Project Status report

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Community (UN SD goal): Goal 11 – Sustainable Cities and Communities

MVP # 1

Sprint cycle dates: Oct 19 / 2021 – Nov 1 / 2021

Project Name	Green Screen
Blurb	Green Screen serves as a solution to create better understanding of the state of recycling for the City of Regina within Waste Management Workers. As the city suffers from significant recycling contamination, it is vital to build knowledge of its source. Green Screen will be an actively updated knowledge base which promotes asynchronous learning for workers. This dashboard will serve to improve the experience of waste management workers consumption of information, allowing them to create actionable goals to lead the city towards a sustainable and green future.
For Week Ending	Nov 2 / 2021
Project Status	Green
Status Description	The status is green as there is a working product of the initial architecture as stated by the project Activity Based Schedule document. I also attended meetings with Sam from Prairie Robotics and was able to setup various technologies needed for the success of this project including the databases and API.

Activities—During the past sprint cycle

1) Build Simple React Project to understand fundamentals
2) Meeting with Sam Dietrich from Prairie Robotics to setup databases, API, and user accounts for authorization
3) Review CartSmart weekly document which contains various information which waste management workers find useful. Therefore, the following information can be implemented for waste management workers to view on a regular basis.
    a. Households Serviced – How many houses were recycling bins collected from?
    b. Total Contaminants – Cumulative number of contaminants detected each week
    c. Mail Cards Sent – Number of mail cards which were sent to households which contaminated
    d. Perfect Households – Percentage of households with zero contamination
4) Understand Streamsight API endpoints and how they can be used for Green Screen
5) Build home page and structure routing for collection zone pages.
    a. Use grid-based approach to layout panels
    b. Tweak global styling with CSS
    c. Create information panels and reusable styles
6) Integrating and debugging issues with React-Leaflet maps

Project Issues

API running locally requires authentication as RBAC is implemented when accessing data.

- This authentication token can not be simulated
- Initially my thought was to avoid sign-in flow for the mean time, however I will have to implement this functionality to access data

React Leaflet package includes a bug which causes an error at compile time.

- Potential solutions are to look into new map options which include TurfJS or Mapbox-GL
- Leaflet is still a powerful tool and there should certainly be a fix / alternative for this. Therefore, it is still valuable to spend

some extra time looking to resolve this package, while be cognizant of limited time.

Project Changes

The largest change is that Green Screen will be a project developed in Prairie Robotics Streamsight monolith repository where the API also exists. This was decided to avoid issues of authentication which may arise in future MVPs. I initially believed it may be simpler to build Green Screen as a separate entity; however, after discussing with Sam, we believe that the configurations for authentication might be beyond the scope of this project, and a more effective solution is to iterate upon what already exists in the repository.

To summarize:

1. The project will now be built within the Streamsight Monolith Repository with Prairie Robotics GitHub
2. The project will exist on branch "10-29-CopyWaste"
    a. https://github.com/proboticsinc/streamsight/tree/10-29-CopyWaste
3. The project exists the directory "apps/copywaste"
4. To take advantage of existing Role Based Access Control, only a sign-in page needs to be implemented as the logic and users already exist
5. A new CI/CD pipeline will not need to be built for building the project as one exists within Prairie Robotics existing pipeline
6. Sam will have to provide Tim with access to the Streamsight repository to evaluate this project
7. For ease of evaluation, a WIP Pull request will be always active at: https://github.com/proboticsinc/streamsight/pull/228

Activities—Planned for Next Week

- Implementing a sign-in page so users can be authenticated – Development time of 1 day
- Integrating real world data by building API end points - Development time of 2 days
- Implementing maps, whether it is Leaflet, TurfJs or Mapbox-GL – Development time of 1 day

Reflection

Do you feel "on track"?
Yes, I feel on track as I have had proper conversations needed throughout this sprint to be successful in future milestones. Although, the map was not fully implemented, I made substantial progress in developing a front-end within a new framework which I was not familiar with.

What progress do you particularly feel good (great) about?
I feel great about the initial architecture I have built as this is my first time working with React in-depth. Moreover, seeing the components I designed come to life has personally been a rewarding experience.

What barriers (if any) do you feel is/are a current impediment to success?
The process of integrating a sign-in flow to authenticate any requests being made is a barrier as I expected that authentication for data existing locally could be simulated. However, I still think this is great for the project as I would have had to implement this in future MVPs regardless.

What help (if any) do you require to move positively forward?
I might need guidance from either Sam or Avery at Prairie Robotics while developing API end points to ensure I am following best practices.

What questions or concerns do you have (if any)?
I am slightly concerned about map related packages, but still am very optimistic in steps moving forward to resolve the issue that occurred this sprint.