Educational Research Challenge

Experience Design Practice

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Summary

- **Discovery.**
  - Market needs.
  - Industry requirements.
  - Users.
  - Identifying possible issues or challenges.
  - Establishing measurable goals.

- **Ideation and planning.**
  - Experience map.
  - Sitemap.
  - Interaction and style design guidelines.
  - UX project road map.

- **Prioritisation and process.**
  - Find the right approach.
  - User Flow.
  - Wireframe and prototype.
  - Testing and feedback.

Market needs.

Method: Research and analysis of public reports, studies, white papers, etc...

In today modern educational system, the need for an effective student assessment platform, capable of identifying and visualizing the students' knowledge levels, has increased considerably.

- ○ Allow students and instructors to assess information and interact with each other.
- ○ Motivates and inspire the students.
- ○ Measure and evaluate the behavioral changes in students
- ○ Monitors progress toward personal and state-standards goals.

Recommended task: Qualitative research such as interviews with a selected group of teachers about their needs and concerns.

An Open Model for Student Assessment Visualization

Formative assessment diversity to foster student engagement

Visualizing Student Data in a Real Teaching Context by Means of Concept Maps

Industry requirements.

Method: Research and competitive analysis of some official assessment platform at a state and National level.

The use of technologies to aid the teaching-learning process is increasingly present in people's daily lives. Existing platform aim to simplified teaching while making it more dynamic and attractive to students.

- Capability of extensive data entry with multiple access level.
- Visualization of student performance.
- Assisting of learning strategies.
- Enabling a self-regulate learning process.

Recommended task: Quantitative research such as sort survey (email) targeting the Headmasters, competitors benchmark, ethnographic field study.

https://texasassessment.com
https://www.renaissance.com/newyork/
https://webnew.ped.state.nm.us/bureaus/assessment-3/
https://www.mdek12.org/OSA
https://www.cde.ca.gov/ta/tg/ca/
https://oh.portal.airast.org/users/teachers.stml

Discovery

Users.

Method: Research and analysis on competitor's platforms to identified common users' type.

The industry in broadly splitting it users into two distinct groups, which is often made of 2 type of users each.
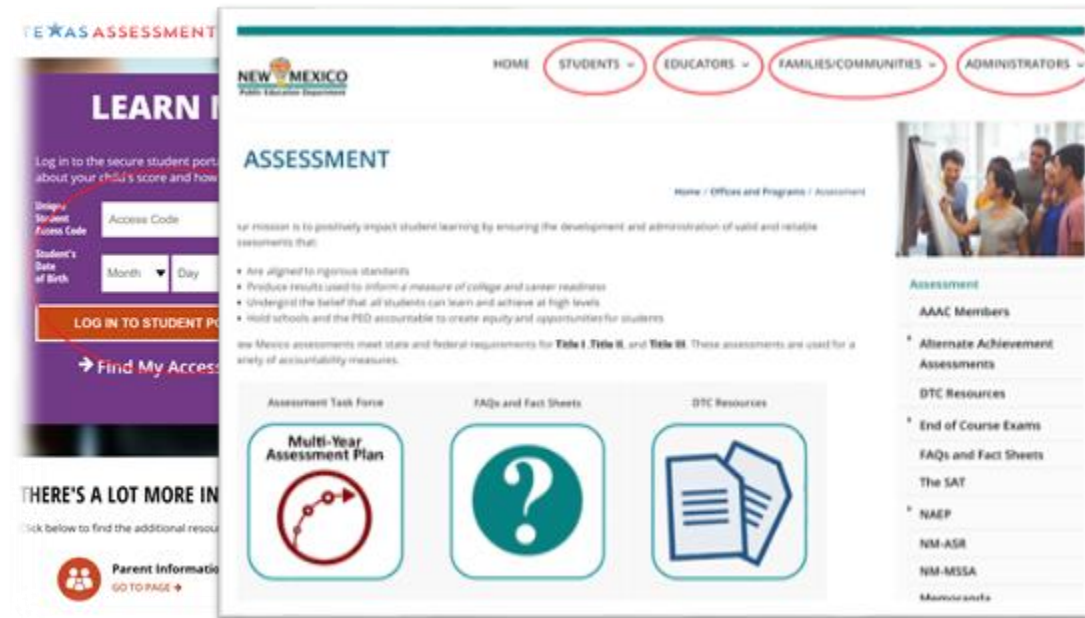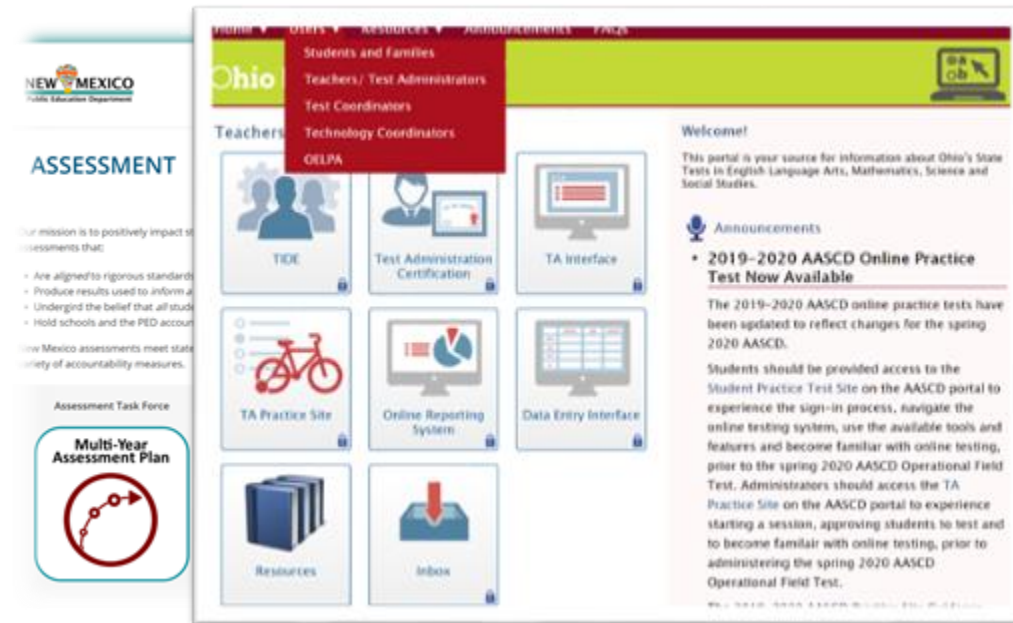
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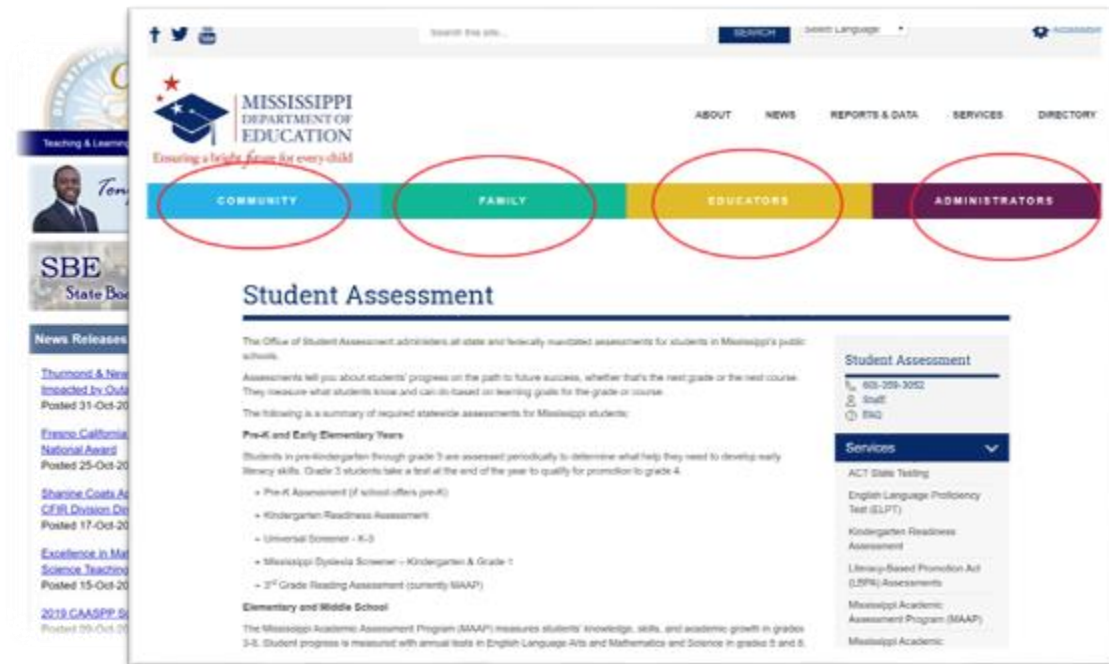
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	Student and family		Instructors and employees	
	Student	Family member	Teacher	Admin member
Prefer device	Mobile	Mobile / tablet	Computer	Computer
Goals (assumption)	• Access and do assessment forms • Check assessment results • Follow his own progress	• Check assessment results • Compare a current result with previous results.	• Review assessments • Assessment marking	• Create and edit assessments • Organize assessment group
Frustration (assumption)	• Unfriendly and unclear assessment form.	• Complex navigation • Unnecessary step	• Poor search • Limited rating and comment system	• Poor organizational structure

Recommended task: Focus group, analytic research, desirability study, surveys to establish user demographic profiles and understand theirs end goals

Discovery

Identifying possible issues or challenges.

Method: Research and analysis of the US department of education gov page where all official methods are listed.

Traditionally, teachers relied on summative method (final exams) to asses' students but in the last decades multiple forms of assessment, namely formative assessments, has grown substantially in the education system.

- ○ Standardization of the assessment process.
- ○ Interpretation and visualization of student's performances.

Recommended task: Sort survey (email) targeting the Assistant Head of School

Establishing measurable goals.

Method: Confirm requirements with the stakeholders, product owner and managers. Get an overview of the technology and resources available to deliver, test and monitor the success of the solution.

The main goal is to provide a comprehensible platform easily accessible for students which is robust enough for the teachers and admin users.
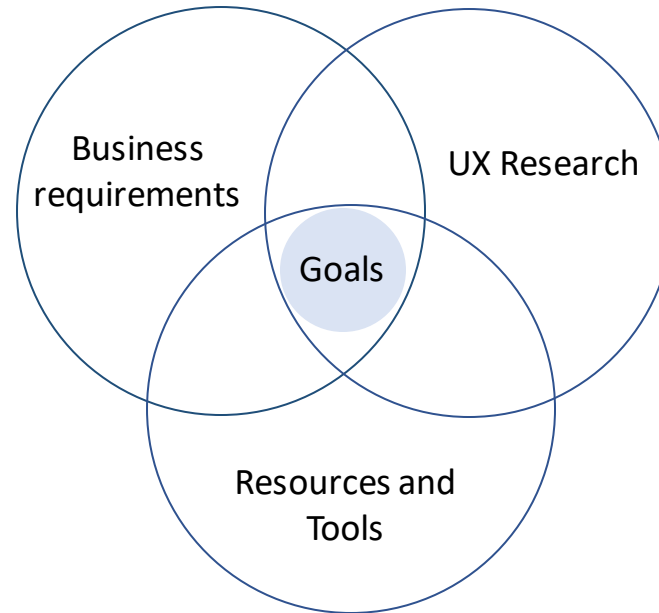
Recommended task: Ask for details brief and client's requirements and agree on a delivery schedule.

Ideation and planning

Experience map.

	Student	Family member	Teacher	Admin member
Must have (MVP)	• Login • Browse and select an assessment • Complete assessments • View assessment results	• Login • Browse and select an assessment • View assessment test results	• Login • Browse and select an assessment • View assessment test results • View the student's list per assessment • Review and rate assessment's answers of each student. • Entre / edit the assessment grade for each student	• Login • Set the assessment method • Set a rating system • Create and organize assessments • View assessment test results • Browse and select an assessment • Edit assessment • View the student's list per assessment • Review and rate assessment's answers of each student. • Entre / edit the assessment grade for each student
Should have	• Chat with Teacher • Complete mock assessment tests • View mock assessment tests results and comments	• Access assessment's Q&A.	• Chat with student • Access assessment's Q&A. • Record notes for each assessment. • Comment on student answers	• Create, edit and organize mock assessment tests
Could have	• View personal performance Graphs • View comparative graphs • Success prediction rate	• View personal performance Graphs • View comparative graphs	• View assessment performance Graphs • View student performance Graphs • View national performance Graphs • View comparative graphs	

Recommended task: Concept testing, cards sorting.

Sitemap.

Method: Group the experience map's touch points into components and pages.

This sitemap help me to visualize, the user journey and organize its structure.
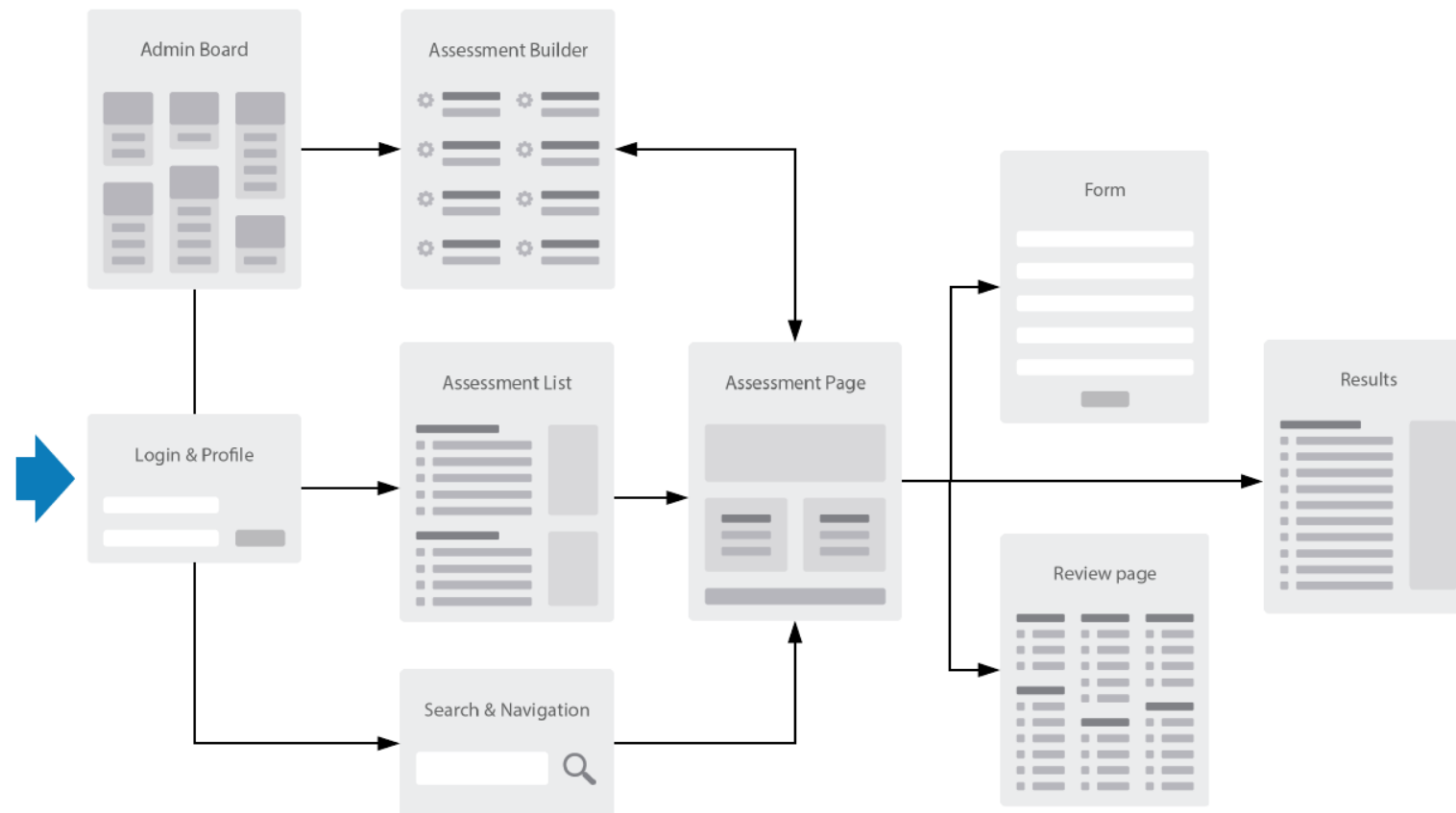
Recommended task: Check the journey with the Product owner.

Ideation and planning

Interaction and style design guidelines.

Method: Ask client's engendering or marketing team for any design principle / asset / guidelines that should be use in the solution.

The design guidelines help to standardize design and bring a consistent experience throughout your products. UI guidelines explain the best practices of UI components and understanding of their behavior by giving real examples.

- Helpful for designers, developers and testers.
- Make learning new behaviors easier.
- Enforce a cohesive and consistent experience among your products.
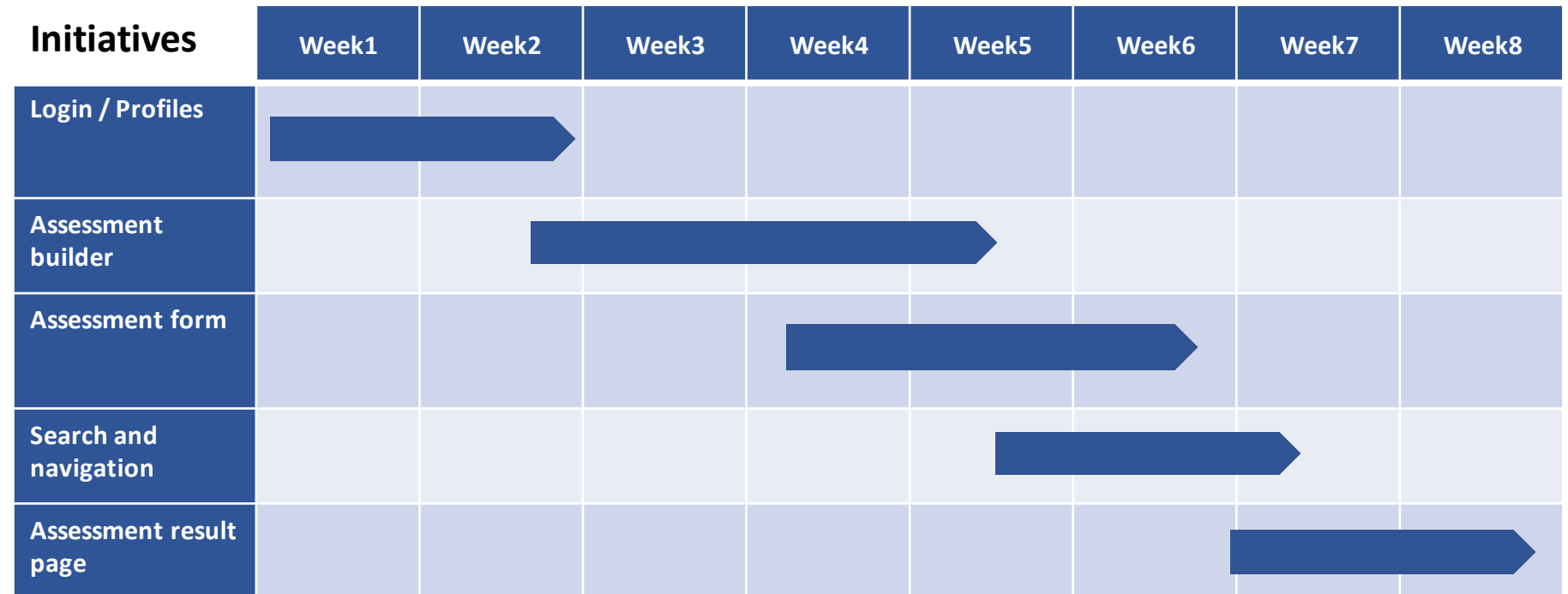- Allow scalability
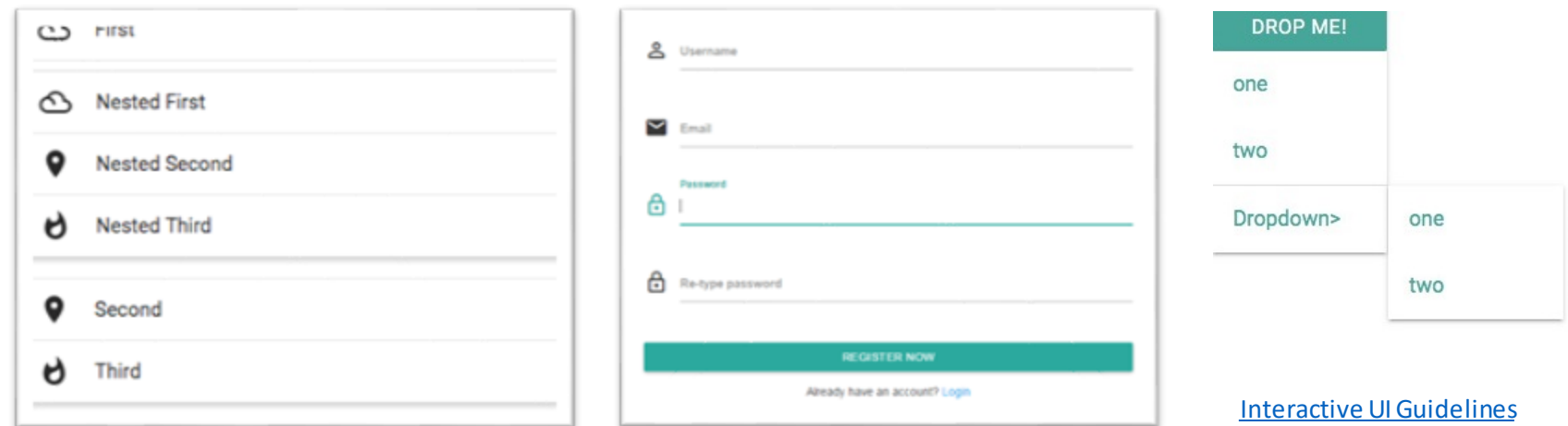
Interactive UI Guidelines

Recommended task: If not in place, Advocate the use of UI framework.

Ideation and planning

UX project road map.

Method: Group the experience map's touch points into initiatives (components, pages).

This UX road map help me organize the work load, monitor it progress and share its schedule.

Initiatives	Week1	Week2	Week3	Week4	Week5	Week6	Week7	Week8
Login / Profiles	███	███						
Assessment builder			███	███	███			
Assessment form				███	███	███		
Search and navigation						███	███	
Assessment result page							███	███

Recommended task: Liase with Project manager.

Find the right approach.

Method: Use the user research and the experience map to establish the best approach.

Student and family group will mainly use mobile devices to interact with the platform, where instructors and admin users will be at their desk with their computers.
The mobile-first approach method with a hybrid design (responsive and adaptive) seem the best strategies to create consistent, customizable designs and interactions.
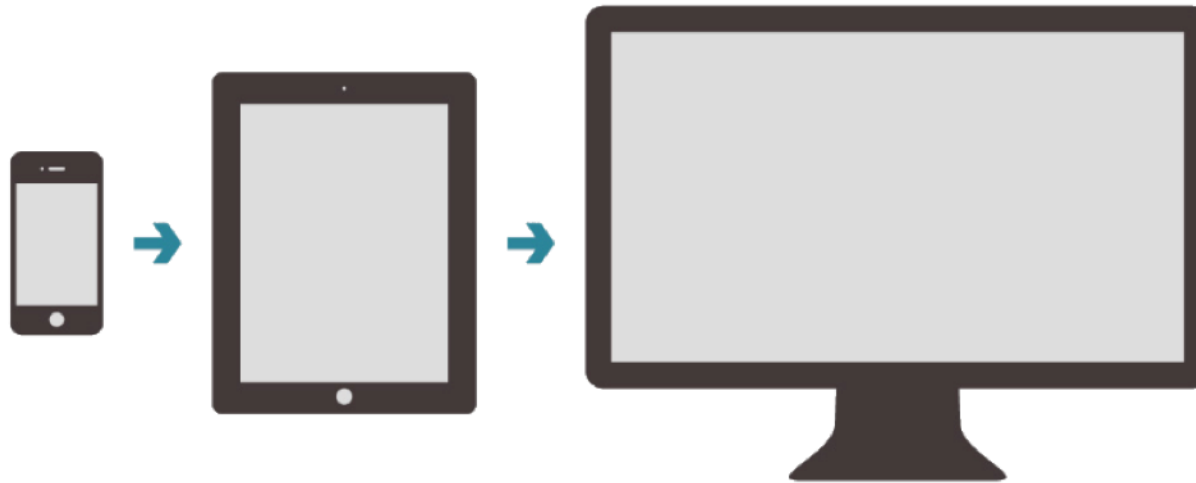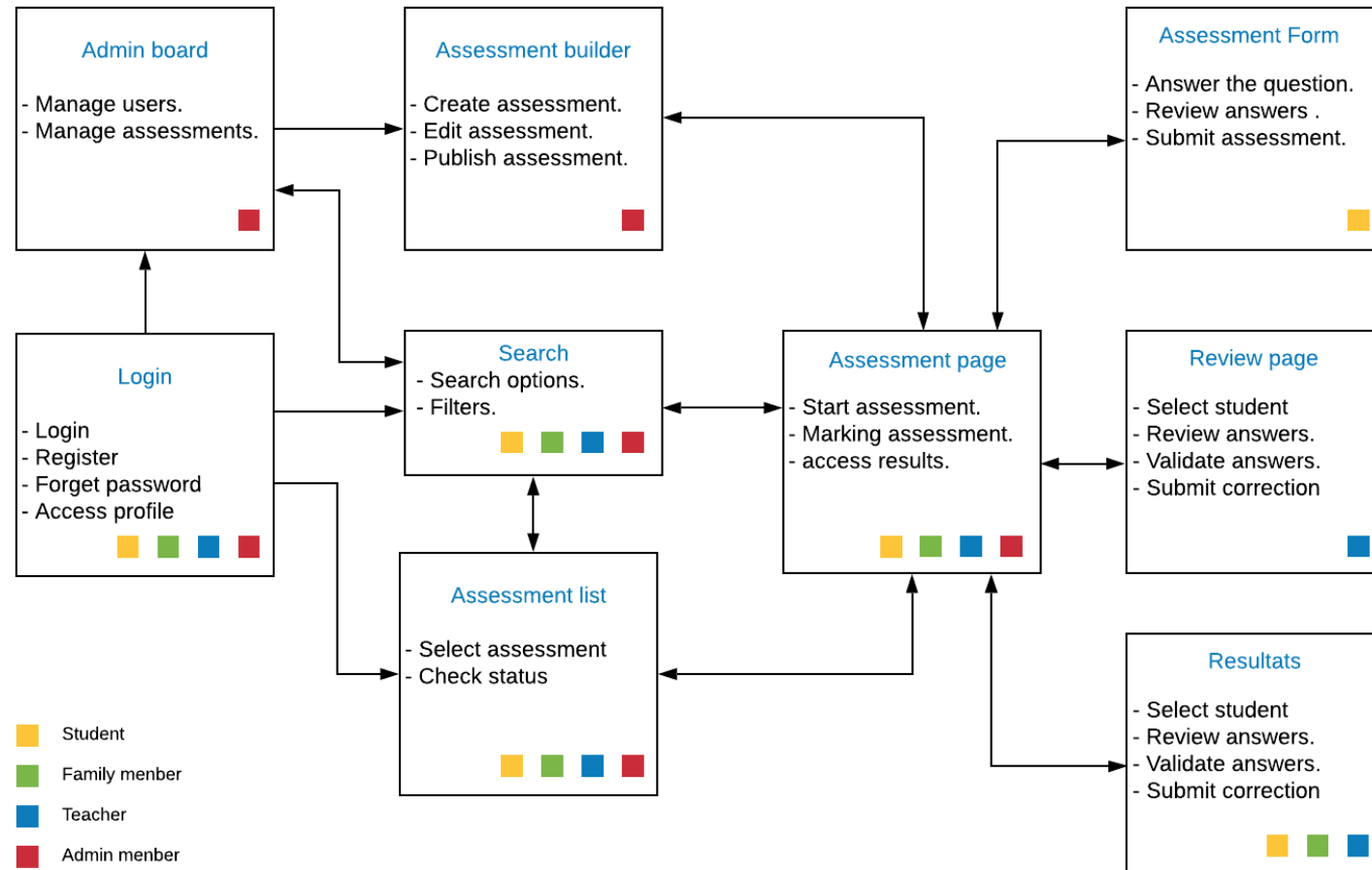
Recommended task: ethnographic field study about the where, how the product might be use.

User Flow.

Method: Use the experience map and the sitemap to build the flow with users' action and touch points.
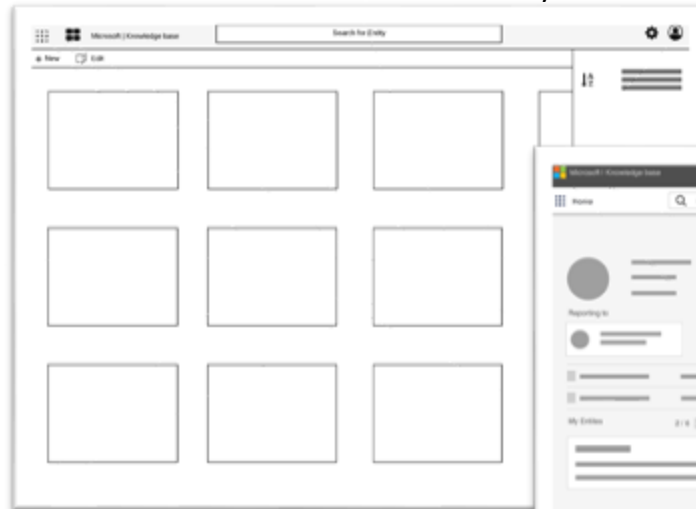
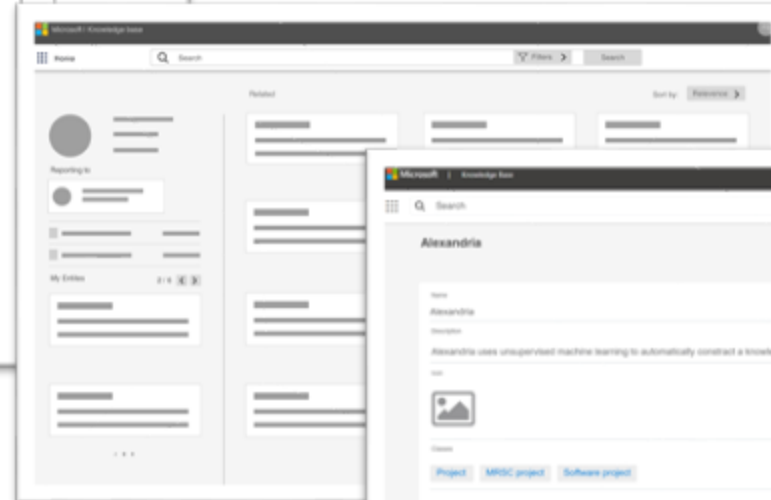This user flow allows me to identified interaction points that have to be represented in the wireframe.

Wireframe and prototype.

Method: Evaluate the need of details and level of interaction to identified the appropriate tools to use.
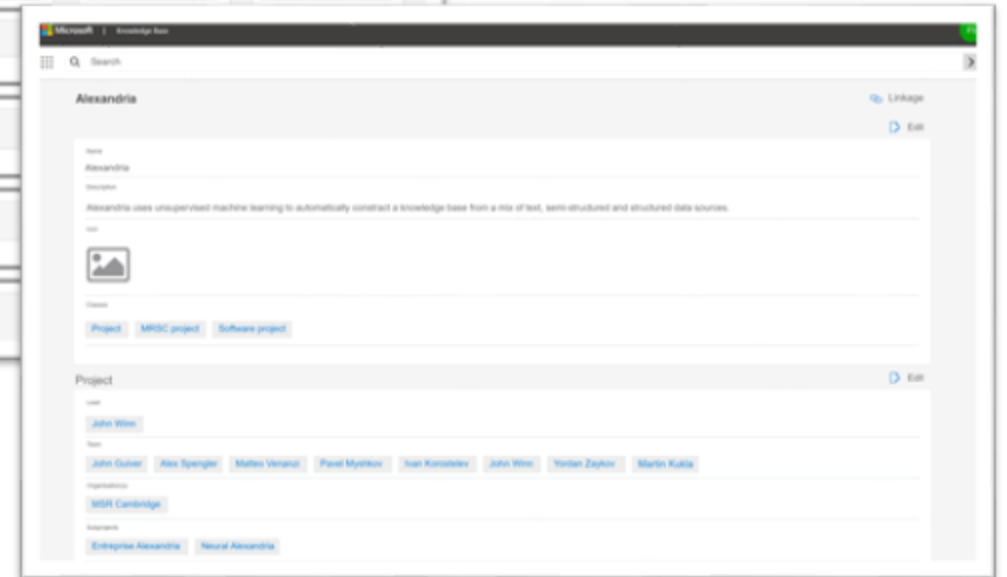
Low fidelity wireframe.

High fidelity wireframe, live prototype.

Mock's up and UI framework.

- InVision.
- Lucidchart.
- Omnigraffle.
- Balsamiq.
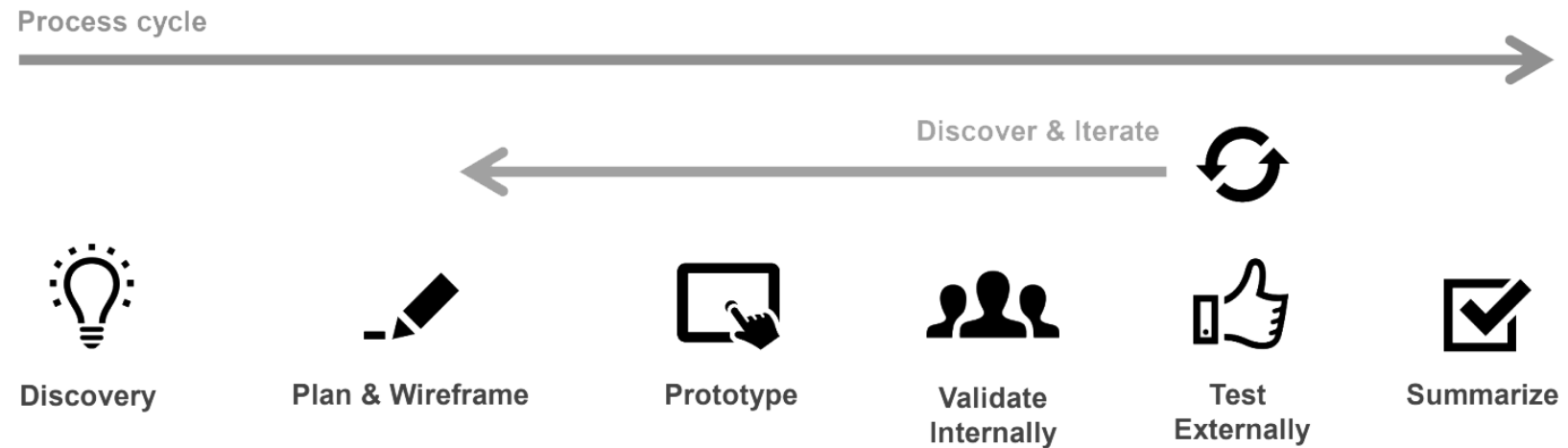
- Sketch.
- UXPin.
- Axure RP.

- Adobe Photoshop, Sketch.
- HTML, CSS, JS.

Recommended task: Participatory design

Testing and feedback

Method: I will use the Lean process throughout the project where each step will be validated, tested when possible and iterate.

Lean process

- Usability test and benchmarking.
- Customer feedbacks tools
- A/B testing.