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Team Name: Bob's Builders

Project Name: Kombucha

Introduction

Problem:

Currently, Procore collects terabytes of user data & analytics. However, none of that important information is visible to the client.

Project Specifics

- Data Visualization Tool: Apache Superset
- Database: PostgreSQL
- Web Hosting Service: Heroku
- Languages: Python, Javascript, SQL
- Work management tools: Trello
- Version Control: Git/Github
- Communication: Slack, Facebook Messenger, GoToMeeting

Team Goals/Objectives

Use Apache Superset to transform user data into charts and graphs

Superset allows us to take in data from our database (PostgreSQL) and create data visualizations. This allows our users to get a better understanding of how their company is making use of Procore's tools, and is central to our targeted consumer.

Populate dashboards with relevant charts and graphs specific to a user role

By giving specific charts to certain users, users will not be as overwhelmed by an over-complicated dashboard. They'll be able to view only the information that they need in a clear, concise manner.

Create a query system to allow users to make their own dashboards

Users have large databases with hundreds of ways they can query their company data, but not all users will be interested in the same analytics. Thus it is important to allow users to customize their queries to make their own dashboards.

Create a way to share dashboards (via URL, CSV, or PDF)

Users should be able to share their usage analytics with others involved with their project. This will allow our users to add charts and visuals to presentations, bring them to meetings, etc. to have better communication overall with their stakeholders.

Host dashboards online using Heroku

By having dashboards online, it allows the clients to easily access the dashboards/information whenever they want to see a dashboard instead of having to ask Procore to take a screenshot or send files to them.

Allow admins to control permission access to specific data

By granting admins the ability to assign granular permissions to specific people or roles it allows the company to control information flow and keep certain confidential information secure.

Connect Procore's data pipeline to a database in order to display info in real time

Having real time info will allow companies to make informed decisions that are based on current, not outdated data.

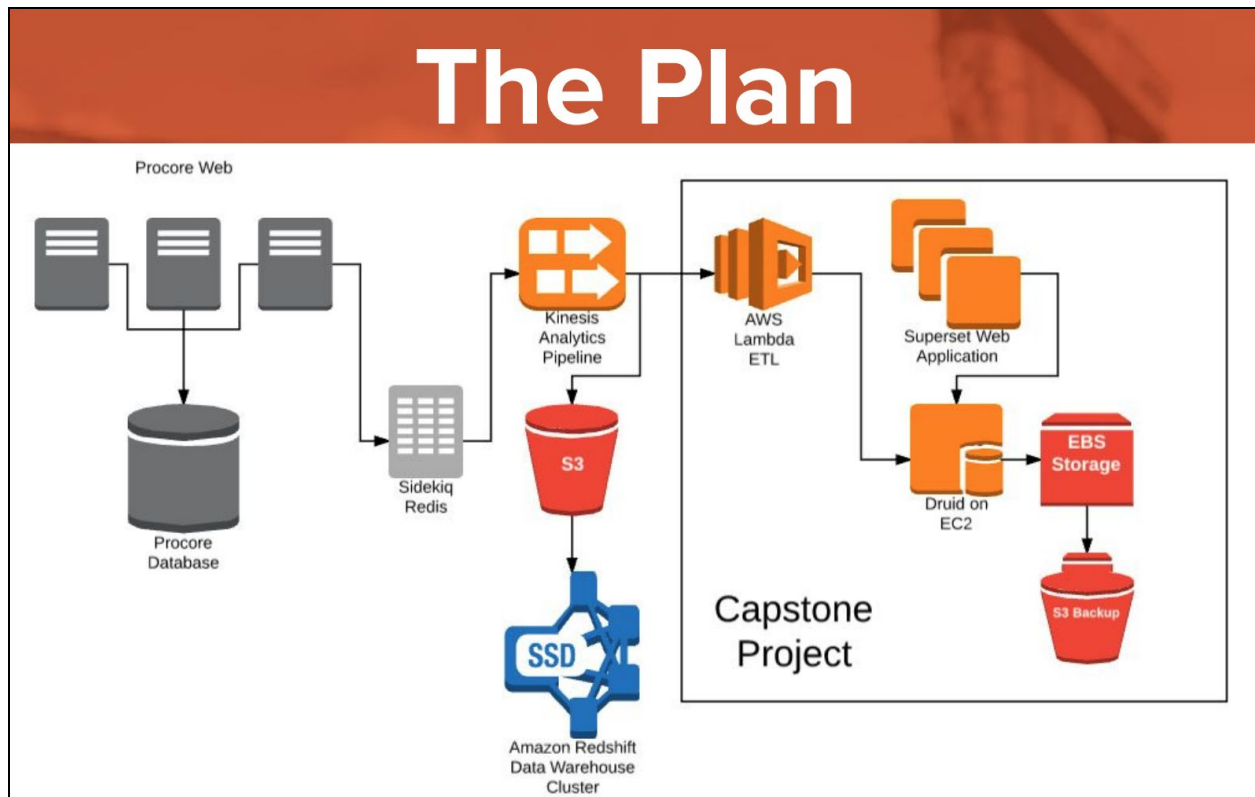
- Background
 - **What problem the project is solving?**

Procore collects terabytes of data on the usage of their tools. Currently, clients don't have a way to view this data. In other words, they don't know which tools are being utilized in their organization. Thus, we want to innovate the way data is organized and redirected to the customer so that information can be ingested intuitively and quickly.
 - **Why the problem is important?**

Without utilizing this data, clients have no idea which tools their organization or company is using. Knowing what tools are being utilized and what tools aren't is essential in understanding the value of Procore's products.
 - **How the problem is solved today?**

Currently the problem is solved by organizing this data and presenting it to clients in a way that lets them quickly pinpoint trends and important points so that they can make decisions going forward based on that data. However, this is inefficient because the clients have to consult Procore each time they want to get analytics on their product usage.
- Assumptions
 - The user has an internet connection to view the webpage
 - The user is a customer of Procore and has Procore log-in credentials
 - The user will have a managerial or administrative position in the company
 - Procore will provide the user data in JSON format for us to ingest

System Architecture Overview



Requirements

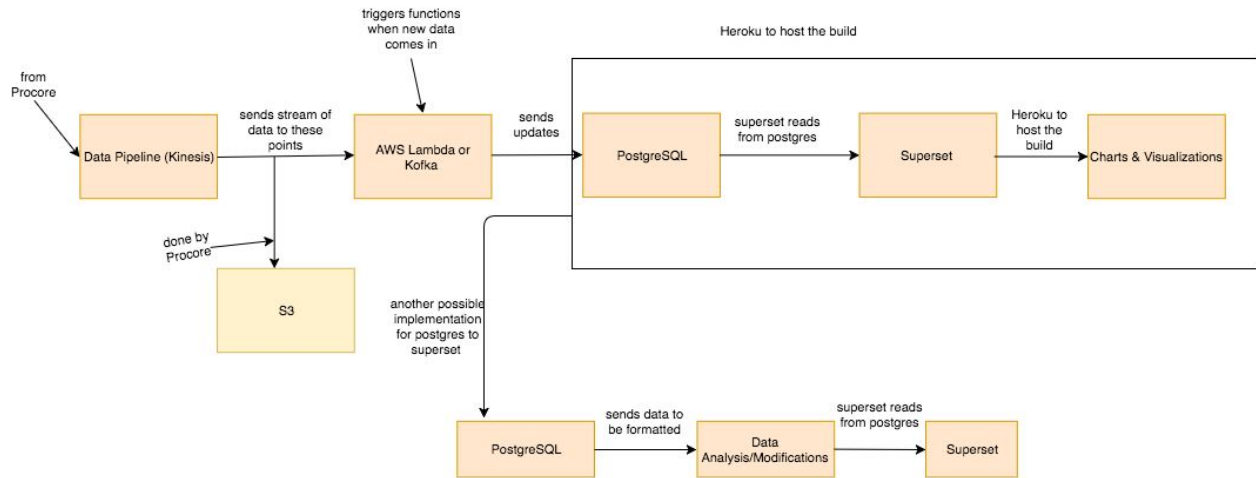
User Stories

1. As an admin, I want to view my organization's usage of Procore's tool suite to learn how much value I'm getting out of the software.
 - **Acceptance Test:** We can visit the website and see tool usage statistics displayed on the site in a visually intuitive way.
 - https://github.com/procore/superset/tree/json_to_postgresql
2. As an admin, I want to see which tools are NOT being used to investigate / take action to increase usage.
 - **Acceptance Test:** We can visit the website and see a chart of the least used tools under the organization.
3. As an admin, I want easy access to dashboards so that I can view charts relevant to my organization.
 - **Acceptance Test:** Open the webpage and see one single dashboard that contains multiple graphs and charts.
4. As an admin, I want to control the type of data that my employees can see so that no one has access to data that they shouldn't be able to see.

- **Acceptance Test:** Create two “dummy users” (User A and User B) with differing roles, give access to User A but not User B, then check that User A can access the data and User B cannot.
- 5. As an admin, I want to create my own graphs and charts so that I can have full control over what graphs are in my dashboards and how they’re laid out.
 - **Acceptance Test:** Create a “dummy dashboard” with a set of charts, then check that the dashboard is saved with all customizations.
- 6. As an admin, I want to be able to share my dashboards so others can see the graphs I've created.
 - **Acceptance Test:** Create a “dummy dashboard,” use our Share feature, then check whether or not the same exact dashboard is shown to the person that the dashboard was shared to. (by checking properties, visuals, etc.)
- 7. As an admin, I want to be able to clone dashboards and charts in order to make slightly different iterations easily.
 - **Acceptance Test:** Create dummy dashboards and charts, use our “clone” function, then check whether or not the dashboards and charts created by the clone function are equivalent to the original. (e.g. check properties, check visuals, etc.)
- 8. As an admin, I want to be able to change the time period of my charts so that I can view recent as well as long term trends.
 - **Acceptance Test:** Go to a dashboard and choose a chart. Then click on the edit button for the chart and change the time period I want to show. Go back to the dashboard to see if the chart was updated to the new time period I chose.
- 9. As an admin, I can login with my Procore credentials and have my data pulled from my account.
 - **Acceptance Test:** Create a mock User with a fake username/credentials. Check that they are able to login successfully into the Procore ecosystem.
- 10. As an admin, I want to access to navigate to the webpage and still feel like I’m within the Procore ecosystem.
 - **Acceptance Test:** Design a webpage that follows Procore’s official design guidelines.
 - <https://github.com/procore/superset/pull/2>
- 11. As a data analyst, I can use the data visualizations in order to easily create better data-driven decisions.
 - **Acceptance Test:** Make comparisons between the charts generated by our software and charts generated by other software in order to see which one has better clarity

System Models

- Contexts
- Sequences
- Behavioral / UML



- State

Appendices

- Technologies
 - [PostgreSQL](#)
 - [Superset \(Private\)](#)
 - [Superset \(Public\)](#)
 - [AWS: Kinesis](#)
 - [AWS: Lambda](#)
 - [AWS: S3](#)