Business case

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Community (UN SD goal): Goal 11 – Sustainable Cities and Communities
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Proposed Project	Green Screen
Date Produced	2021-10-05
Background	Recycling within the City of Regina is heavily contaminated, inefficient, and expensive. These contaminants lead to a significant number of recyclables being redirected to landfills. This is unsustainable for the city but also unacceptable and irresponsible to actively harm the environment knowing improvements can be made. In its current state, the collected recycling data is difficult to visualize and analyze in order to educate the public effectively on better recycling habits.
Business Need/ Opportunity	I believe there is a large area of improvement in utilizing this data which is being collected regularly and displaying it in a way it is easily digestible to waste management operators. Events for hazardous waste detected in recycling, common contaminants, neighborhoods which tend to contaminate, among other information should all be simple and straightforward to view for waste management workers on a regular basis. This will allow them to create actionable items to improve household recycling rapidly. As the recycling collection routes are separated based on zones within city and are collected on different days, recycling from each day can be thoroughly analyzed to understand its levels of contamination as well as its rate of success. A representation of this data which currently does not exist for Regina, will help the city understand issues with household recycling and strengthen the waste management program.
Options	1) Web Based Dashboard 2) Excel / Spreadsheet Based Data Analysis

Cost-Benefit Analysis

[This section contains the detailed costs and benefits of each option listed in the previous section. The costs may include considerations such as financial expenditures, the amount of time required, possible risks, and the potential for reduced quality. The benefits may include the potential of increased sales, market share, and brand recognition and the reduction of errors and ongoing costs. Each option should be clearly identified and listed separately.]

Option 1 – Web Based Dashboard

Cost:

- Software development resources
- Infrastructure to host the dashboard on servers

Benefits:

- Intuitive User Interface for community members to use
- Once the dashboard architecture is set up, it can be iterated upon
- Easy to navigate flow to quickly analyze the health of recycling

Option 2 – Excel / Spreadsheet Based Data Analysis

Cost:

- Knowledge of and Ability to operate Excel
- Resources on user's personal machine to run spreadsheets and queries locally
- Purchase licenses for Excel
- Not visually appealing
- User has to apply an intermediate amount of effort into comparing data

Benefits:

- Relatively simple to develop
- User has more immediate control on the data they would like to compare

Recommendation

Although a dashboard requires more time and resources to develop and maintain, it is the better option. Data on its own tends to be difficult to read and extract value from for people. By allowing computers to do this, the users can focus on the important aspect of the recycling program, which is to understand areas of concern and create actionable items from them.