

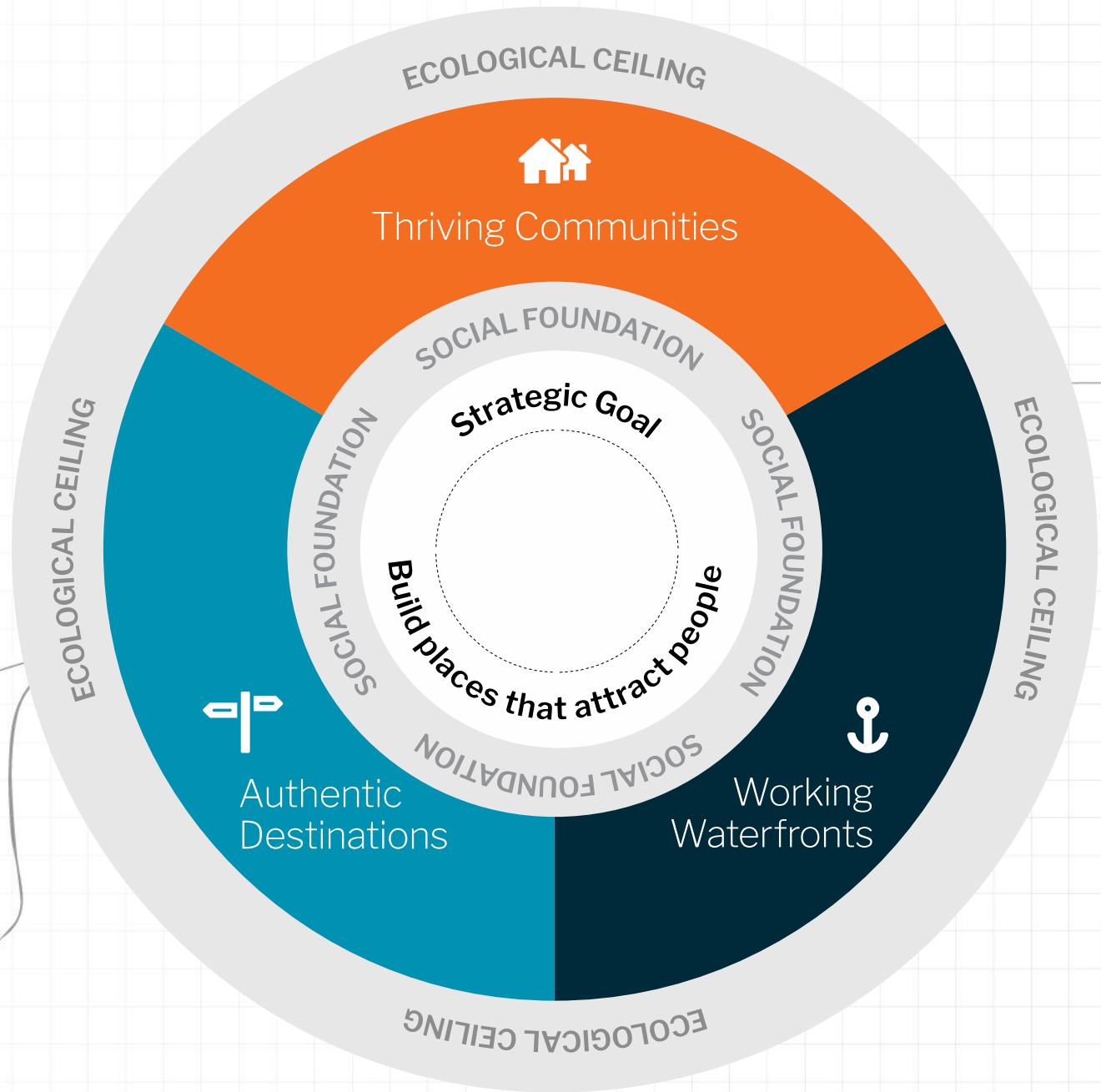


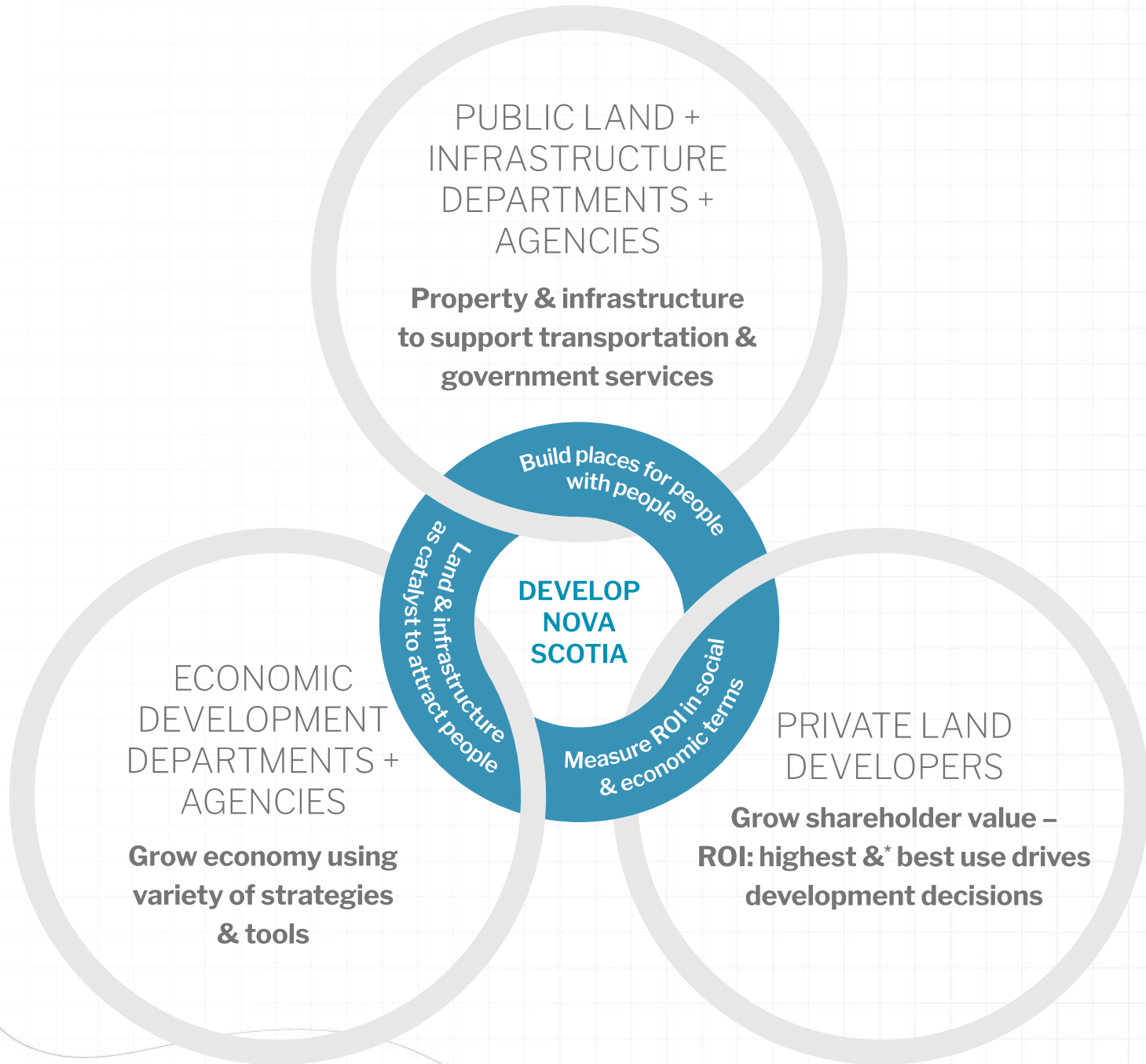
Responding to Climate Change Through Adaptation & Mitigation

Develop Nova Scotia's
approach to project delivery



Strategic Framework



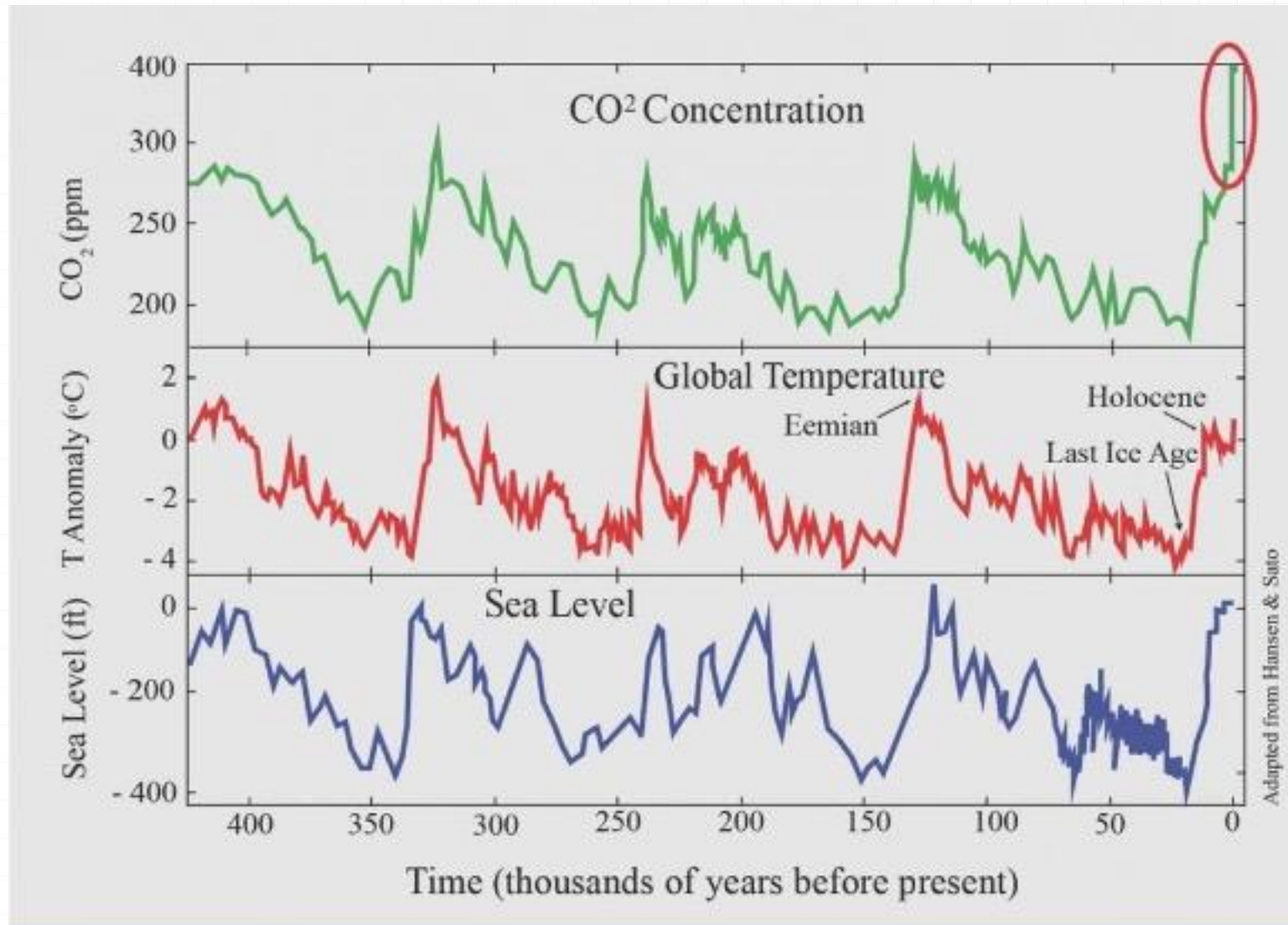


How We Fit in

Hurricane Dorian | Halifax Waterfront 2019



Awareness & Urgency - Making the Case for Action



Global Sea Level Rise

- 16cms since 1950
- 7cms since ~2000



Greenland, 2019

“

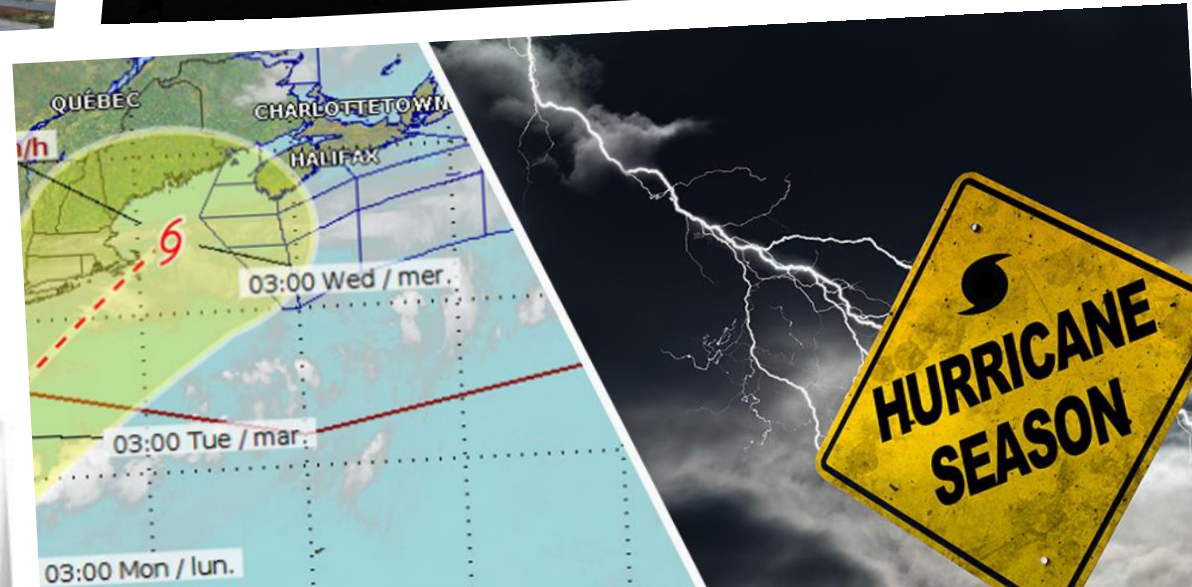
Building sector emissions hit record high, but low-carbon pandemic recovery can help transform sector

—UN report

Construction GHG Emissions

- CO2 emissions increased by 9.95GtCO2 in 2019; 38% when adding building construction industry emissions
- Direct building CO2 emissions need to be 50% lower to be on track by 2050
- Need to prioritize low-carbon buildings in pandemics and updated climate pledges

Climate Change in Canada



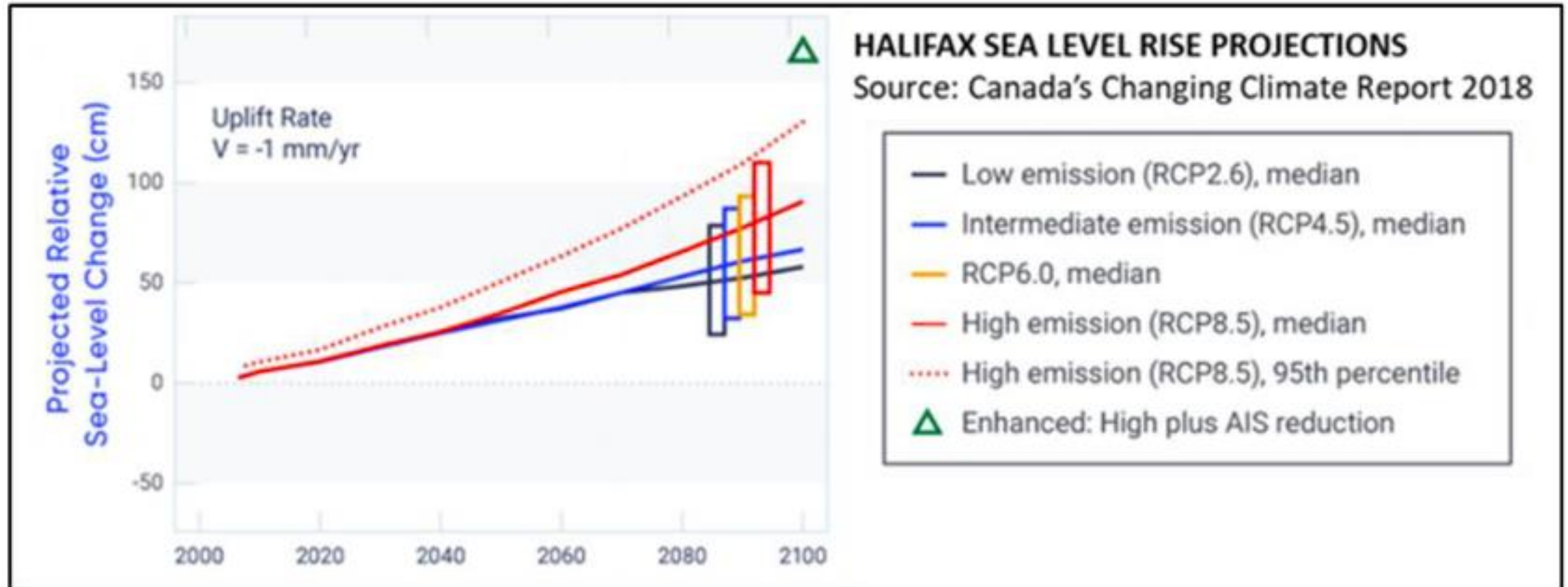
Risks in Atlantic Canada's Coastal Communities

- Sea level rise worsened by subsidence
- Tides influenced by moon wobble¹
- Increased frequency of storms and hurricanes
- Increased erosion
- Forest fires
- Flooding

¹ *Nature Climate Change Paper, 2021*



Understanding our Specific Climate Hazard



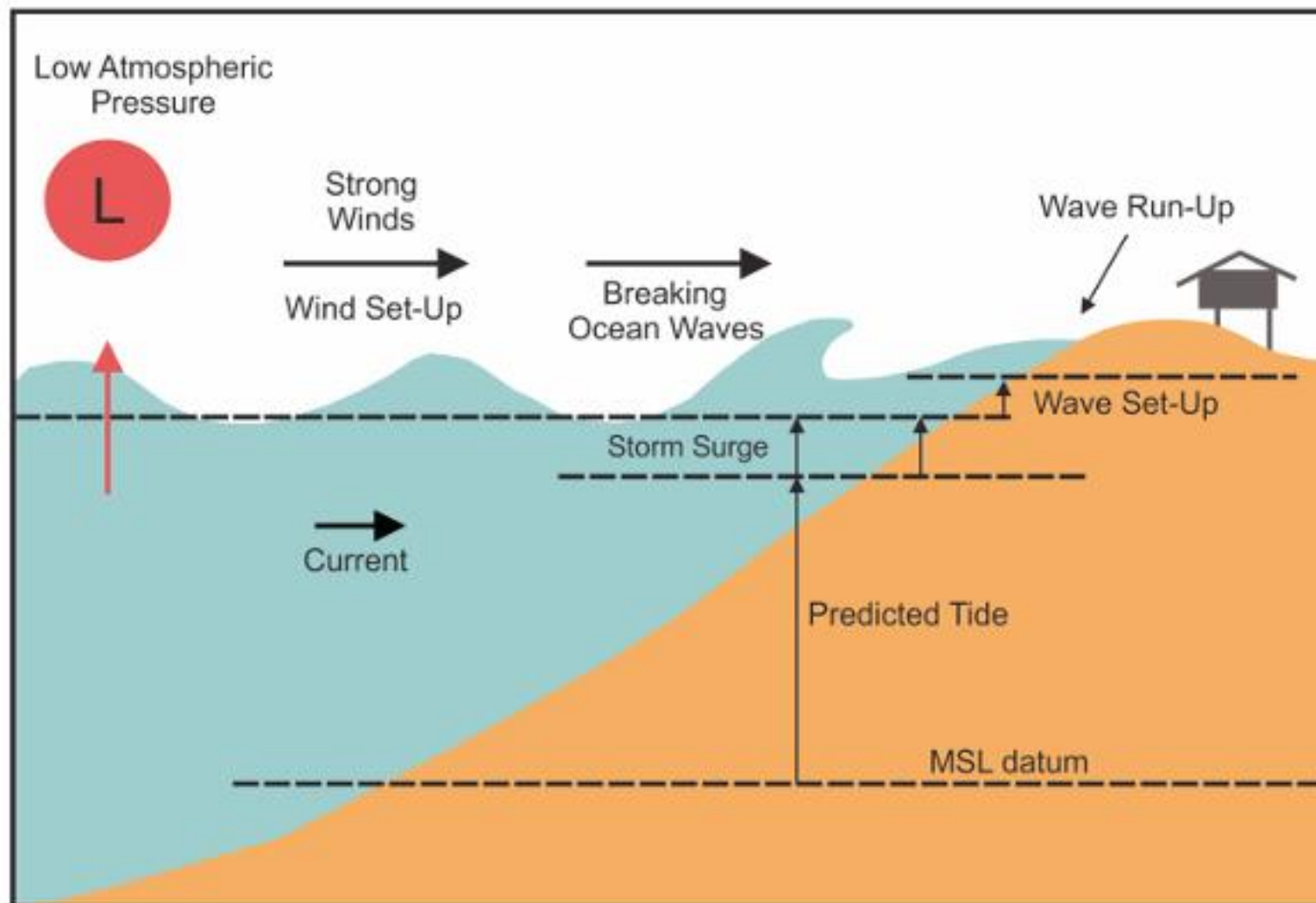
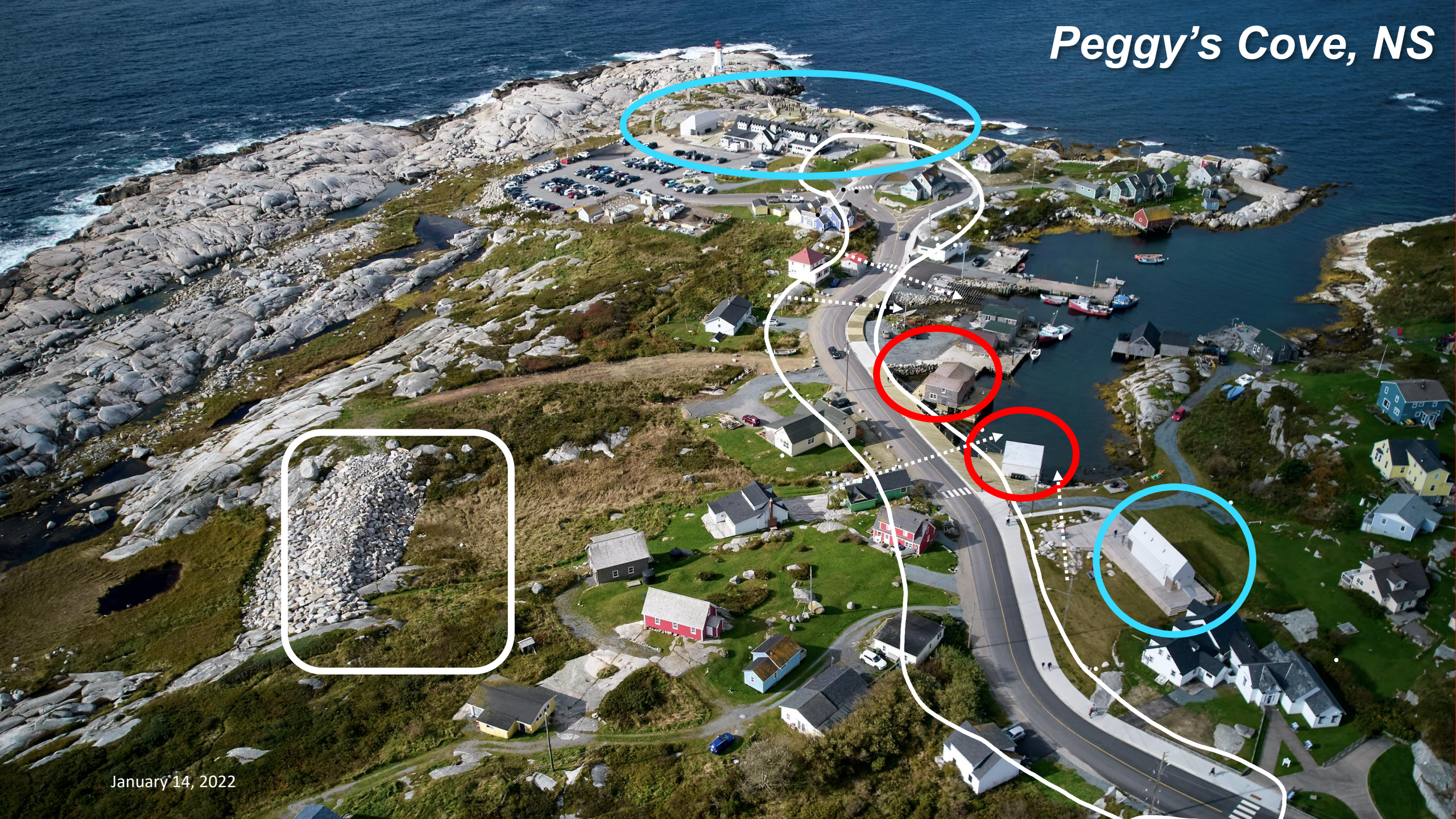


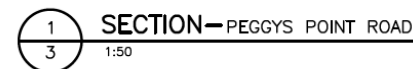
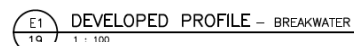
Figure 7.18: Factors contributing to storm surges

Peggy's Cove, NS



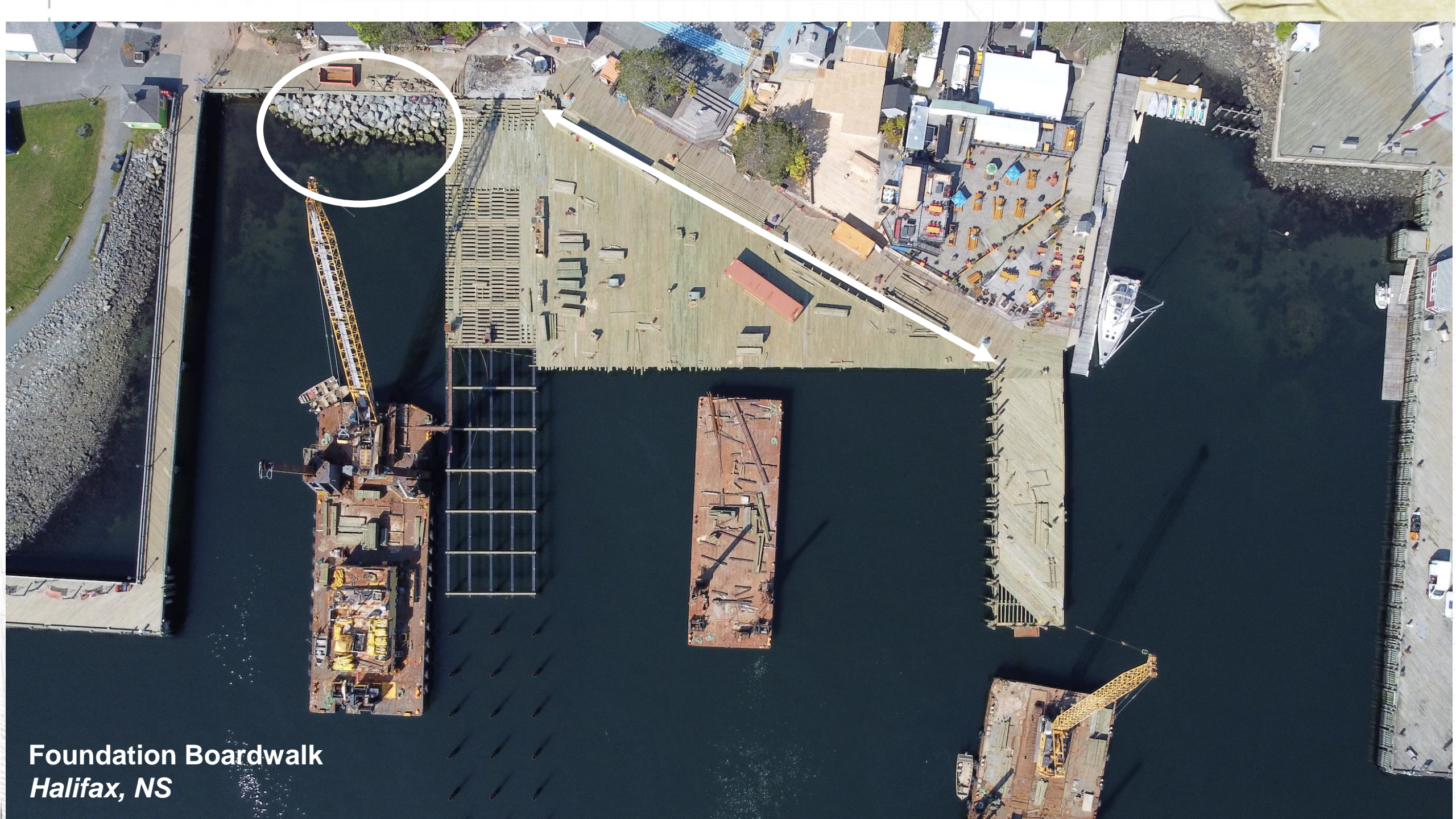
January 14, 2022

Breakwater Improvements



CONCRETE
SINFWALK

Peggys Point Cove Road Raising



Foundation Boardwalk
Halifax, NS



Arts District | Art Gallery of Nova Scotia
Halifax, NS



COVE South Terminal
Dartmouth, NS

CUNARD Mixed-Use Development
Halifax, NS





Georges Island Wharf
Halifax, NS



Queen's Marque + Cable Wharf
Halifax, NS



Our Approach | Climate Mitigation

- **Maintain sustainable practices**
- **Extend life cycle; rehabilitate if feasible**
- **Densify as much as possible**
- **Design to drive less and don't seek new places**
- **Measure Waste Reduction, GHG Reduction, Toxicity Reduction, and others during construction or operations**



Our Approach | Climate Adaptation

- **Assess risks based on service life – think incrementally**
- **Nature based systems when possible**
- **Enhance maintenance controls; asset management strategies**
- **Think on how the improvement affects accessibility and the socio-economic fabric of communities**

RISK ASSESSMENT TOOLS

- **Climate Lens Framework: Guidance document and requirement federal funding**

<https://www.infrastructure.gc.ca/pub/other-autre/cl-occ-eng.html#1.1>

- **PIEVC Protocol: Free for any public infrastructure in Canada**

<https://pievc.ca/protocol/>

- ✓ Projections
- ✓ Adaptive capacity infrastructure
- ✓ Estimate of severity of climate impact

Understand climate
projections



Assess the risk



Prioritize "high risk"
assets, critical
infrastructure,
operations/maintenance
plans



Funding

- **Build relationships**
- **Let a climate risk assessment dictate the priorities – it can be done incrementally**
- **Plan to leverage available funding**
 - DMAF: 2 billion merit-based program
 - ICIP: 33 billion cost sharing
 - GIBF: 1.5 billion cost sharing

“

*The COVID-19 crisis is a minor
dress rehearsal for tackling climate
change.*





Thank You