

Searten Research management

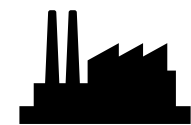
Hugo Dowd

The Project

- Completed as part of a university internship.
- 4 groups of computer science students had completed prototypes of features already but were they were not combined.
- Some user research had been conducted and was in the form of user stories.
- More research needed to be undertaken to understand the full problem space and improve the user experience of the platform.

The Problem Space

The current system of conducting academic research in Australia is inefficient and collaboration between industry, universities and researchers is desired but difficult.



Industry

- Have high-value problems needing researchers but struggle to navigate the university system and find researchers
- When they do provide funding to the university system they lack visibility of their research portfolio.



Governments

- Need maximum accountability of research and ensure that it is having impact.
- Need to make decisions of where funding is allocated.



Academics

- A significant portion of their time is spent on admin for grants.
- Would like access to a wider pool of funding but are held back by admin.

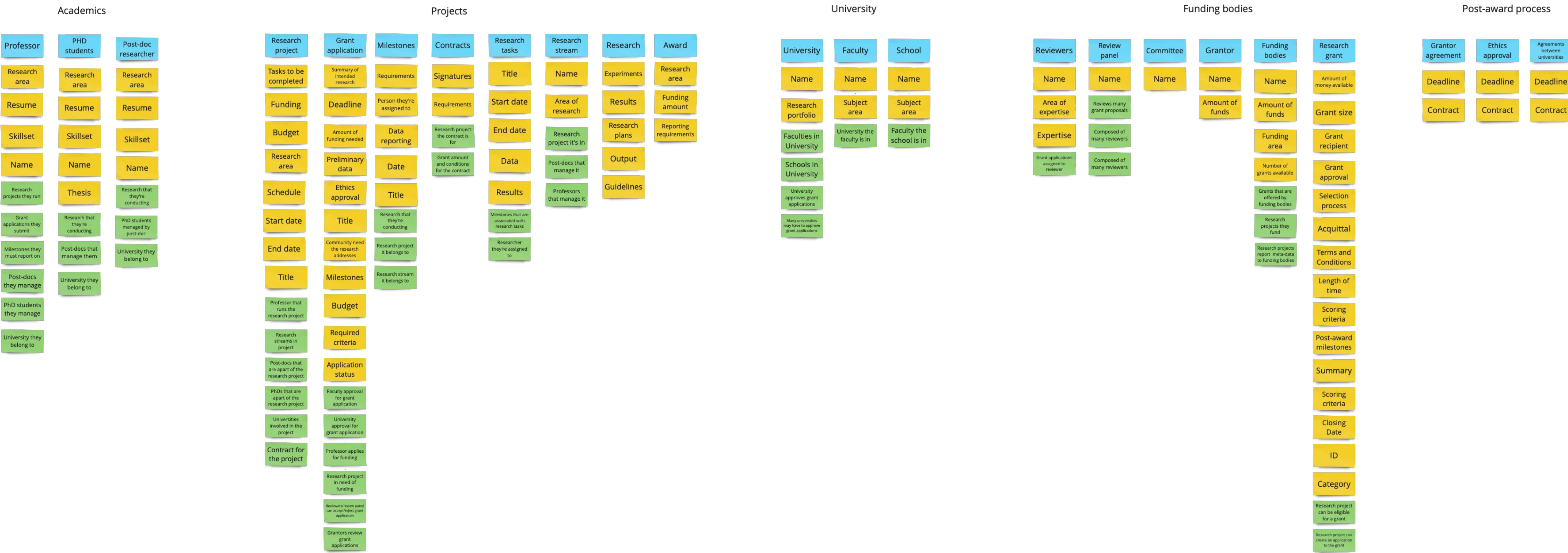


Universities

- Need to keep track of funds, researchers and students.
- Have large, overburdened administration teams.

Understanding the problem space

Mapped out the objects in the system, their attributes and actions.

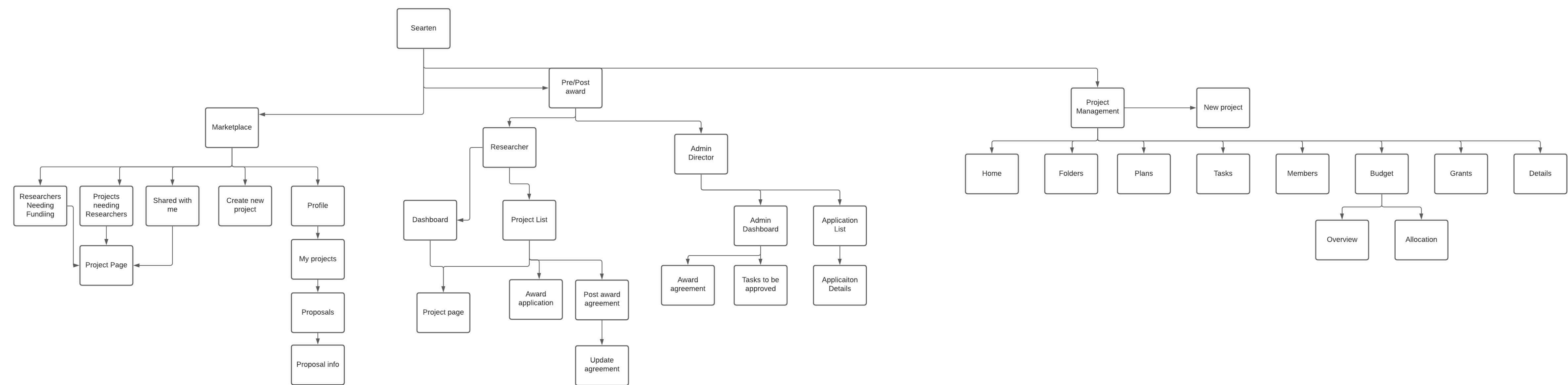


Object	Scoring Criteria	Grant announcement	Grant	Review	Grant Applications	Tasks	Questions	File	Summary	Applications	Projects	Reviewer	Terms & Conditions	Funding
Attributes	<ul style="list-style-type: none">DescriptionMarksTotal scoreReviewers	<ul style="list-style-type: none">Succesful applicantsUnsuccessful applicantsGrant Owners	<ul style="list-style-type: none">NameGrant OwnersScoring CriteriaReviewersReview Panel	<ul style="list-style-type: none">ScoreComment	<ul style="list-style-type: none">ResearchersDescriptionAnswer to Questions	<ul style="list-style-type: none">NameContentFields	<ul style="list-style-type: none">Description	<ul style="list-style-type: none">Name	<ul style="list-style-type: none">Name of grantGrant MoneyStart DateEnd DateProject ProposalMinimum SpendMaximum SpendExtra InformationSummary	<ul style="list-style-type: none">TitleFinal Review ResultAverage MarkReviewersReview Status	<ul style="list-style-type: none">Project StatusGrant NameApplication NameTasks	<ul style="list-style-type: none">Nameid	<ul style="list-style-type: none">NameContent	<ul style="list-style-type: none">Grant IDGrant NameTotal Grant MoneyApplication IDResearch NameTotal ReceivedTotal Used

Understanding the current processes

	Grant Creation	Grant application	Grant Selection	Grant Award
Persons involved	Funding bodies, Grantor, Grant administrator	Professors, Researchers, University Administrators	Funding bodies, Grantor, Reviewers, Review Panel	Funding bodies, Grantor, Grant administrator, Professors, University Administrators, Contract officer
Tasks	<ul style="list-style-type: none">• Create application criteria.• Scoring Matrix is created for applicant assessment• Create application form.• Share grant	<ul style="list-style-type: none">• Create grant application• Get application approved by university/multiple university processes.• Sign-off by university delegates• Send off application to funding body	<ul style="list-style-type: none">• Applications are reviewed.• Applications are scored• A ranked list is created.• Ranked list is evaluated by a committee• Applications are allocated funding if successful	<ul style="list-style-type: none">• Grantor uploads post-award milestones• Researchers fulfil requirements• University approvals process• Agreement created.• Agreement sent to institutions• Agreement reviewed• Creation of final agreement• Agreement sign-off
Contents	<ul style="list-style-type: none">• Amount of money available• Grant Description• Size of grants offered• Terms and Conditions• Length of grants offered• Scoring criteria• Closing date• Research area• Eligibility criteria	<ul style="list-style-type: none">• Summary of intended research• Research objectives• Amount of funding needed.• Project budget• Number of research students involved• Preliminary data• Ethics approval• Socio-economic objectives• Field-of-research• Community need criteria• Faculty approval• Internal University Requirements• Research milestones• Researcher participants<ul style="list-style-type: none">• Chief investigators• Partner Investigators• Organisation participants	<ul style="list-style-type: none">• Grant applications up for review.• Scoring Criteria• Selected Grants	<ul style="list-style-type: none">• Post-award requirements• University approvals• Contracts• Agreements• Post-award status

Mapping out the current sitemap



Component library

Buttons

<div>button</div>	<div>border-radius: 4px; /* primary-200 */ padding: 8px 12px; /* Body-text */ color: #FFFFFF;</div>	Primary Button - Used to emphasis the most important option
<div>button</div>	<div>border-radius: 4px; /* primary-300 */ padding: 8px 12px; /* Body-text */ color: #FFFFFF;</div>	Primary Button - Hover
<div>button</div>	<div>border-radius: 4px; padding: 8px 12px; border: 1px solid #484848; /* text-200 */</div>	Secondary Button (transparent) - used for an option that requires less emphasis
<div>button</div>	<div>border-radius: 4px; padding: 8px 12px; border: 1px solid #484848; /* text-200 */ background: hsla(0, 0%, 20%, 0.1);</div>	Secondary Button -hover
<div>button</div>	<div>border-radius: 4px; padding: 8px 12px; border: 1px solid #FA4338; /* warning-200 */ color: #FA4338;</div>	Button Warning - Used as a warning, the user pressing this button may have consequences
<div>button</div>	<div>border-radius: 4px; padding: 8px 12px; background: #C8C7C7; /* text-100 */ color: #8F8F8F;</div>	Disabled - used to indicate that this option is not available

Greys

#F3F3F3	#D9D9D9	#C8C7C7	#B3B3B3
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Text

#636363	#484848	#323232
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Primary

#DBEBFA	#6AADEC	#1561A7
---------	---------	---------

Warning/error State

#FDB5B0	#FA4338	#B80F05
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Success State

#CAFCE4	#0DEE82	#08914F
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Normal Icons

Search	Filter	Sort- Ascending	Sort- Descending		
<SearchOutlined />	<FilterOutlined />	<SortAscendingOutlined />	<SortDescendingOutlined />		
Tick	Cross	Arrow-left	Arrow-right	Arrow-up	Arrow-down
<CheckOutlined />	<CloseOutlined />	<LeftOutlined />	<RightOutlined />	<UpOutlined />	<DownOutlined />
File	Folder	Add folder	Add file		
Favourite	Comment	Home	Marketplace	Project Management	
Add	More	Warning			

<div><div></div><div>Headings are used in order of the importance of the content</div></div>	
<div>Heading 1</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 64px; line-height: 76px; color: #323232</div>
<div>Heading 2</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 62px; line-height: 62px; color: #323232;</div>
<div>Heading 3</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 40px; line-height: 48px; #484848</div>
<div>Heading 4</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 32px; line-height: 38px; color: #484848</div>
<div>Heading 5</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 20px; line-height: 29px; #484848</div>

<div><div></div><div>Used to differentiate important text in small places</div></div>	
<div>ALL CAPS</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: bold; font-size: 16px; line-height: 24px; text-transform: uppercase; color: #2A8BE4;</div>
<div>Body text</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: normal; font-size: 16px; line-height: 24px; color: #323232;</div>
<div>Small label text</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: medium; font-size: 12px; line-height: 24px; color: #323232;</div>
<div>Smaller label text</div>	<div>font-family: Helvetica Neue; font-style: normal; font-weight: medium; font-size: 10px; line-height: 24px; color: #323232;</div>

User research

- Spoke to researchers, heads of department, university administrators. Demonstrated prototypes as well as explored their current pain points and workarounds.
- **Professors** need to keep track of research funding, applications and acquittals while managing a research team. Hacking together solutions through word, excel etc. results in problems with visibility and version control, there is currently no purpose built software. Funding has different requirements for applications, they change often and are hard to keep track of.
- **Administrators** need to prioritise grants, get a wide view of the deadlines that are coming up and the requirements of different grants.
- **Research collaboration** between universities is extremely difficult as each university has their own system and processes for managing approvals and keeping track of their status is difficult.

Prototype

Searten

SPACES

Projects

Marketplace

PROJECTS

Planner

Drive

Chat

Notes

SETTINGS

Settings

Projects

+ New Project

search...

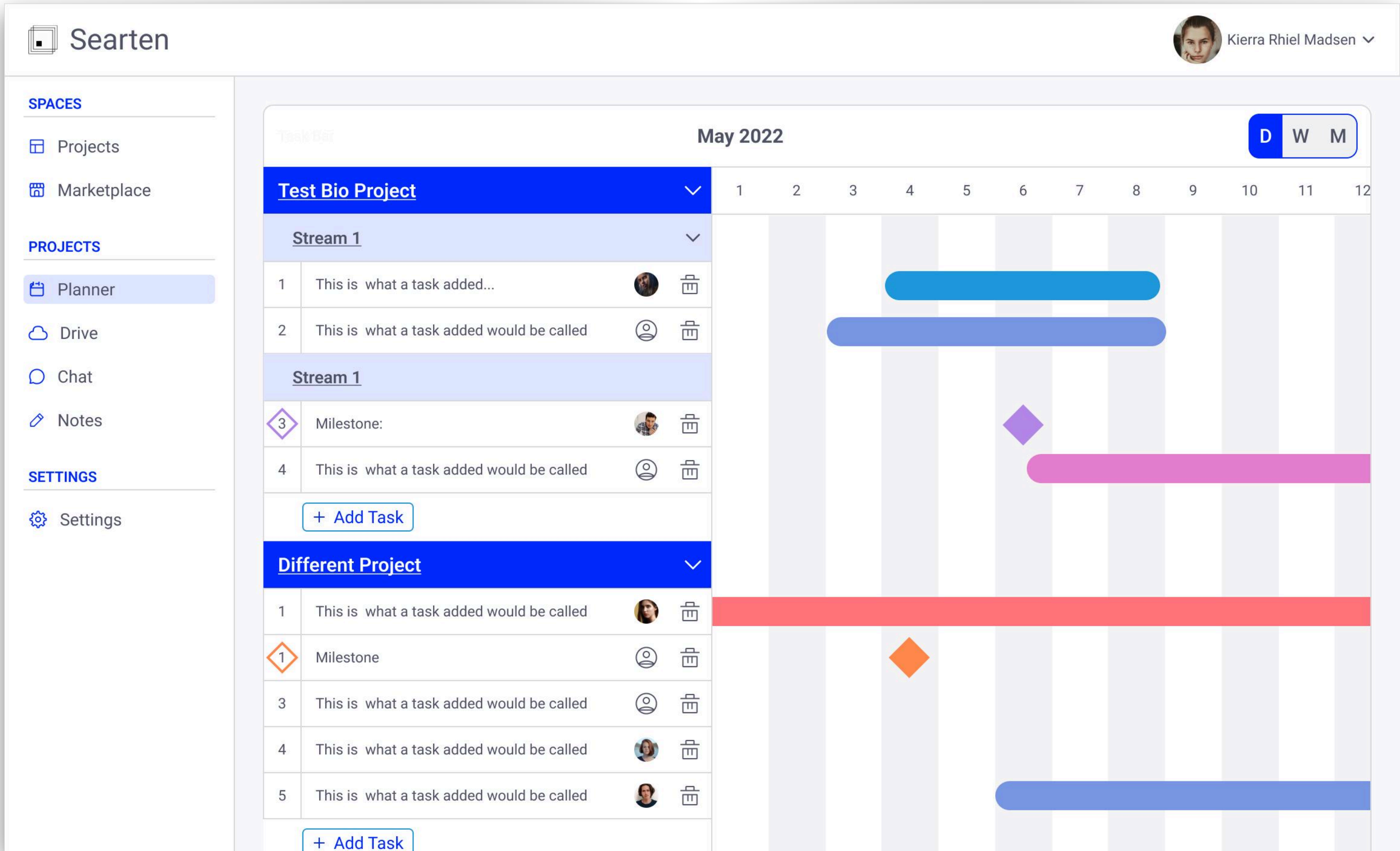
Active

Project	Status	Completion
Test Bio	Pending head of school approval	36% complete <div><div></div></div> >
3D Printed Prosthetics	Project report due in 10 days	48% complete <div><div></div></div> >
Robotics for Agriculture	DVCR review	48% complete <div><div></div></div> >
Dental Ceramics	Pending Contract	36% complete <div><div></div></div> >
Aerospace Materials	Pending Admin Approval	48% complete <div><div></div></div> >

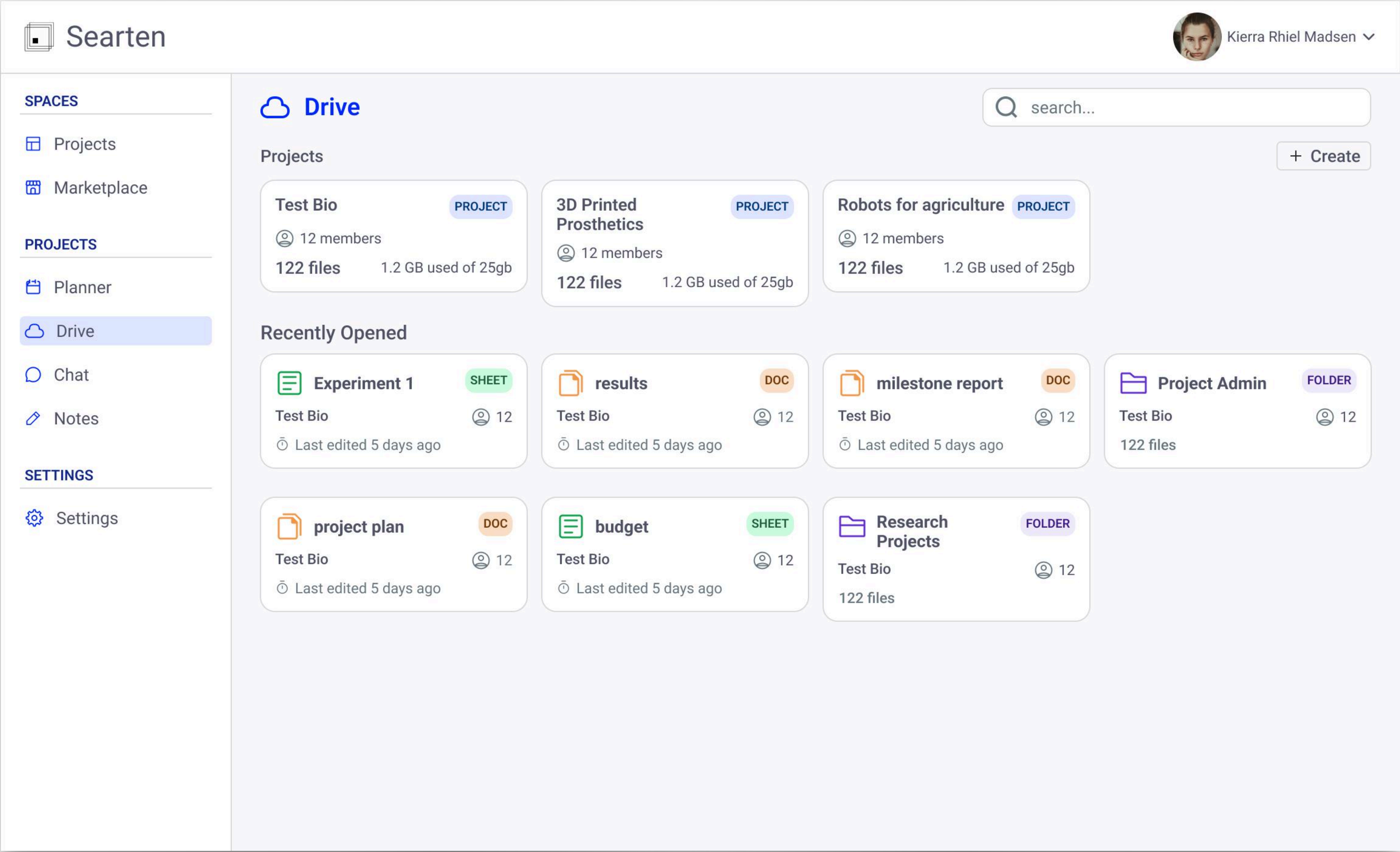
Completed

Archived Project	Completed: 6th Febuary 2021	>
Archived Project	Completed: 6th Febuary 2021	>

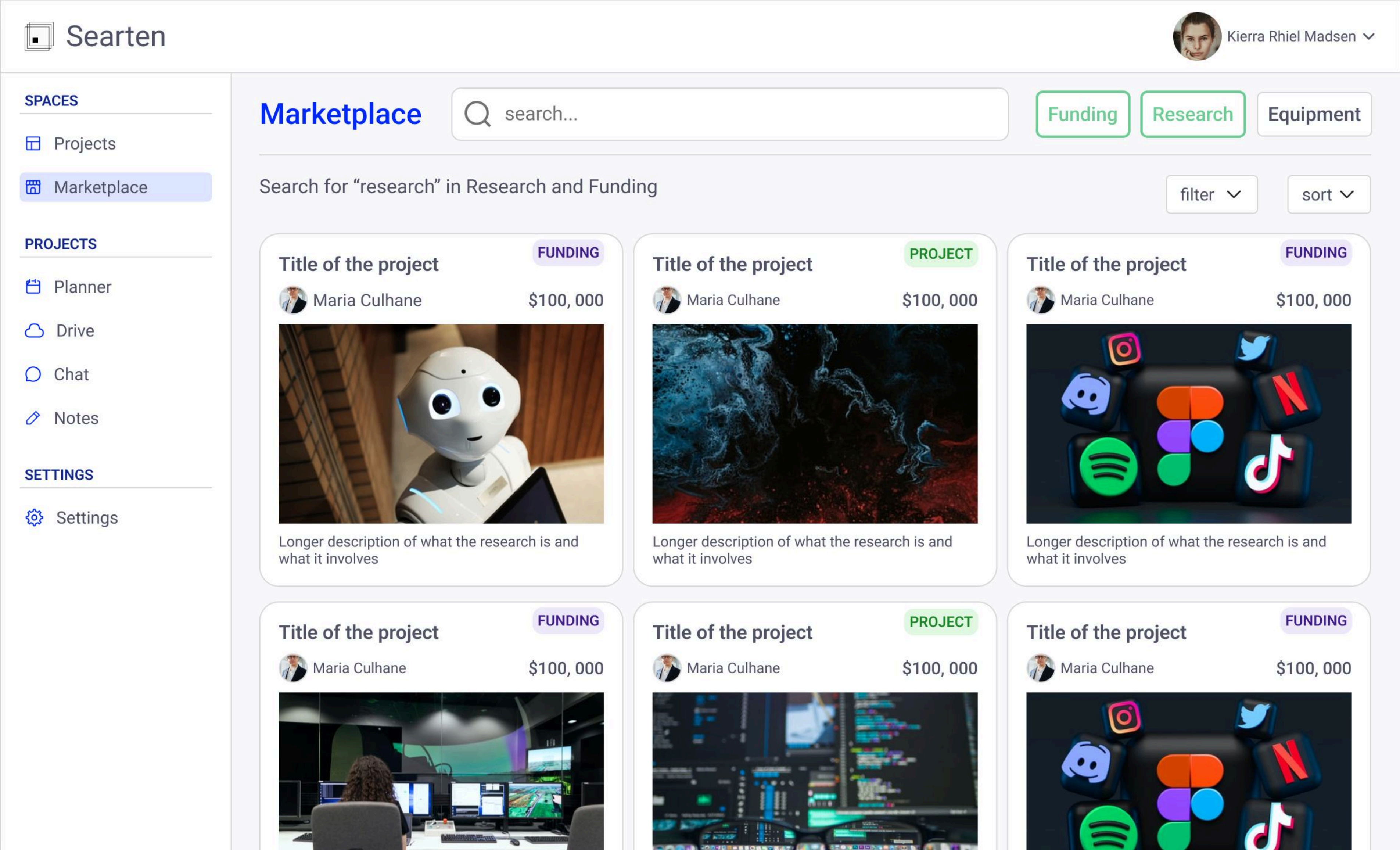
Prototype



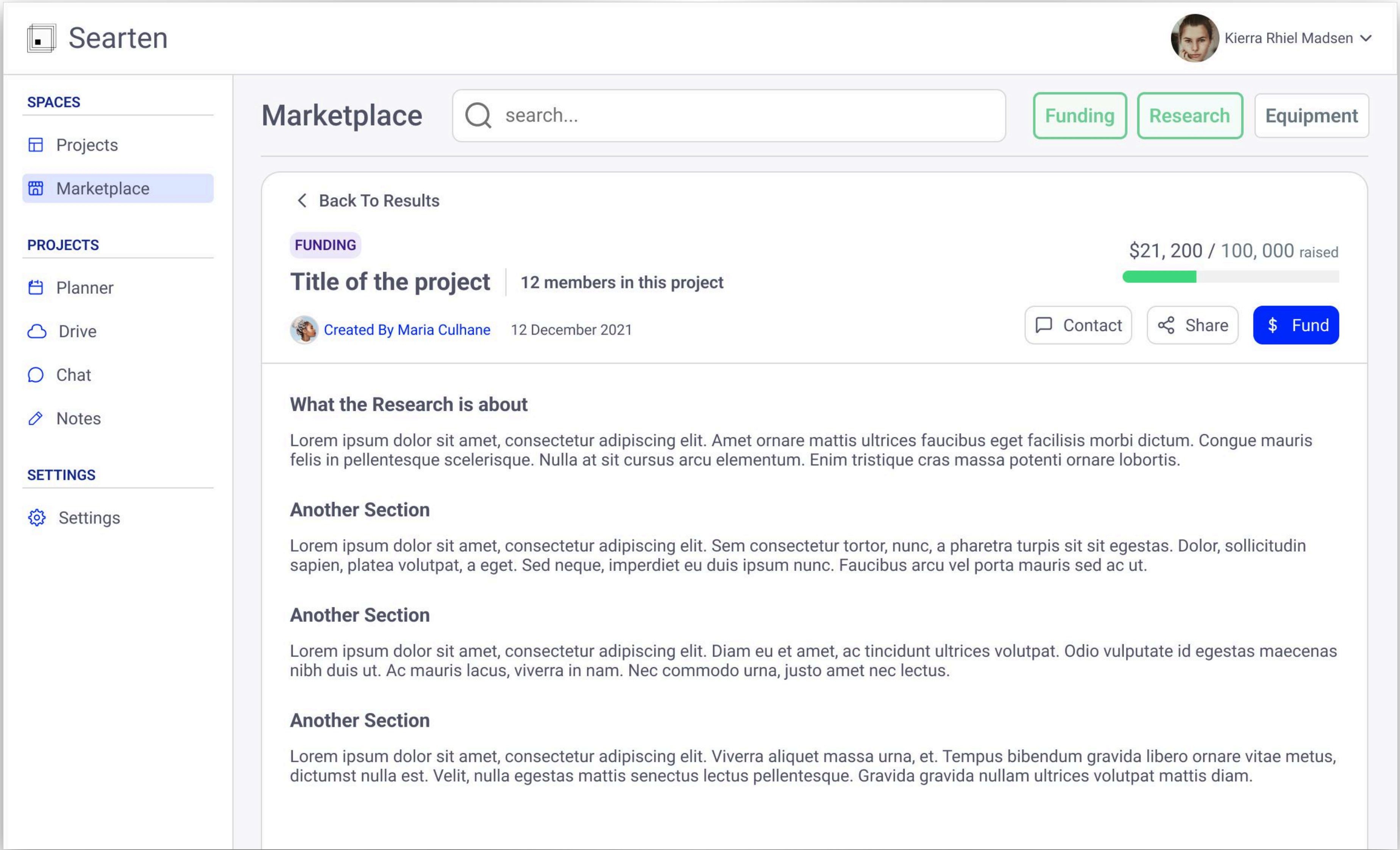
Prototype



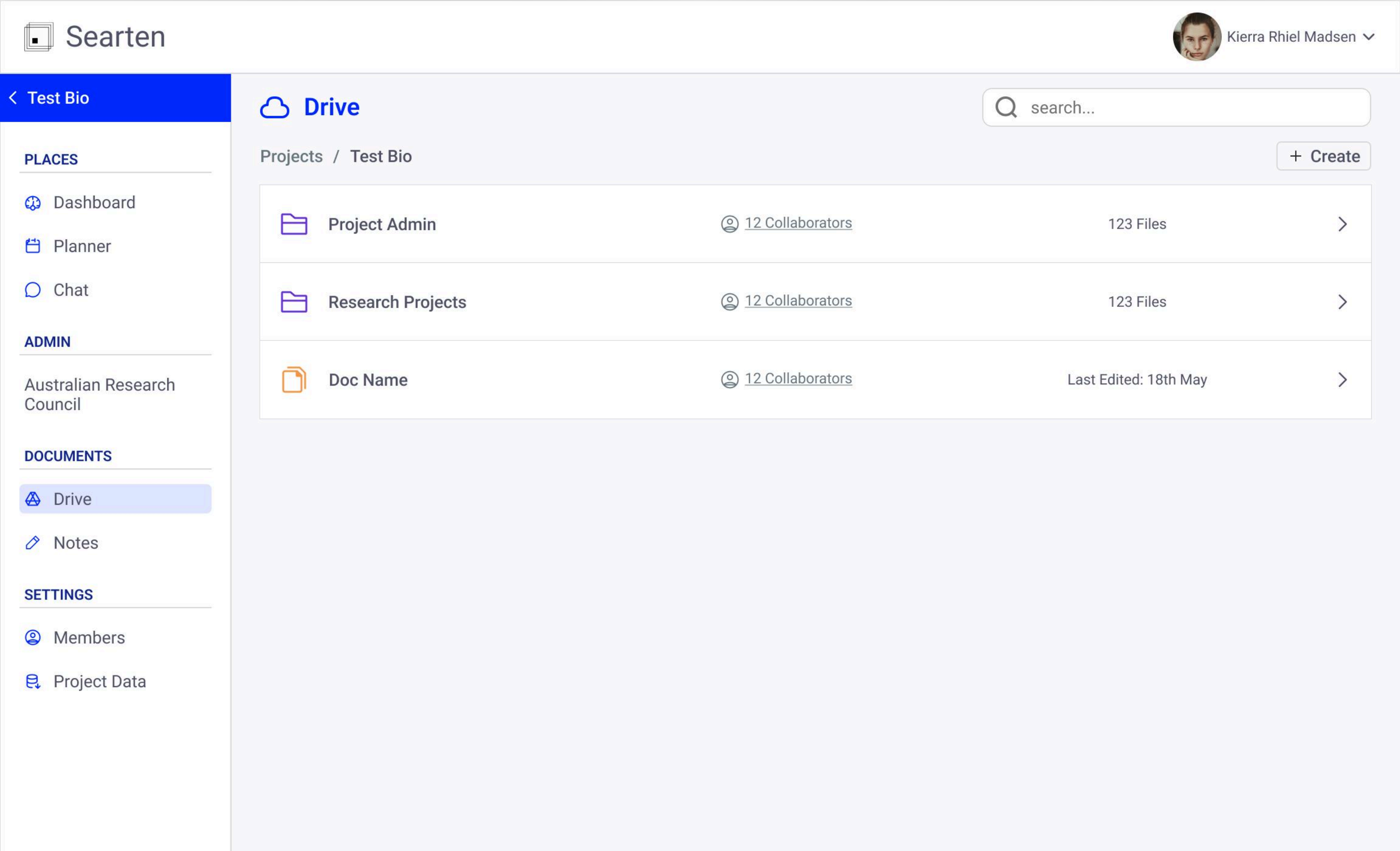
Prototype



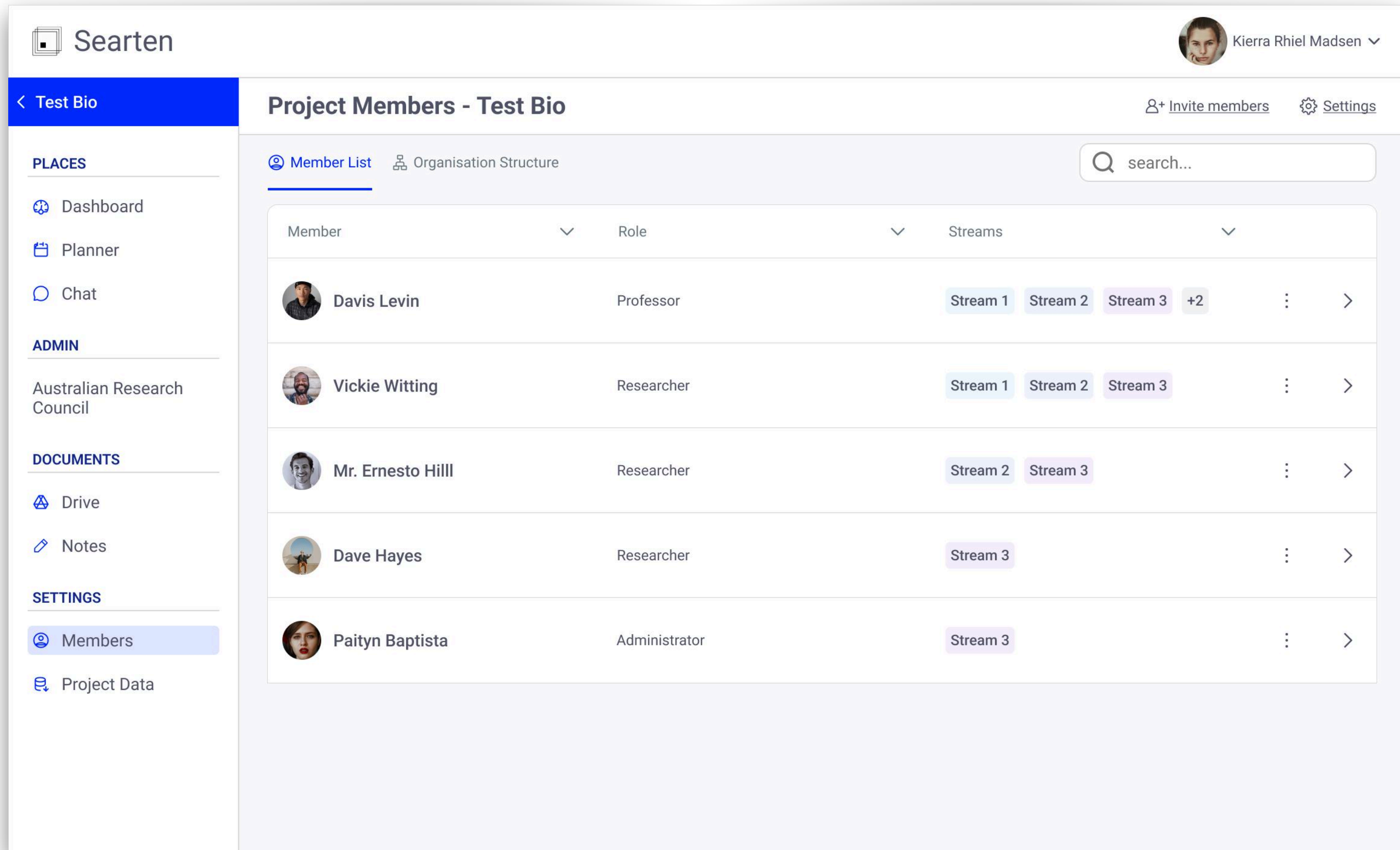
Prototype



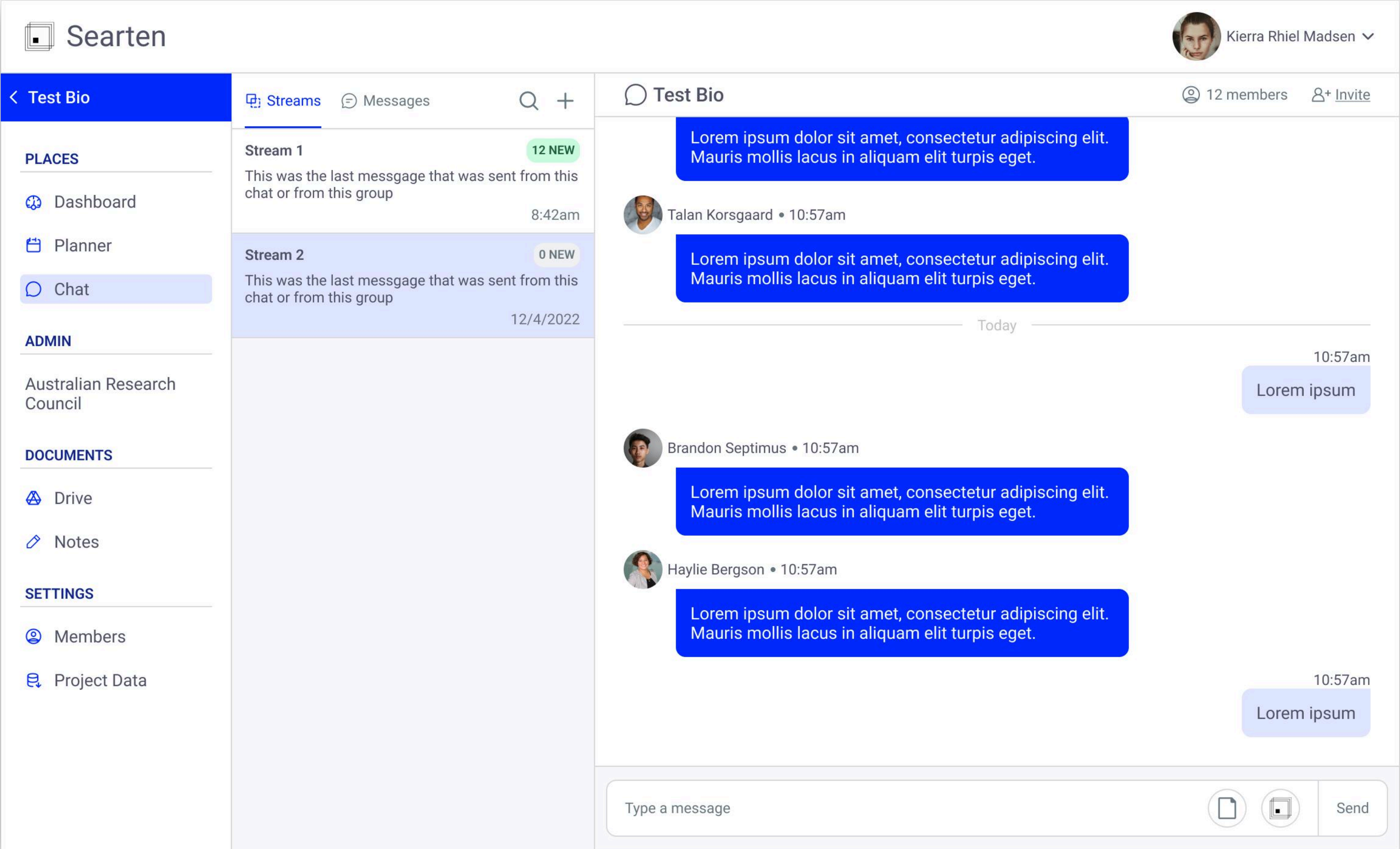
Prototype



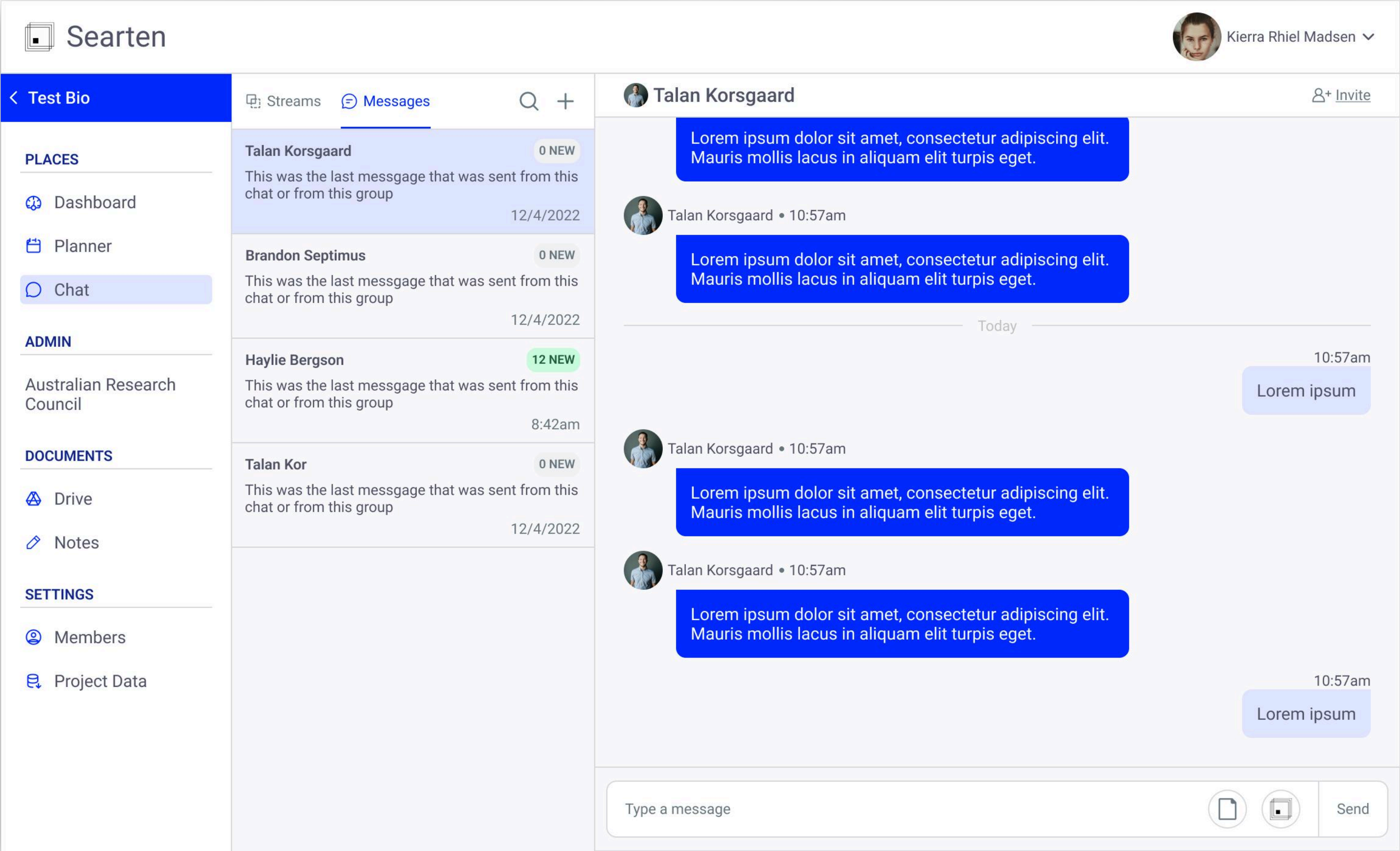
Prototype



Prototype



Prototype



Prototype

Searten

< Test Bio

PLACES

Dashboard

Planner

Chat

ADMIN

Australian Research Council

DOCUMENTS

Drive

Notes

SETTINGS

Members

Project Data

Test Bio (2nd March 2021 - 2nd March 2022)

Grant Reporting Deadline

In 10 days

TASKS FOR THIS MILESTONE

Literature Review

3 days

Diane Padberg

Assigned by: Amos Bechtelar

Data Collection and Experiments

4 days

Marcus Dokidis

Assigned by: Amos Bechtelar

Data Analysis and Results Alignment

6 days

Anika Westervelt

Assigned by: Amos Bechtelar

Paper - First Draft

8 days

Phillip Vetrovs

Assigned by: Amos Bechtelar

RECENTLY COMPLETED

Task name

3rd March

Ann Gouse

Task name

4 days

Marcus Dokidis

Assigned by: Amos Bechtelar

Data Analysis and Results Alignment

6 days

Budget - total: \$230 000

\$100 000

Project completion

76%

Project Members

Davis Levin

Researcher

Task that they're working on

Madelyn Siphron

Researcher

Task that they're working on

Lincoln Carder

Researcher

Task that they're working on

Miracle Rosser

Post-doc

Task that they're working on

Kierra Rhiel Madsen

