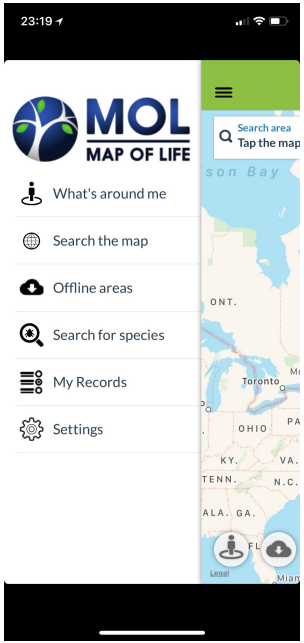
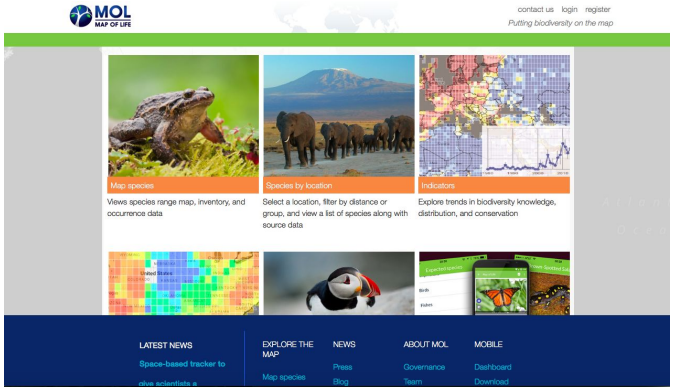
Aquanomics

A Road Map for *OceanCanada* Knowledge

Why (Motivation)

- Contribute to saving our oceans
  - Understand and address potential opportunities and threats facing Canada’s coastal-ocean regions
  - Develop a shared vision for the future of these oceans.
- Inform and engage public users with
  - health and wellbeing
    - Our oceans and
    - coastal communities
- Leverage other initiatives





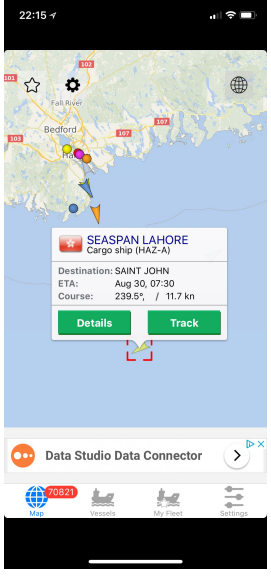
Map of Life

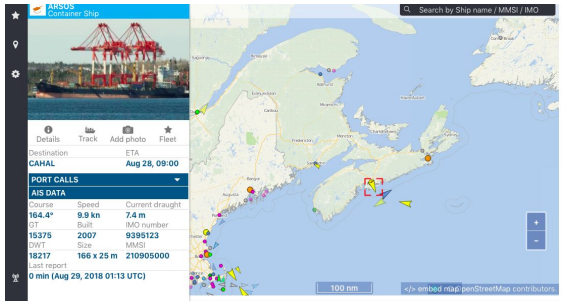
What (Proposal)

- Mobile app
- Provides geo-located access to data related to our oceans
  - Inform users about
    - ocean life
    - Economic activity

What is Aquanomics

- Mobile app
- Provide geo-localized data
  - practical information
    - satellite data
    - fishing license applications
    - navigation tools
    - policy documents
  - link to the OceanCanada website
- Provide citizens a mean to be able to interact and contribute with content
  - Citizen science





Vessel Finder

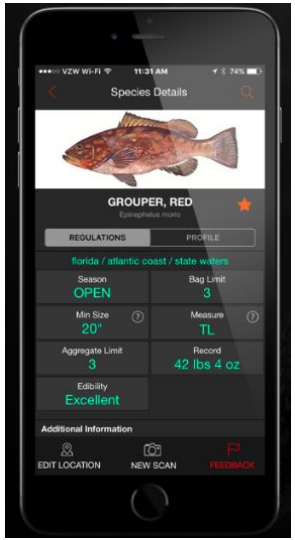
Marine Debris

Demo

Onscreen - extremely rough prototype

How to use it/Scenarios

- A person's local position from their mobile device's GPS will be the real-time entry point to:
  - information about Canada's oceans,
  - ecological systems,
  - political systems,
  - navigation,
  - fish and marine mammals, and
  - ocean-based social and economic activities.
- Users can ask
  - "What types of species am I seeing in this channel?
  - What are the fishing policies here?
  - Where can I buy sustainably caught seafood?
  - Who are the people and industries that depend on the ocean near me?
  - What are the initiatives to preserve the marine life in here?
  - What can I do to support the preservation of the krill?"



Fish Verify

What’s in it for:

- Researcher
  - Increased visibility (social capital)
  - Citations (H index)
  - Networking (research collaborations)
  - New funding opportunities
  - Attracting top students
- Society/Communities
  - Awareness of dependency on ocean economy
  - Data for trends in use of oceans
  - Mechanisms to get involved
  - Access point for policy development
- Citizens
  - Information and understanding
  - Saving, Protecting, Improving Canada’s Oceans
- Industry
  - Supplying relevant data from our sources to industries that can utilize it for compliance or more
- Canada
  - Recognized leadership of ocean research and policy

Roadmap for Aquanomics

Year 1: Minimal viable app

- Devoted to the technical aspects of developing the app
- Ensuring its compatibility with the OceanCanada website
- Focus group testing
- Iterative improvements based on user feedback.
- Beta launch in public centres

Year 2: User engagement

- Enrich the app with data and links to information sources
- Increasing users through advertising, community engagement, social media, and additional public events.
- Conducting Surveys from main user groups
- Updates prototyped & evaluated

Year 3: Sustainable funding model

- Continue to enrich app with new data sources
- Increase users and engagement
- Comprehensive analysis of business plan
- Seek business partners interested in collaboration
- Ensure sustainability beyond NCE funding

Year 4: Product maturity and growth

- Maintenance
- Increase user base size and engagement
- Long term plan for enterprise sustainability
- Large emphasis on maintainability
- Incorporating as a not-for-profit venture

Tools

Technical tools and languages that will be used include, but are not limited to:

- MongoDB
- SQL
- JavaScript
- React
- Python

Along with a variety of low and medium fidelity prototyping tools for front end development.

Funding opportunities

Seed money

- Tri-council: NCE KM, I2I
- Foundation funding
- Industry partnerships
- Crowdsourced

Continuity and Sustainability

To ensure sustainability beyond NCE funding, we will:

- Evolve app with data and links to information sources
- Grow user base through value-add propositions
- Business planning including industry partners
  - enterprise sustainability.
- Emphasis on maintainability from technical perspective
- Incorporate as a not-for-profit venture

How to get involved

- Ideas
- Expertise
- Materials
- Research
- Code

Summary and next steps

- Engage our group
- Enable public/private conversation and informed choices
- Interactive app to meet requirements for public access
- Granting access to *OceanCanada*, Partner, and Citizen Science data
- A four year sustainable development plan.

Who to contact

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