BUSINESS CASE	
Proposed Project	F.L.O.A.T. (Facilitating Level Objectives Assessment Technology)
Date Produced	October 21, 2021
Background	There are numerous water parameters to uphold when maintaining the health of recreational waters in canada. The Canadian guidelines for recreational water quality [1] have specified some guideline values to different parameters, however the majority of these are not quantifiable. An automated approach on adhering to these parameters would increase convenience of environmental scientists while allocating their time elsewhere.
Business Need/ Opportunity	Maintaining safe levels of Water Quality in recreational waters of Saskatchewan not only preserves the environment, but also protects the public health. This system proposes an automated solution to report water parameters. With the use of artificial intelligence it can periodically collect samples to develop quantifiable trends in the water. This system will also be able to identify any foregin objects.
Options	Option A: Automated marine drone to collect Water Quality data. Option B: Automated aviation drone to survey waterways.

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 A:

- Benefits
    - Able to detect more details about the water qualities
    - Possible extensions to interact with environment
- Costs
    - Compatibility with proprietary technologies
    - Hardware costs

Option B:

- Benefits
    - Easy birds eye view of waterways
    - Less intrusive method for surveying
- Costs
    - Hardware costs

Recommendation

The recommendation to go move forward with option A. This option provides the best way to gather data on water parameters. This also provides the best ways to create extensions to this project such as integrating a collection system to filter litter.

[1]Guidelines for Canadian Recreational Water Quality Third Edition: https://www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/publications/healthy-living-vie-saine/water-recreational-recreative-eau/alt/pdf/water-recreational-recreative-eau-eng.pdf