXXXXXXXXXXXXXXXXXXXXX". It features a large graphic of various music genres stacked together, including SKA, PUNK, GRUNGE, METAL, NEW WAVE, and SHOEGAZE. To the right of the graphic is the text "Chapter 1 - what is music ?". Below the graphic is a video thumbnail of a basketball game.

On the left side, there is a vertical toolbar with icons for a camera (selected), a bottle, a large letter T, a person, a box, and a marker.

At the bottom, there are navigation controls: a back arrow, "1 / 2", a forward arrow, a red "+ New Slides" button, and a "100%" zoom control.

Features:



Share lessons with colleagues
to get meaningful comments
and advices

Final Delivery

Prototype

Prepare a course from E-Hub

The screenshot shows the myViewBoard™ Classroom interface. At the top, there are three colored dots (red, yellow, green) and the text "myViewBoard™ Classroom". On the right, there is a user profile for "Jeremy Chen" with a dropdown arrow and a "Start Presenting" button.

The left sidebar has a "Dashboard" tab selected, indicated by a red border. Below it are other tabs: "Courses" (with a dropdown arrow), "Activities", "My Library", "E-Hub" (which is currently active, indicated by a mouse cursor over the link), "Setting", and "Help".

The main content area is titled "Dashboard" and "Upcoming Courses". It displays the message "No upcoming courses".

Below this is a "Calendar" section titled "April 18 - April 24" with a collapse/expand arrow. The days of the week are listed: MON, TUE, WED, THU, FRI, SAT, SUN. The days are labeled with their respective dates: 18 MON, 19 TUE, 20 WED, 21 THU, 22 FRI, 23 SAT, 24 SUN.

At the bottom left of the main content area, there is a "QuickBoard" icon.

Features:



Share and learn how to
create lessons by E-Hub, a
curated library for teachers

Final Delivery

Design Research Report



myViewBoard Classroom

Design Research Report

Jeremy Chen **myViewBoard™ Classroom**

27 pages design research report

Process
Understand



What I learned

- Collaborate effectively with cross-functional teams including Product Manager, Engineer, and Sales teams to ship an early-stage product that balances consumer/customer frictions and needs with business goals and technical feasibility.
- Create product concepts through visually-pleasing and usable prototypes and designs with Figma
- Deliver design assets in a format that can easily be consumed and embedded by the engineering team.
- Summarize user research to a design research report





Let's unleash great design with **Passion!**

Thank you!

Jeremy Chen
jeremyschen.com