

# SAMQWANE'JK Impact report

# **TABLE OF CONTENTS**

- **3** ACKNOWLEDGMENTS
- 4 EXECUTIVE SUMMARY
- 5 PJILA'SI/WELCOME MESSAGE
- 6 ABOUT SAMQWANE'JK
- 7 PROJECT PARTNERS
- 8 PARTICIPATING INDIGENOUS OCEAN-SECTOR BUSINESSES
- 9 METHODOLOGY
- **GOAL 4:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- 12 **GOAL 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- **GOAL 10:** Reduce inequality within and among countries
- 14 **GOAL 11:** Make cities and human settlements inclusive, safe, resilient and sustainable
- 15 **GOAL 13:** Take urgent action to combat climate change and its impacts
- 16 LESSONS LEARNED AND FUTURE OPPORTUNITIES





#### LAND ACKNOWLEDGEMENT

Samqwane'jk is based in Mi'kma'ki, the traditional and unceded territory of the Mi'kmaq people.

#### **ACKNOWLEDGEMENTS**

The Samqwane'jk partners thank Employment and Social Development Canada for its funding support as part of Canada's Sustainable Development Goals Program. Thank you to Jim Hanlon, former CEO of COVE, for his original vision to bring together the three project partners to support Indigenous ocean ventures and their impact on sustainable development in Atlantic Canada. Thanks to Richard MacLellan at Miawpukek Horizon, Barry Stevens at 3D Wave Design and Adam Kennedy at Sma'knis Maritime Safety & Security for their participation and insights.



## **EXECUTIVE** SUMMARY

#### SAMQWANE'JK AT A GLANCE



PROJECT NAME	SAMQWANE'JK (SAMQWANEJK.COM)	
Purpose	Connecting Indigenous businesses and ocean technology companies in Atlantic Canada. Through these partnerships, drive measurable progress against the United Nation's Sustainable Development Goals and improve the sustainability of our oceans and communities.	
Partners	Led by Ulnooweg Development Group, in partnership with COVE and Upswing Solutions	
Funding	\$857,000 from Employment and Social Development Canada (ESDC) through the Government of Canada's Sustainable Development Goals Program.	
Timeframe	2021 - 2023	
Demonstrator projects	<b>Miawpukek Horizon Maritime Services:</b> conducted seafarer training programs for Indigenous participants aboard the Polar Prince.	
	<b>3D Wave Design:</b> delivered 3D LiDAR climate change modelling solution for Indigenous communities across Atlantic Canada.	
	<b>Sma'knis Maritime Safety &amp; Security:</b> worked to develop a prototype electric rigid-hulled inflatable boat.	

#### **KEY OUTCOMES INCLUDE:**

Meaningful collaboration, investment and capacity-building opportunities created for participating Indigenous companies.

9 Indigenous communities in Atlantic Canada took part in climate-impact modelling and planning sessions.

**108** First Nations representatives took part in conversations about climate-impacts modelling.

**14** new Indigenous seafarers trained to enter the industry.

**100+** youth experienced time aboard the Polar Prince.

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Measurable progress made against **5 SDGs**.

#### **FUTURE OPPORTUNITIES INCLUDE:**



Expand the Samqwane'jk platform through new rounds of public and private funding, empowering more Indigenous innovators.

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Capitalize on opportunities to collaborate more with established innovation incubators, e.g. Volta.

Design innovation funding programs to be more flexible and inclusive, recognizing Indigenous entrepreneurs are typically distributed geographically and at different stages on their innovation journeys.



Scale up adoption of 3D modeling solution through new partnerships or ownership model.

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Grow Indigenous seafarer training opportunities through new partnerships and greater focus on marine science and technology.



### PJILA'SI

#### WELCOME MESSAGE FROM ULNOOWEG COO CHRIS GOOGOO

Samqwane'jk translates into people who love water. The project name recognizes the importance of our oceans, coastlines and water ways to Mi'kmaq people and Indigenous communities across Turtle Island. These waters sustain us and bring us together. They also symbolize opportunities for renewal and discovering new ways to make our communities even stronger.

For over three decades, Ulnooweg Development Group has been working to empower Indigenous entrepreneurship, education and community building. As the lead partner in Samqwane'jk, we are proud of how this first-of-its-kind project has delivered on our mission while also building partnerships and growing capacity in the region's Indigenous ocean sector.

Thanks to Samqwane'jk, we've seen enhanced innovation, collaboration and knowledge sharing for Indigenous and non-Indigenous ocean businesses alike. The participating Indigenous companies benefited from increased access to opportunities for collaboration, investment and capacitybuilding. Our communities benefited from enhanced access to technology and opportunities that support youth education, career development, scientific research, economic growth and resilience planning. As this report shares, Samqwane'jk has also made measurable contributions towards the United Nation's Sustainable Development Goals (SDGs) and Canada's SDG ambitions. Samqwane'jk would not have been possible without the commitment of our partners, supporters and participants. We are grateful to the federal government for its funding support provided through Employment and Social Development Canada as part of Canada's Sustainable Development Goals Program. Thanks also to Samqwane'jk partners, COVE and Upswing Solutions, as well as Ulnooweg team members, for being part of the journey, for sharing your expertise and for opening doors. Of course, none of this would have been possible without the participation of our three demonstrator businesses: Miawpukek Horizon, 3D Wave Design and Sma'knis Maritime Safety & Security. Thanks to all of you for taking part and showing what an important contribution Indigenous businesses can make to Canada's ocean sector.

I'm excited about what's next for Samqwane'jk as we explore ways to build on these foundations to create even more opportunities for Indigenous innovators and our communities in future. We've shown that opening doors to greater collaboration between Indigenous businesses, communities and the broader innovation ecosystem leads to shared prosperity and value.



**CHRIS GOOGOO** Chief Operating Officer Ulnooweg Development Group





## ABOUT

Launched in 2021, Samqwane'jk is a first-of-its-kind initiative connecting Indigenous businesses and ocean technology companies in Atlantic Canada. Through these partnerships, Samqwane'jk has helped improve the sustainability of our oceans and communities.

Led by Ulnooweg in collaboration with COVE and Upswing Solutions, Samqwane'jk's initial goals included:

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- Building partnerships with ocean technology companies to boost competitiveness
- Enhancing innovation, collaboration, and knowledge sharing for Indigenous and non-Indigenous ocean businesses
- Offering training and business development support to Indigenous ocean businesses
- Mobilizing action to deliver measurable progress against the United Nations Sustainable Development Goals (SDGs)

Samqwane'jk was supported with a grant from Employment and Social Development Canada (ESDC) through the Government of Canada's Sustainable Development Goals Program to deliver the project within a threeyear time frame starting in March 2021. Soon after being founded, Samqwane'jk invited Indigenous ocean businesses in Atlantic Canada to take part. Three demonstrator projects were selected to participate. This report shares more about those companies, their projects and outcomes.

#### Samqwane'jk (pronounced suhm•kwan•āj•ka) means "Those who love the water".

The whale or Putup (phonetically pronounced Bootup) was inspired by the Kluskap legend "How Glooscap Found Summer" where Glooscap enlisted the help of Whale to help get him to Southland in search of Summer. In this legend, Whale represents a loyal guide or helper, a mammal amongst the fish, and a wise friend to help you through. Samqwane'jk's breaching whale logo represents the relationship between people and the ocean and our role both above and below the surface.

#### TOWARDS CANADA'S 2030 AGENDA NATIONAL STRATEGY

The federal government's Towards Canada's 2030 Agenda National Strategy recognizes that "[c]ollaboration with Indigenous peoples is crucial to Canada's successful implementation of the 2030 Agenda and the central commitment to leave no one behind. Engagement with Indigenous partners and National Indigenous Organizations will strengthen cooperation to develop an integrated approach to advancing the peoples' inherent right to self-determination and honour commitments under modern treaties and self-government agreements."

LEARN MORE: TOWARDS CANADA'S 2030 AGENDA NATIONAL STRATEGY →



### **PROJECT** PARTNERS



#### **ULNOOWEG DEVELOPMENT GROUP**

Now in its 35th year of operation, Ulnooweg is a not-for-profit organization dedicated to the success of the Indigenous communities, individuals and businesses of Atlantic Canada.

Ulnooweg's mandate is to empower Indigenous individuals, youth and their communities in business, education, entrepreneurship and wealth creation. It does so by providing them with the tools, means, thought leadership, and genuine opportunities that lead to positive capacity building on a long-term basis.

As project lead for Samqwane'jk, Ulnooweg leveraged deep relationships with Indigenous businesses and communities in Atlantic Canada, driving progress towards Canada's SDG ambitions while boosting innovation and sustainability in the ocean sector for everyone.



#### COVE

COVE is a high-tech innovation hub for the global marine technology sector. Headquartered alongside Halifax Harbour, COVE is where marine technology leaders develop solutions for a better and more sustainable world. We bring together people, ideas, and opportunities and champion the commercialization of marine technology.

Through resources and various programming, COVE has attracted a roster of companies and innovative businesses that are developing and marketing new technologies for Canada's marine economy.

As a Samqwane'jk partner, COVE contributed market expertise, facilitated connections with marine technology businesses and provided leadership for workshops and communications.



#### **UPSWING SOLUTIONS**

Upswing Solutions has decades of experience leading sustainability, ESG and decarbonization strategies inside companies and organizations globally. Our team includes expert consultants based across Canada, working with major North American companies and brands in a broad range of sectors.

Upswing helps companies to understand sustainability and to rightsize their approach, including identifying material factors, understanding and improving emissions and impacts, driving sales, attracting capital, building responsible supply chains, growing team capacity and delivering effective disclosures.

As a Samqwane'jk partner, Upswing contributed expertise in sustainable business strategy, environmental and social impact measurement, communication and project management.

LEARN MORE: ULNOOWEG.CA →

LEARN MORE: COVEOCEAN.COM →

LEARN MORE: UPSWINGSOLUTIONS.COM →



# PARTICIPATING INDIGENOUS OCEAN-SECTOR BUSINESSES



#### **MIAWPUKEK HORIZON MARITIME SERVICES**

Miawpukek Horizon Maritime Services offers seafaring training programs designed for Indigenous participants. The company is majority owned by the Miawpukek First Nation in Newfoundland and Labrador in partnership with Horizon Maritime. The company's mission is to maximize Indigenous participation in Canada's blue economy.

Working with the Nova Scotia Community College and the Marine Institute at the Memorial University of Newfoundland, Miawpukek Horizon has developed specialized seafarer and cadet recruitment and training solutions.

With accommodations for 62 people, Miawpukek Horizon's operating vessel the Polar Prince provides an excellent platform for cadet development and seafarer experience.

**Samqwane'jk participation:** Miawpukek Horizon conducted seafarer training programs for Indigenous participants aboard the Polar Prince.

"Our focus is to work with Indigenous communities to develop seafarers and expedition leaders for future projects and for greater participation in the blue economy."

-Richard MacLellan, Managing Director, Miawpukek Horizon



#### **3D WAVE DESIGN**

3D Wave Design, a Mi'kmaq-owned-and-operated company based in Mahone Bay, Nova Scotia, has developed close relationships with First Nations, educational institutes, climate and environmental scientists and applied ocean research groups, particularly in relation to global warming induced sea-level rise prediction and simulation, storm surge events and inland flood risk assessments.

Father and son team Barry and Noah Stevens have developed proprietary LiDAR ingestion software and created an interactive 3D visualization approach that readily communicates scientific data about sea-level rise, flooding and forest fires for easy and rapid comprehension. This proprietary technology provides an important service, allowing communities to model changes in their water table, flood zones, fire zones and prepare for changes in their surrounding environment due to climate change.

3D Wave Design was named a 2024 Clean 50 Top Project for its work to make impact modelling accessible.

**Samqwane'jk participation:** 3D Wave Design delivered 3D LiDAR climate change modeling solutions for nine Indigenous communities across Atlantic Canada.

"Democratizing data and sharing it in First Nations and more broadly is important, because the community's voice matters. Tools like 3D Wave's enable everyone to make informed contributions to decisions about the future."

-Barry Stevens, President/Co-Founder, 3D Wave Design

LEARN MORE: 3DWAVEDESIGN.COM →



#### SMA'KNIS MARITIME SAFETY & SECURITY

Sma'knis Maritime Safety & Security specializes in maritime safety and marine security. Headquartered in Eel River Bar First Nation in New Brunswick, the company's patrol boats and crews can secure your assets while they are anchored, alongside or in transit in the shipping lanes in and out of port. Sma'knis also conduct safety training for crews working around marine environments.

**Samqwane'jk participation:** Sma'knis worked to develop a prototype electric rigid-hulled inflatable boat by incorporating an electric power source and battery bank to one of its 19-foot vessels. Unfortunately, due to unexpected challenges that occured during the course of the project, it is not possible to include an assessment of its impact towards the SDGs in this report. Despite this, this project showed there is significant potential for electrification of vessels for First Nations communities and the broader ocean sector.

LEARN MORE ABOUT SMA'KNIS →





# METHODOLOGY

#### **PROJECT MILESTONES**

June 8, 2021	Samqwane'jk project announced on World Oceans Day		
July-August, 2021	Call for participants		
September- October, 2021	Potential participants evaluated and successful demonstrator projects announced		
2022-2023	<ul> <li>Participating companies:</li> <li>Take part in capacity-building workshops to integrate sustainability into their business strategies and networking opportunities</li> <li>Implement project proposals and track progress against relevant KPIs aligned with the SDGs</li> </ul>		
April 2024	Samqwane'jk Impacts Report shared with project funders and the public		

SUSTAINABLE DEVELOPMENT COALS

The Sustainable Development Goals (SDGs), were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. Canada has committed to pursuing these goals under the country's Towards Canada's 2030 Agenda National Strategy. As a project funded under Canada's Sustainable Development Goals (SDGs) Program, Samqwane'jk was created to help advance SDGs relevant to Indigenous and coastal communities and the blue economy in Atlantic Canada.

The first step was to identify the SDGs that would be most relevant to the Samqwane'jk project. The three project partners then consulted with representatives of Indigenous communities and businesses to ensure the selected SDGs were relevant to their contexts and objectives.

The Samqwane'jk project was announced on World Ocean Day in June 8, 2021. Ulnooweg reached out to Indigenous communities and business groups to provide information about the aims and objectives of the Samqwane'jk project, to encourage Indigenous ocean businesses to apply. The final shortlist of SDGs were then used as part of the application process.

The final shortlist of SDGs were then used as part of the application process. Applicants were asked to demonstrate their ability to have a measurable impact against one or several of the SDGs. Demonstrator projects were selected based on a number of factors including the scale of the business opportunity for partner companies, the potential impact towards advancing SDGs, technology and software needs, feasibility, time and cost to complete the project.

Three Indigenous ocean businesses were selected to receive funding under the Samqwane'jk initiative, including 3D Wave Design, Miawpukek Horizon Maritime Services and Sma'knis Maritime Safety & Security, announced in May 2022 at an event hosted by COVE.

From June 2022 to January 2024, participating companies took part in a dedicated workshop focused on building sustainability business strategies and driving SDG alignment and progress; they developed a set of KPIs relevant to their individual projects and tracked data about their progress against their target SDGs. As the projects were nearing completion, they took part in interviews to provide qualitative assessments of their results and impacts. Results data and impact highlights are included below.

#### **LEARN MORE:**

#### UN SUSTAINABLE DEVELOPMENT GOALS →

TOWARDS CANADA'S 2030 AGENDA NATIONAL STRATEGY →





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#### **GOAL 4**:

### ENSURE INCLUSIVE AND EQUITABLE QUALITY EDUCATION AND PROMOTE LIFELONG LEARNING OPPORTUNITIES FOR ALL



#### **GOAL DESCRIPTION**

SGD 4 recognizes the importance of universally available education to self-fulfilment, prosperity and opportunities for individuals and societies.

#### **SELECTED KPIS**

TARGET	INDICATOR	3D WAVE DESIGN	MIAWPUKEK HORIZON MARITIME SERVICES
4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Number of community members trained	Held training sessions and discussions with 108 council, fire and EMO personnel from Indigenous communities at Pictou Landing, Paq'tnkek, Eel River Bar, Lennox Island, Wagmatcook, Membertou, We'koqma'q, Potlotek and Eskasoni. In total, these First Nations represent 12,447 registered community members.	Trained 14 new crew members. Engaged with over 100 youth (mostly Indigenous) during community visits.
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	Relevant Skills Gained	Conveyed understanding, planning and training of 3D climate change modeling on sea-level rise, flooding storm surge and fire scenarios. Enhanced the ability for non-experts to visually identify and understand climate risks.	<ul> <li>Taught the skills required to safely operate a vessel, including:</li> <li>Marine Basic First Aid</li> <li>Domestic Vessel Safety</li> <li>Operator proficiency (Communicate using the Global Maritime Distress and Safety system)</li> <li>WHMIS</li> <li>Occupational Health &amp; Safety</li> </ul>





#### **IMPACT HIGHLIGHTS**

Recognizing that many community leaders and members are non-technical, **3D Wave Design** created an easily accessible and user-friendly interactive tool that maps sealevel rise and other climate-related impacts in a 3D rendering of specific communities. Barry Stevens of 3D Wave Design says this kind of community education, where people can literally see future scenarios and risks, is an important step in the long-term mitigation and adaption processes required in First Nations and other communities.



High-level view of Lunenburg, NS. at year 2100 Sea Level Rise (SS&DI-3D Wave Design)



Providing one-on-one support to Indigenous community members as they navigate the travel arrangements and many steps required to complete seafarer training and certification is a hallmark of Miawpukek Horizon's approach.

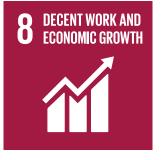






100 FN youth includes those who took part in expeditions or just vessel visit while it was in community.





#### **GOAL 8:**

PROMOTE SUSTAINED, INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH, FULL AND PRODUCTIVE EMPLOYMENT AND DECENT WORK FOR ALL



#### **GOAL DESCRIPTION**

SDG 8 calls for financial progress created through decent, fulfilling and environmentally sustainable jobs. It calls for an end to modern slavery and child labour, while expanding access to banking and financial services, to ensure everybody benefits from entrepreneurship and innovation.

#### SELECTED KPIS

TARGET	INDICATOR	MIAWPUKEK HORIZON MARITIME SERVICES
8.5 By 2030, achieve full and productive employment and decen	t Training completed by	Six crew members completed the in-depth, three-month Bridge Watch program from the
work for all women and men, including for young people and	Indigenous crew members	Marine Institute at Memorial University, NL.
persons with disabilities, and equal pay for work of equal value		Eight crew members completed three weeks of on-vessel basic marine safety training.



#### **IMPACT HIGHLIGHTS**

Thanks to support from Miawpukek Horizon, 14 Indigenous community members gained the certifications required to work as seafarers as part of the Samqwane'jk project. Six of those undertook the in-depth, three-month training required to be able to pilot a vessel and navigate at sea. (66

"Working with Miawpukek Horizon was a pleasure that I greatly enjoyed. They were very flexible and accommodating throughout my work with them. The Polar Prince had a wonderful crew that were willing to show me the ropes. I felt very comfortable while offshore on the Polar Prince and I look forward to going back again in the spring. I can honestly say I made some great new friends, got to see some beautiful places I've never been to before, and there is definitely room to climb the ladder for someone starting out in the offshore industry."

- FARON JOE, MIAWPUKEK FIRST NATION, NL





10 REDUCED INEQUALITIES

#### **GOAL 10:**

### REDUCE INEQUALITY WITHIN AND AMONG COUNTRIES

#### **GOAL DESCRIPTION**

SDG 10 argues that to build a fairer world, equality and prosperity must be available to everyone – regardless of gender, race, religious beliefs or economic status.

#### SELECTED KPIS

TARGET	INDICATOR	MIAWPUKEK HORIZON MARITIME SERVICES
10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status	Calculate potential value of a candidate undertaking a career at sea vs. baseline of working in the community	New seafarers from Indigenous communities are moving into a minimum \$80K annual salary. Most are coming from an unskilled position and potentially doubling their income.



#### **PROGRESS HIGHLIGHTS**

In addition to stepping up into high-paying jobs in an industry with lots of potential for career movement and development, Indigenous seafarers supported by Miawpukek Horizon are also offered opportunities to become regional experts on emerging ocean technologies. Miawpukek Horizon is investing in robotic systems like the sustainable harvester C Bud that is firstof-its-kind in Canada. Two Miawpukek First Nation community members were funded to travel to Europe to learn how to operate the C Bud robots and translate their application to Atlantic Canadian waters.



**Miawpukek Horizon** is also building on the momentum built during the Samqwane'jk project to grow economic opportunities for the region's Indigenous communities. This includes exploring a partnership with another First Nation and advancing conversations for a pan-Atlantic partnership, which would create many more pathways for Indigenous communities to take part in the blue economy.



"There's a global shortage of seafarers and Indigenous community members have tremendous potential to help meet the demand. We see that at our sister company Maritime Horizon, where 16% of employees come from First Nations – well above the industry average."

- RICHARD MACLELLAN, MANAGING DIRECTOR, MIAWPUKEK HORIZON





#### **GOAL 11:**

MAKE CITIES AND HUMAN SETTLEMENTS INCLUSIVE, SAFE, RESILIENT AND SUSTAINABLE



#### **GOAL DESCRIPTION**

In the face of a growing global population, SDG 11 is focused on building safe, affordable and resilient cities.



#### **SELECTED KPIS**

3-6	TARGET	INDICATOR	3D WAVE DESIGN
	11.3 By 2030, enhance inclusive and sustainable	Number of KM2 mapped by 3D Wave Design software	315 Km <sup>2</sup> LiDAR data tiles and HD orthophotos ingested/processed to create 3D models
	urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries		Completion of direct training, demonstration, attendance, contact, discussions with 108 First Nations' personnel at nine communities, representing 12,447 registered community members.



#### **IMPACT HIGHLIGHTS**

Barry Stevens of **3D Wave Design** says that in recent years the Miawpukek First Nation at Conne River in Newfoundland has had a series of forest fires, which may have been sparked by a practice of burning waste at a nearby gravel pit. After viewing fire modelling generated by 3D Wave Design's platform, community members altered their behaviour and invested in new natural fire breaks, leading to decreased risk from forest fires.

In addition to assisting Indigenous communities, **3D Wave Design** has supported other municipalities in the region to plan for climate-related impacts. For example, the town of Lunenburg in Nova Scotia used the 3D model to design a berm that will prevent ocean surges and floods affecting its wastewater treatment facility. The nearby town of Mahone Bay implemented a living shoreline project to mitigate against coastal erosion, drawing on modeling generated by 3D Wave Design.





#### **GOAL 13:**

### TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACTS

#### **GOAL DESCRIPTION**

SDG 13 calls for the education, innovation and adherence to climate commitments so we can make the necessary changes to protect the planet.

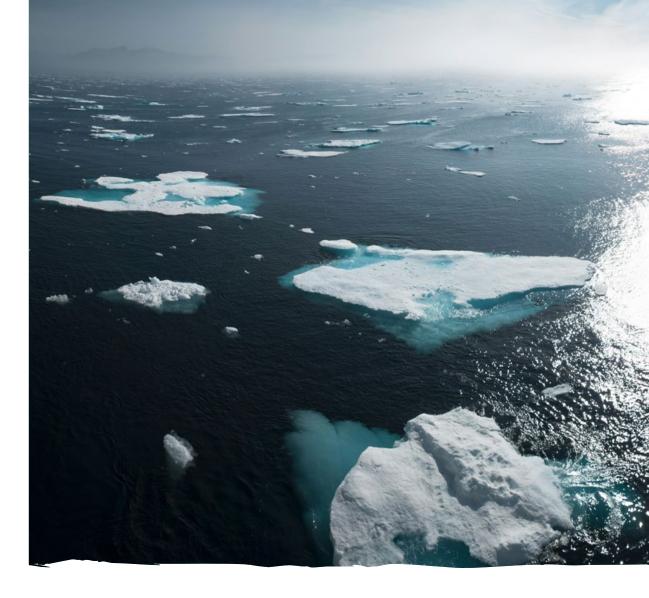
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#### **SELECTED KPIS**

TARGET	INDICATOR	3D WAVE DESIGN	
See answers for SDG 11	See answers for SDG 11	See answers for SDG 11	

#### **IMPACT HIGHLIGHTS**

Many First Nation reserves were sited on marginal land, which are areas at greatest risk from climate change. Indigenous communities also often lack the funds and technical resourcing required for planning and environmental assessment available in larger municipalities. 3D Wave Design democratizes climate-modeling information that would be otherwise hidden away in technical databases and reports, helping Indigenous community members to see the risks posed by sealevel rise and other climate impacts.





"Decisions can take a long time in First Nations because knowledge must be shared and agreed upon. When everyone gets it, everyone supports it."

- BARRY STEVENS, PRESIDENT/CO-FOUNDER, 3D WAVE DESIGN



# **LESSONS LEARNED** AND FUTURE OPPORTUNITIES

#### THE SAMQWANE'JK MODEL WORKS AND SHOULD BE EXPANDED.

The participating Indigenous businesses all benefited from the increased access to new collaborators, investors and markets made possible by Samqwane'jk. The project helped overcome the significant barriers Indigenous innovators face when trying to access investment support and new markets. In addition to creating opportunities for collaboration and capacity building, Samqwane'jk generated investment in the participating companies above and beyond initial project funding amounts. Lead project partner Ulnooweg is exploring ways to build on this success and demonstrated multiplier effect, finding ways for Samqwane'jk to become an ongoing platform connecting Indigenous businesses to the broader ocean innovation system. Samqwane'jk's next phase would benefit from ongoing public support from EDSC, ACOA and other government programs, combined with the potential for new private-sector funding. Ulnooweg will also explore ways to partner with established innovation organizations such as Volta and The PIER in Halifax.

### FOSTERING COLLABORATION AND CAPACITY DRIVES MEASURABLE SDG PROGRESS.

Samqwane'jk demonstrator projects said the access they gained to knowledge about the SDGs and sustainable business planning assisted them in taking actions and driving progress that aligned with specific development goals. Participants also benefited from the network-building and collaborative opportunities arising from Samqwane'jk. 3D Wave Design and Sma'knis Maritime Safety & Security have become members of COVE, accessing ongoing collaboration opportunities through COVE's network of ocean innovation companies. Miawpukek Horizon is taking steps to become a COVE member while also exploring collaboration opportunities with industry, maritime education institutions and other Indigenous communities.

#### BARRIERS FOR FIRST NATION PARTICIPATION IN THE BLUE ECONOMY PERSIST AND MUST BE OVERCOME.

Samqwane'jk partners and participants highlighted the ongoing historical, social, geographical and economic barriers that make it challenging for First Nations community members to participate in planning for community resilience and to take up educational and economic growth opportunities. For example, the complex, multi-step process required to become a certified seafarer can be difficult for Indigenous people to complete given the logistical challenges involved in travelling from remote communities to regional centres. Barriers to education have a compounding effect, creating downstream challenges around employment opportunities and community prosperity.

### INNOVATION FUNDING MODELS SHOULD BE MORE FLEXIBLE AND INCLUSIVE.

Publicly funded innovation support programs need to take into account the specific context of Indigenous participants, who are often geographically dispersed and at different stages of their innovation journeys. Traditional one-size-fits-all and limited-term cohort models make it challenging to recognize the real-world difficulties of building a critical mass of potential participants from Indigenous communities. Future innovation funding programs that allow more flexibility about where, when and how people take part would enable more effective outcomes for funders and participants.



#### ADOPTION OF INDIGENOUS-LED INNOVATIONS AND INDIGENOUS PARTICIPATION IN THE BLUE ECONOMY CAN BE SCALED AND ACCELERATED.

3D Wave Design said that despite ongoing positive discussions with Natural Resources Canada and others about the broader application of 3D climate-impacts modeling, it is challenging for the company's small team to scale up adoption. 3D Wave Design would be open to conversations about partnering or selling the proprietary modelling solution to an organization or company with the reach and resources to take it national or even international.

Miawpukek Horizon is focused on scaling up its expedition model to grow Indigenous participation and build capacity. This includes discussions to enable more time for expeditions (from ~20 to ~100 days per year) and to grow the company's focus on marine science and technology. Miawpukek Horizon's investment in the robotic ocean harvester C-Bud has the potential to be scaled up, particularly given the resurgence of interest in bottom-trawling fisheries such as Atlantic redfish.

Despite facing challenges to fulfilling its project objectives, Sma'knis Maritime Safety & Security's work to explore vessel electrification helped the company and its project partners to learn more about the opportunities and challenges associated with EV marine craft. These lessons will be valuable as the broader ocean industry continues to decarbonize.

