URStreamSight: BUSINESS CASE

Proposed Project	URStreamSight
Date Produced	2020-10-04
Background	Municipalities across Canada have recycling programs that are operated by the municipality or are contracted out to separate companies. These programs have guidelines for what is recyclable and what is not. These guidelines may change depending on the location and the program and infrastructure involved but there are always items that can be recycled and items that cannot be recycled.

If waste or other non-recyclables, such as meat and other organics, are put into the recycling, the recycling is contaminated. Contamination results in fines to the municipality if they use a different company to process the recycling. Additionally, contamination results in lost revenue as recycled material can be of lower quality and less valuable for selling.

Most recycling programs have trucks similar to garbage trucks collecting recycling on a weekly or bi-weekly basis. The recycling is poured into a receiver in the truck before being compacted or stored. The municipalities charge a single fee per household that does not change each month based on the amount of recycling output. This is unlike water, gas, or electricity which is charged based on use. |
| **Business Need/ Opportunity** | Citizens around Canada are confused regarding what proper recycling is. This costs millions of dollars in processing fees and lost revenue due to contaminated recycling. By providing a method of measuring contamination from households, municipalities can begin to target the issue at its source and begin providing individuals with contextual feedback to improve their recycling habits. Furthermore, it will allow municipalities to charge customers on a per use basis. Therefore reducing the fees that consumers pay for the management of their recycling. |
| **Options** | Perform the project

Do nothing: |

Cost-Benefit Analysis

	Perform the Project	Do Nothing
Cost to Organization	~$500 (AWS credits for compute times, servers, etc. on the high end)	0
Cost to Municipality	$ Unknown	$190,000 (average fees)
Time Required (in hours)	675 (225 first half, 450 second half of project)	0
Revenue	$10,000+	0
Brand Recognition	Increased by success	0
Future Contracts	In discussion currently, chance for more increases with this projects completion as the idea will be more demonstrable	0
Error Occurrence	Reduced as machine learning implementation is improved	Contamination continues to be present in recycling

	Perform the Project	Do Nothing
Cost	8/10	10/10
Time	7/10	10/10
Revenue	10/10	0/10
Brand Recognition	10/10	0/10
Future Contracts	8/10	0/10
Error Occurrence	7/10	0/10
Total	50/60	20/60

Recommendation

 The recommended option is to 'Perform The Project'.The relative cost of AWS credits to the organization since the credits already exist and are currently unused is low compared to not using them. By not doing the project time is saved but as the time is from a Capstone project this advantage is comparatively low. The potential increase in revenue, brand recognition, future contracts, and reduction in error occurrence provides a lot of benefit to the organization when compared with doing nothing and at a low risk. This is why Performing the Project is recommended.