

# Discovery Tool

An idea management system

Team 3

# Project overview

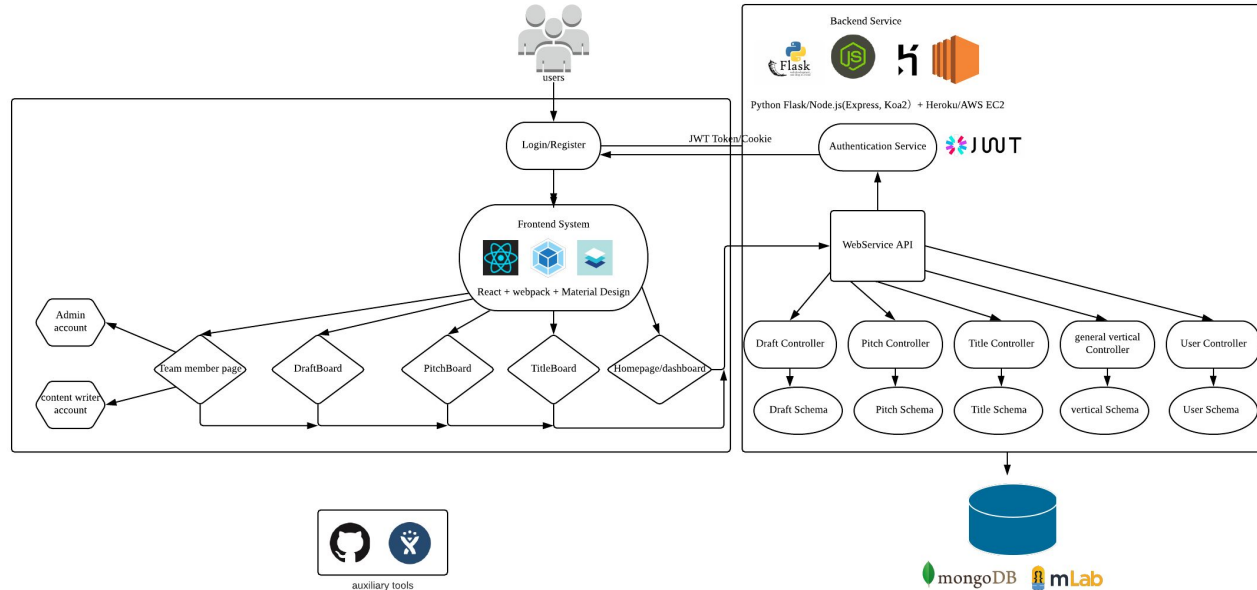
---

Discovery Tool is a web app based **idea management system**. It serves as an **internal tool** to System1. It provides a solution to **help System1 admins and content contributors to streamline, manage, accelerate their workflow**. It gives the admins necessary tooling to quickly **scale the team as well as content production**. Overall, the system supports the team to work cross-functionally, leveraging resources to meet needs as efficiently as possible.

Stakeholders	Initiatives	Value Propositions	Beneficiaries
<ul style="list-style-type: none"> <li>-System1 Super Admin</li> <li>-System1 Admins</li> <li>-System1 Contributors</li> <li>-System1 Maintainer</li> </ul>	<ul style="list-style-type: none"> <li>-Admins and contributors correctly use the app</li> <li>-Maintainers maintain the whole system after handoff occurred</li> <li>-Admins and contributors are responsive to the different stages of idea formulation</li> <li>-Developers implement system to mimic and streamline existing process on idea formulation</li> </ul>	<ul style="list-style-type: none"> <li>-Modernized frontend and backend technology</li> <li>-Streamlined process with real-time feedback</li> <li>-Ease of scaling the project and team size</li> <li>-Monitored and transparent team performance, progress, and goals</li> <li>-Improved organization, tracking, and resolution of content disputes</li> </ul>	<ul style="list-style-type: none"> <li>-Super Admin</li> <li>-Admins</li> <li>-Contributors</li> <li>-Maintainer</li> </ul>

# Technologies

- Frontend: React/Redux + webpack + Material Design
- Backend: Python Flask/Node.js(Express/Koa2)
- Database: mLab(mongoDB)
- The whole architecture is based on RESTful API, MVC pattern and microservices, realize frontend and backend separation
- High performance on scalability, availability and usability based on mature cloud services(AWS EC2 Auto Scaling, Heroku distributed dynos, mLab DAAS features, etc)



NDI/NCS Products	Purposes	Comments
React	Front-end Framework	<p>Positive Points:</p> <ul style="list-style-type: none"> <li>• Better performance</li> <li>• Better compatibility among web browsers</li> <li>• Better ecosystem</li> </ul> <p>Negative Points:</p> <ul style="list-style-type: none"> <li>• Learning curve</li> </ul>
Flask	Back-end Framework	<p>Positive Points:</p> <ul style="list-style-type: none"> <li>• Open source</li> <li>• Light Weight</li> <li>• Familiar by the client</li> </ul> <p>Negative Points:</p> <ul style="list-style-type: none"> <li>• Have to use third party extensions</li> </ul>

NDI/NCS Products	Purposes	Comments
MongoDB	Database	<p>Positive Points:</p> <ul style="list-style-type: none"> <li>• Flexible and schemaless</li> <li>• Support large scale of data</li> </ul> <p>Negative Points:</p> <ul style="list-style-type: none"> <li>• Lack of community support with respect to Flask integration</li> </ul>
AWS	Cloud Server	<p>Positive Points:</p> <ul style="list-style-type: none"> <li>• Easier than building local server</li> <li>• Cheaper when having small data scale</li> <li>• Safe</li> </ul> <p>Negative Points:</p> <ul style="list-style-type: none"> <li>• More complex setup compared to alternatives (Heroku)</li> </ul>

# Backend Demo

**default** Default namespace

POST	/auth/login
POST	/auth/logout
POST	/ideas/
GET	/ideas/
PUT	/ideas/{idea_id}
DELETE	/ideas/{idea_id}
GET	/ideas/{idea_id}
GET	/ping
POST	/users Create a new user
GET	/users Return a list of users
PUT	/users/{user_id} Update a user entry
DELETE	/users/{user_id} Delete a specific user entry
GET	/users/{user_id} Return a specific user entry

Models

**mLab** WELCOME PLANS & PRICING DOCS & SUPPORT ACCOUNT LOG OUT

Home: {a: '12-dec'}  
Collection: users {user: 'russomg', account: 'Michael Russo'}

Documents Indexes Stats Tools

Documents  
Delete all documents in collection Add document

-- Start new search --

All Documents  
Display mode: list table (edit table view)

records / page 10 [1 - 1 of 1]

```
{
  "_id": {
    "oid": "5bc6731248c81acf6194e901"
  },
  "public_id": {
    "$uuid": "e5491a01-ac26-c361-d683-cb3d1c53ce8c"
  },
  "email": "test@gmail.com",
  "password": "$2b$12$sEUVj1gHwLSp3YdaamV7xectoJ.QfD.1vW8c56XsAY/y13sVQ8w6",
  "role": "writer",
  "created_at": {
    "$date": "2018-10-16T23:24:02.677Z"
  }
}
```

records / page 10 [1 - 1 of 1]

**Documents (aka Objects)**

From the "Documents" tab you can browse and search for objects in this collection. All standard query constructs are supported except for map/reduce queries. To use map/reduce, use the MongoDB shell (note that temporary result collections will be viewable in mLab).

You can also add, edit, and delete individual documents from here. Bulk collection updates are not yet supported in this UI (although they are supported in the shell).

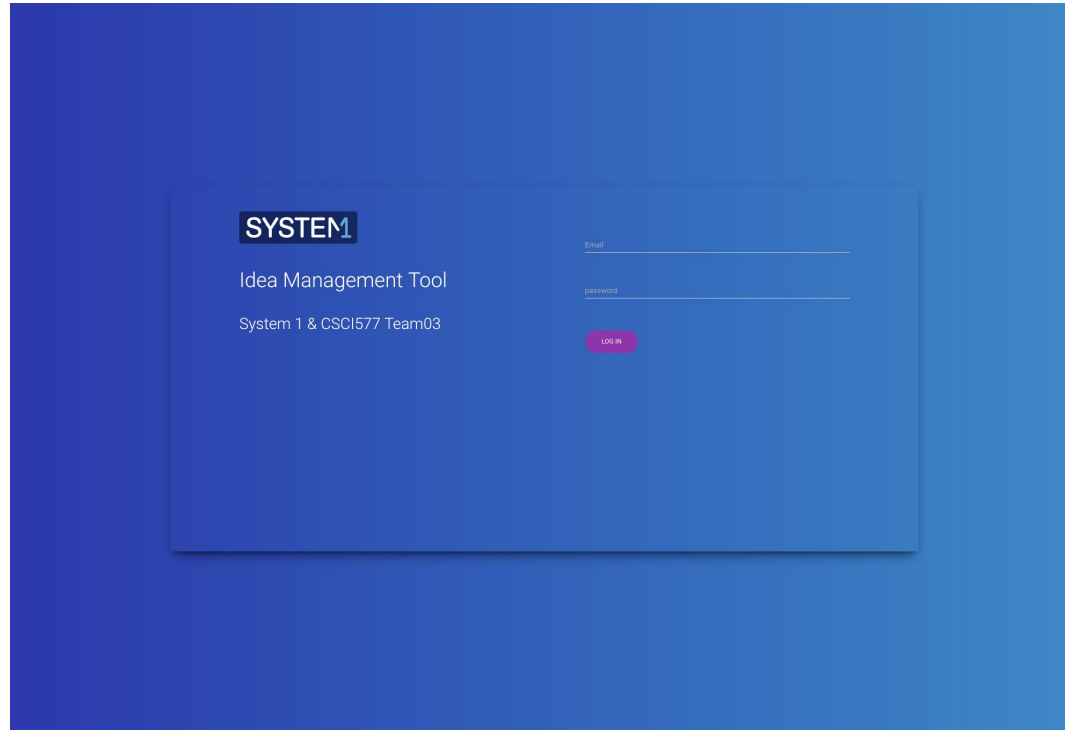
# UI Live Demo



# Login Page

---

Auto redirect to admin dashboard or content writer homepage

A login page mockup with a blue gradient background. A central white box contains the login form. On the left side of the box, the text 'SYSTEM1' is in a dark blue box, followed by 'Idea Management Tool' and 'System 1 & CSCI577 Team03'. On the right side, there are input fields for 'Email' and 'password', and a red 'LOG IN' button.

**SYSTEM1**

Idea Management Tool

System 1 & CSCI577 Team03

Email

password

LOG IN

# Content Contributor Homepage

Work progress indicator  
indicate assigned vertical, and pitch

**Sidebar**  
nav to other board

**Pitch table**  
submitted pitches

**Work progress indicator**  
indicate assigned vertical, and pitch

**Vertical Assigned**  
Education / Lifestyle / Employment  
Assigned to Kerry Deng  
34 Approved / 12 Parked / 30 Rejected

**Pitch Target**  
76 Total  
14 Approved / 12 Pitched / 1 Unpitched

**Title Target**  
27 Total

**Pitch Progress**  
Progress of last 6 days view

Subject	Reporter	URL	Buy-side Network	Time Created	Last Time Modified	Status	Update #
College life	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	Rejected	13
College life	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	Parked	13
College life	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	Parked	13
College life	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	Rejected	13
Employment Policy	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13
Employment Policy	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13
Employment Policy	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13
Employment Policy	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13
Vacation	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13
Vacation	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	New	13

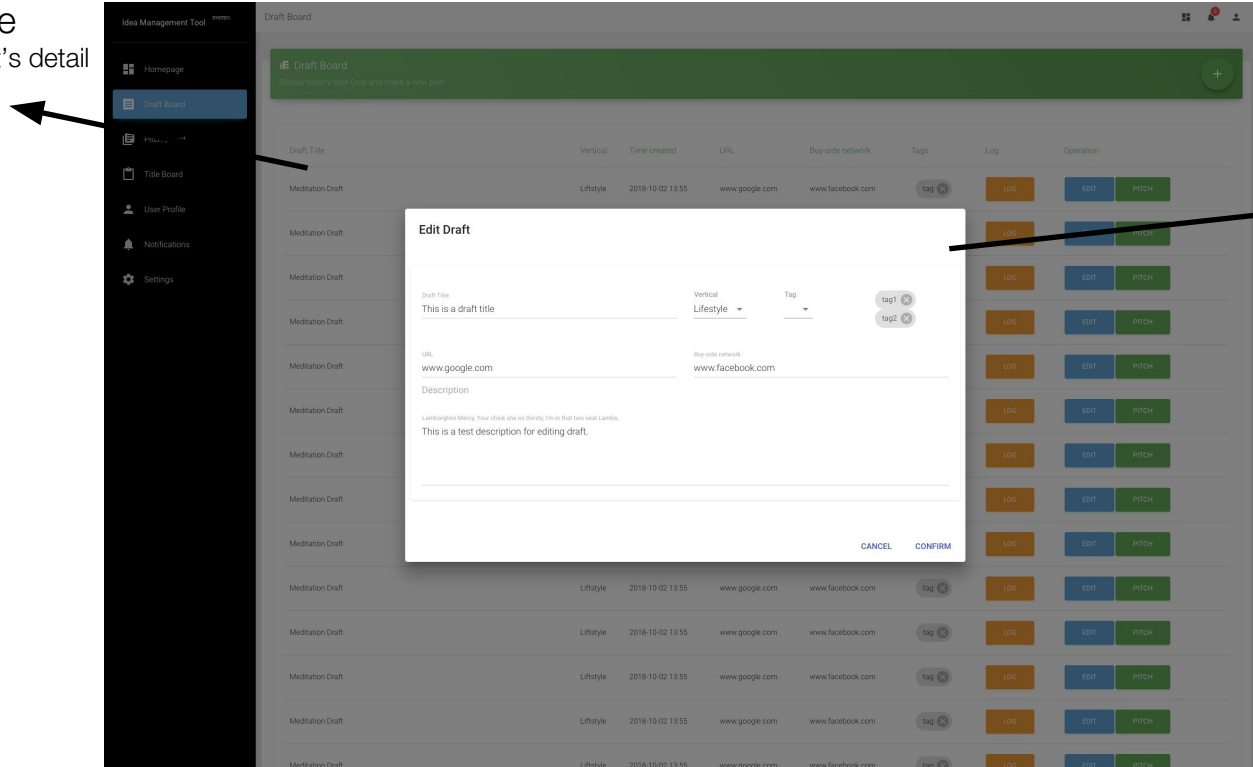
Rows per page: 10 / 101-100 of 10

**Title Progress**  
Title assigned to content editor in this week

Title	Pitch creator	Reporter	Status
If we have something wrong to im...	Kerry Deng	Dakota Rice	Approved
God bless the world.	Kerry Deng	Dakota Rice	Approved

# Content Contributor Draft Board

Draft Table  
display all pitch draft's detail



Edit Draft  
edit a draft's detail

# Content Contributor Global Pitch Board

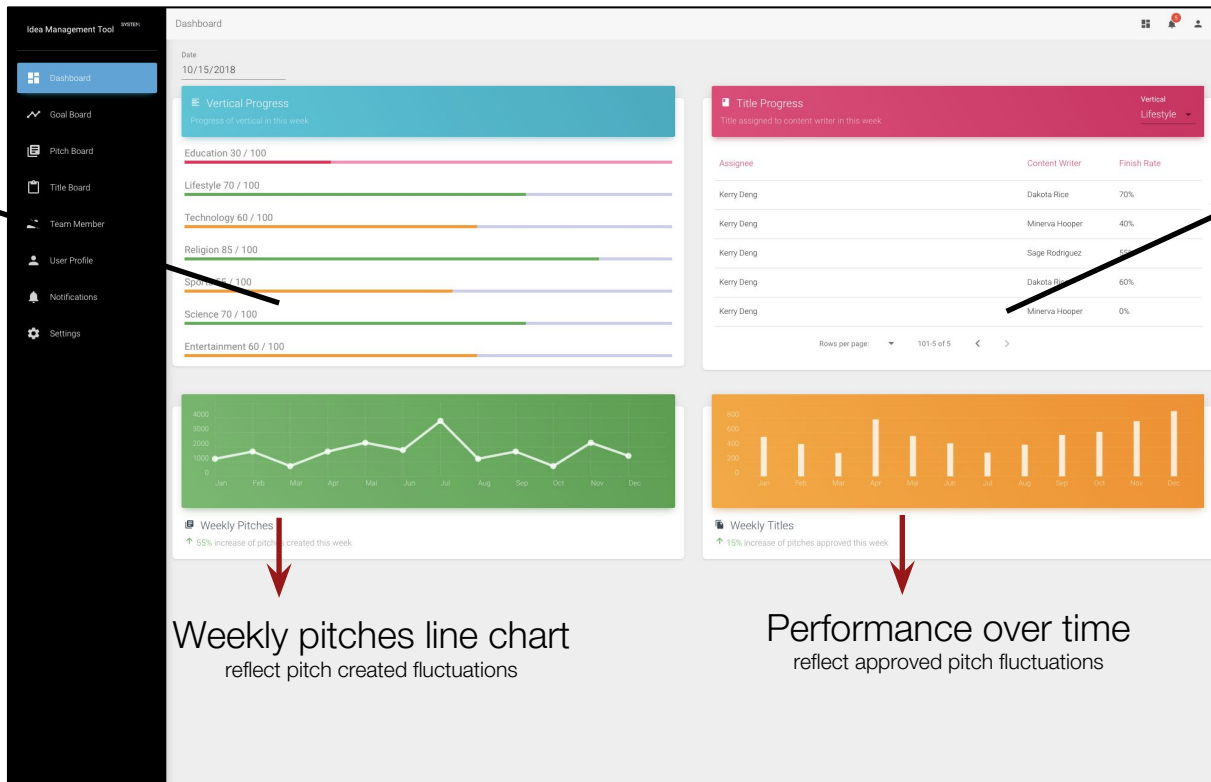
Subject	Vertical	Assignee	Reporter	URL	Buy-side Network	Time Created	Last Time Modified	Expectation	Finished Rate	Status	Update
College life	Education	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	Rejected	
College life	Education	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	Parked	
College life	Education	Sage Rodriguez	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	60	35%	Parked	
College life	Education	Philip Chaney	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	90	55%	Rejected	
Employment Policy	Employment	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	New	
Employment Policy	Employment	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	New	
Employment Policy	Employment	Sage Rodriguez	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	60	35%	New	
Employment Policy	Employment	Philip Chaney	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	90	55%	New	
Vacation	Lifestyle	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	New	
Vacation	Lifestyle	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	New	

Rows per page: 101-10 of 10 < >

Pitch table  
display all pitches submitted  
by current user

# Admin Dashboard

Vertical(pitch)  
overview  
display all verticals work  
progress



Team Member  
Performance

Weekly pitches line chart  
reflect pitch created fluctuations

Performance over time  
reflect approved pitch fluctuations

# Super Admin Goal board

Goal board  
display weekly targets

New goal creation  
create a new goal for a  
specified week

The screenshot displays the 'Super Admin Goal board' interface. On the left is a dark sidebar with navigation options: Dashboard, Goal Board (selected), Pitch Board, Title Board, Team Member, User Profile, Notifications, and Settings. The main area shows the 'Goal Board' with a date filter set to '10/15/2018'. A 'Create new goal' modal is open in the center, featuring a table with columns: Vertical, # of Title Needed, # of Title Completed, and Assignee. The modal also includes input fields for 'Vertical' (set to 'New vertical') and '# of Title needed' (set to '13'), and a dropdown for 'Assignee' (set to 'Kerry Deng'). At the bottom of the modal are 'CANCEL' and 'CONFIRM' buttons. In the background, a table displays goal data with columns for 'Vertical', '# of Title Needed', '# of Title Completed', and 'Assignee'.

Vertical	# of Title Needed	# of Title Completed	Assignee
Education	30	25	Dakota Rice
Science	25	31	Minerva Hooper
Sports	40	33	Sage Rodriguez
Lifestyle	60	45	Dakota Rice
Employment	56	47	Minerva Hooper
Science	25	31	Minerva Hooper
Sports	40	33	Sage Rodriguez
Lifestyle	60	45	Dakota Rice
Employment	56	47	Minerva Hooper

# Admin Global Pitch board

Idea Management Tool

PitchBoard

**Pitch Table**  
Information on vertical in this week.

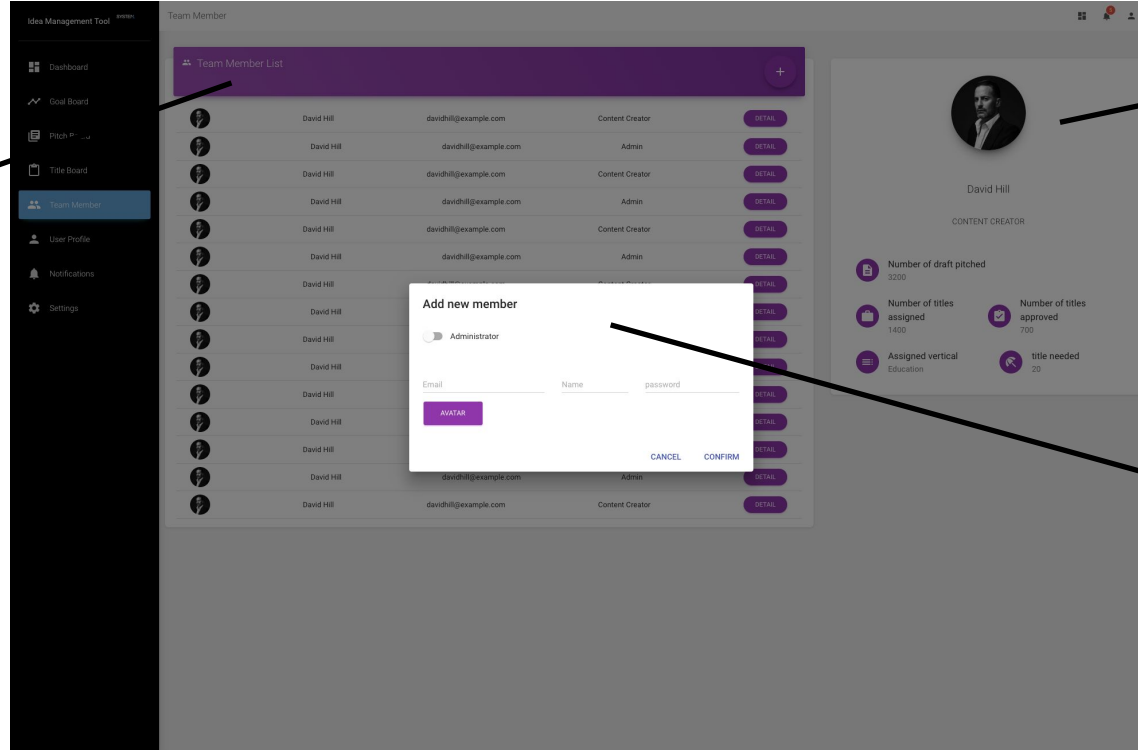
Subject	Vertical	Assignee	Reporter	URL	Buy-side Network	Time Created	Last Time Modified	Expectation	Finished Rate	Operation	Update
College life	Education	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	Rejected	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
College life	Education	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	Parked	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
College life	Education	Sage Rodriguez	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	60	35%	Parked	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
College life	Education	Philip Chaney	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	90	55%	Rejected	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Employment Policy	Employment	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Employment Policy	Employment	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Employment Policy	Employment	Sage Rodriguez	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	60	35%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Employment Policy	Employment	Philip Chaney	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	90	55%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Vacation	Lifestyle	Dakota Rice	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	100	75%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>
Vacation	Lifestyle	Minerva Hooper	Kerry Deng	www.google.com	www.facebook.com	2018-10-02 15:14	2018-10-06 08:32	70	45%	New	<div>APPROVE</div> <div>DECLINE</div> <div>ups</div>

Rows per page: 101-110 of 10

Pitch table  
admin can view, evaluate global  
pitches

# Admin Team member List

Team member  
table  
display all users  
profile



User profile detail  
show a specific user's work  
progress

New member  
the only way for admin to add  
new users



# Lesson Learned

---

## Product Development

- The client does not always know what they want (ikiwisi)
- All success-critical stakeholders should be involved as early as possible
- Feedback loops should be shortened where possible

## Process

- Willing commitments yield better work
- Openly stated and publicly hosted commitment tracking can be used as an effective accountability and motivation mechanism

# Moving Forward...

---

- Implement changes based on feedback from most recent client meeting
- Finalize UI and backend API
- Start discussions with the maintainer