



# 2023 Sustainability Report

*Prepared by*  
Hedgehog Technologies

*Prepared for*  
UN Global Compact

# ABOUT THIS REPORT

In our 2023 sustainability report, Hedgehog Technologies showcases the initiatives undertaken to advance sustainability for our stakeholders, encompassing clients, team members, the community, and beyond. The contents of this report derive from both internal and external consultations with Hedgehog stakeholders, emphasizing four primary areas: Environmental, Indigenous Prosperity, People, and Governance.

Our objectives are closely aligned with the 2030 Agenda for Sustainable Development as outlined by the UN General Assembly. We are unwavering in our commitment to not only meet but exceed the targets delineated in the Sustainable Development Goals (SDGs).

This report covers the period from January 1st to December 31st, serving as a foundational reference for future accountability in achieving our sustainability objectives. It will be disseminated annually, subject to oversight from the Leadership team and input from our stakeholders.

For more information on the SDGs, please refer to <https://sdgs.un.org/goals>.



# CONTENT INDEX



**05.** Executive Summary  
**06.** Company Overview  
**09.** Thought Leadership  
**10.** Sustainability

**15.** Indigenous Prosperity  
**20.** People  
**25.** Governance



# MESSAGE FROM OUR CEO

Dear Stakeholders,

At Hedgehog Tech, we believe in the importance of sustainability and the role it plays in our business operations and in the communities we serve. That is why I am pleased to present our latest sustainability report.

This report highlights our efforts to address the United Nations' Sustainable Development Goals (SDGs) and demonstrates our commitment to sustainability as a core value of our organization. We understand the importance of these goals and the impact they can have on our stakeholders - including clients, the community, and our team.

As a company, we are committing to a five-year plan to improve our performance in areas related to the SDGs. This includes reducing our carbon footprint, increasing our use of renewable energy, innovating, and implementing sustainable practices in our supply chain. We will also strive to make a positive impact in the communities where we operate through initiatives that promote economic, social and environmental development.



Our goal is to become a leader in sustainable business practices and to inspire others to do the same. We believe that by working together and committing to the SDGs, we can create a more sustainable future for all.

Thank you for your ongoing support. We look forward to continuing to work towards a more sustainable future for our company and for the world.

A handwritten signature in blue ink, appearing to read 'Michael Wrinch', written over a light blue dotted background.

**DR. MICHAEL WRINCH**  
CEO, HEDGEHOG TECHNOLOGIES



# EXECUTIVE SUMMARY

## Overview

Hedgehog Technologies has taken a proactive approach to embracing the United Nations' Sustainable Development Goals (SDGs) and has identified key areas of focus for their contributions. We are committed to creating a sustainable future and we have chosen to align our efforts with SDGs related to Governance, Sustainability, Indigenous Prosperity, and People.

Hedgehog promotes ethical business practices and transparency, supports initiatives that promote accountable and inclusive institutions, and actively supports efforts towards clean energy and sustainable resource management.

# COMPANY OVERVIEW



## We make complex visions a practical reality.

Hedgehog Technologies is not just an award-winning consulting engineering firm; we are a force for positive societal change. Our dedication to infrastructure, safety, and innovation drives us to modernize communities and protect the people who rely on our projects.

Whether we're designing attractions that perfectly balance fun and safety, enhancing cybersecurity in the industrial sector, or bringing renewable energy to remote communities, our mission is to create transformative outcomes.

Our diverse team of engineers collaborates closely to bring our clients' visions to life, always with sustainability at the forefront. At Hedgehog, we're leading the way in complex engineering to make anything possible.

## Our AC/DC Values:

- Accountable
- Collaborative
- Diverse
- Community Builders





# GLOBAL MAP OF OPERATIONS



## A CONDUIT OF INNOVATION

Hedgehog Technologies is a globally recognized engineering firm with a diverse portfolio of projects spanning the globe, providing sustainable solutions to clients in industries.



## OFFICE LOCATIONS

Hedgehog Technologies operates out of offices located in British Columbia and Alberta,





# PRIORITY SDG TARGETS



## CLIMATE ACTION

We believe that it is our responsibility to reduce our carbon footprint and promote sustainable practices in all aspects of our business. From our sustainable projects, innovations, and internal climate action targets, we're committed to addressing climate change.

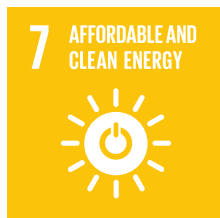
---



## INDUSTRY, INNOVATION, AND INFRASTRUCTURE

We strive to drive sustainable economic growth by leveraging innovative technologies and modernizing infrastructure. From developing smart cities to implementing cutting-edge renewable energy systems, we are dedicated to building a more sustainable and resilient future for all.

---



## AFFORDABLE AND CLEAN ENERGY

Providing innovative and sustainable energy solutions through the development of renewable energy and energy-efficient technologies. We are committed to improving access to clean energy and mitigating the negative impacts of energy production on the environment.

---



## GENDER EQUALITY

We prioritize gender equality through policies for equal opportunities in hiring, promotion and compensation, as well as empowering women in STEM and supporting gender equality organizations.

# THOUGHT LEADERSHIP

Shaping the industry's future through the advancement of innovative technologies, procedures, and methodologies, our thought leadership provides valuable insights into the current landscape and the challenges it presents.



## Considerations for Choosing The Right Flyback Diode and Rating

Published on Plant Engineering | Michael Wrinch

- [Read it here.](#)



## How to Create a Solar Farm Operations and Maintenance Plan

Published on Solar Magazine | Michael Wrinch

- [Read it here.](#)



## Maintenance and safety considerations for pneumatic and hydraulic controls

Published on Plant Engineering | Cameron Rodger

- [Read it here](#)

# SUSTAINABILITY

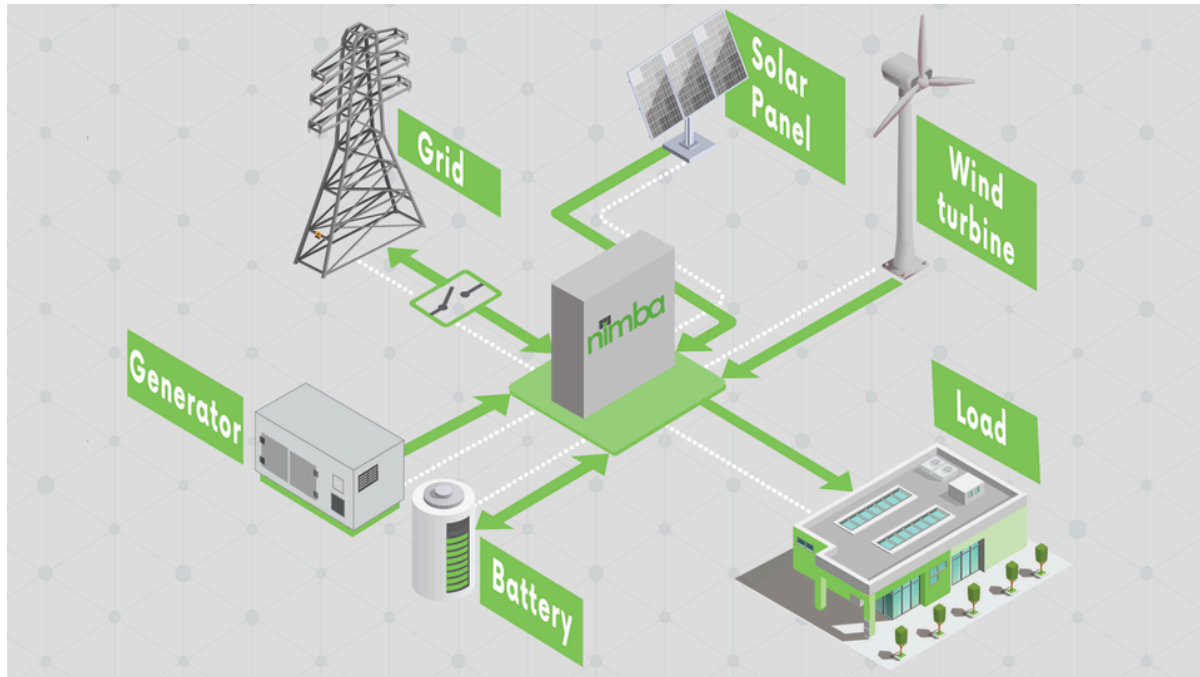
## Overview

Hedgehog Technologies is dedicated to embracing sustainable practices that prioritize environmental responsibility. We have undertaken numerous initiatives to minimize our carbon footprint and champion sustainability. This includes investing in the latest technologies, minimizing energy consumption, and constructing sustainable infrastructure for remote communities.

Moreover, we actively promote environmentally responsible practices among our employees and stakeholders. Our commitment to sustainability not only underscores our dedication to a greener future but also emphasizes our responsibility towards customers, employees, and the overall environment.



# FEATURE: NIMBA MICROGRID CONTROLLER



Engineers and Geoscientists BC presented Hedgehog Technologies with an "Innovation in Sustainability Award " for the development of a microgrid controller to solve the energy challenges faced by Harrison Hot Springs Elementary within School District 78 (SD-78) in Hope, BC.

The school faced frequent power outages due to strong winds from the nearby mountains, leaving its daily operations vulnerable to disruptions. These interruptions led to students being sent home, caregivers encountering difficulties in collecting their children, and some students being left stranded.

Recognizing the seriousness of this predicament, Hedgehog Technologies embarked on a forward-thinking project to address this issue.

The project has been recognized across British Columbia, Canada, to promote sustainable action in the province. Amplifying these stories are important for shifting public consciousness on the power of renewable energy innovation and demonstrating real world examples of its applications.

# SUSTAINABILITY OVERVIEW

Creating sustainable and energy resilient communities using the latest technologies.



“Through partnerships with local collaborators, we're building capacity and empowering communities to take ownership of their energy future.”

- Dr. Michael Wrinch, Founder



Our efforts to develop Nimba are not only driven by a commitment to environmental stewardship but also by a desire to empower and uplift our communities. By providing access to reliable and affordable electricity, Nimba has the potential to improve the lives of millions of people around the world.

In rural and underserved areas, Nimba enables the deployment of off-grid and mini-grid systems, bringing electricity to remote communities and improving the quality of life for residents. Through partnerships with local stakeholders, we're building capacity and empowering communities to take ownership of their energy future.

# FEATURE: ELECTRIFYING OUR CITIES THROUGH EV CHARGING



The deployment of electric vehicle (EV) charging infrastructure is crucial in accelerating the transition to electric mobility. Hedgehog Technologies is dedicated to developing solutions that make EV charging accessible, convenient, and efficient for urban residents and businesses.

One of the key aspects of our work is the strategic placement of charging stations throughout the city. We prioritize the integration of smart technologies such as an energy management system called Nimba into charging units to enable remote monitoring, real-time data analysis, and predictive maintenance, ensuring seamless operation and reliability.

Collaborating with multi-unit residential buildings and businesses, we establish fast-charging hubs to support EV charging in stratas and commercial fleets, such as EV forklifts, driving widespread EV adoption.

Environmental sustainability is at the core of our mission. By facilitating the widespread adoption of electric vehicles, they contribute to reducing greenhouse gas emissions and mitigating the adverse effects of climate change.



# MEASURING SUCCESS

Hedgehog targets SDG goals which are reflected through our culture, the industry, and our communities.

## Sustainable Metrics:

- 17% of revenue tied to sustainable projects.
- 100% of staff working from home or hybrid.
- 12% of staff commuting EV, hybrid, or public transit.

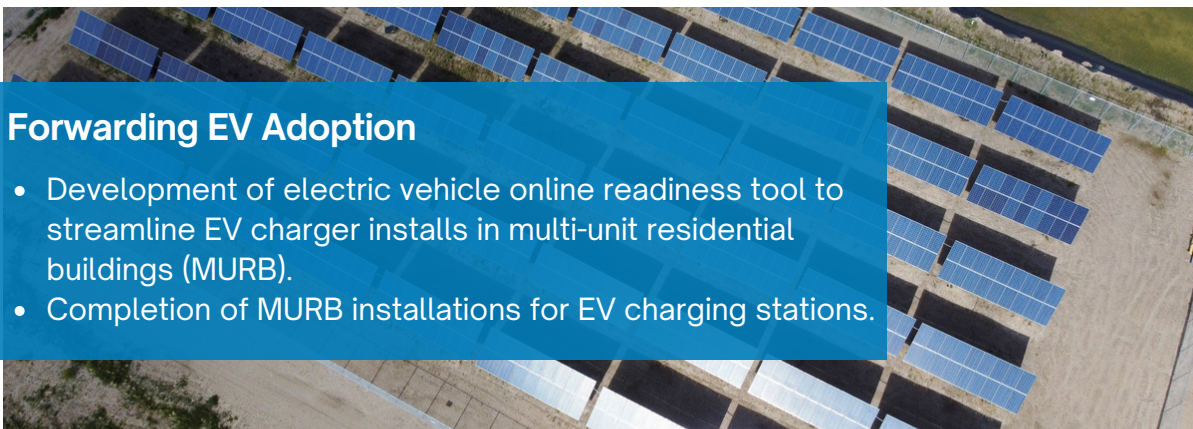


## Microgrid Controller Innovation

Development of Nimba Microgrid Controller that is implemented in Fort Severn and School District 78. The technology is currently under further development.

## Forwarding EV Adoption

- Development of electric vehicle online readiness tool to streamline EV charger installs in multi-unit residential buildings (MURB).
- Completion of MURB installations for EV charging stations.





# INDIGENOUS PROSPERITY

## Overview

Diesel-based generators are a common method of powering remote Indigenous communities which results in higher fuel costs along with health and environmental hazards. Hedgehog recognizes the inherent cultural, economical, and technological advantages from the introduction of renewable energy and demand-side management (DSM) projects.

These projects provide Indigenous economic development and opportunity through training, community engagements, and the creation new job opportunities.

# FEATURE: HAIDA NATION 2 MW SOLAR ARRAY & MICROGRID



Hedgehog Technologies partnered with the Haida Nation to design and install a 2MW solar array and battery to form a microgrid, with expansion potential to 4MW, prioritizing community ownership, management, and training.

One of the challenges of building near Masset Airport was the requirement for careful planning and execution to avoid disrupting airport operations and preserve natural habitats. The aim was to prevent the clearance of acres of old-growth forest, a precious and integral part of Haida Gwaii's ecosystem.

The proximity to the runway demanded specific safety measures, precise planning, and careful execution to ensure no disruption to the airport's regular operations.

Hedgehog Technologies adopted a dual approach, providing extensive training sessions on solar technology for community members, coupled with continuous project support. This ensured that the Haida Nation not only took ownership of the infrastructure but also acquired the skills necessary for future expansions and management.



# INDIGENOUS PROSPERITY OVERVIEW

Creating pathways to energy  
sovereignty for remote Indigenous  
communities



“By prioritizing local talent, we're not only advancing clean energy goals but also fostering economic growth and resilience within the community.”

- Amreen Grewal, Project Manager



Being part of the 2MW solar array project with the Haida Nation in Haida Gwaii has been an incredible journey. We made sure to hire locals for the project, not just for the sake of it, but because we understand the importance of community involvement in sustainable initiatives.

By prioritizing local talent, we're not only advancing clean energy goals but also fostering economic growth and resilience within the community. This project isn't just about solar panels; it's about empowering people and building a sustainable future together. It's a testament to what can be achieved when we work hand in hand with the community."

# FEATURE: FORT SEVERN WATER SHORTAGE SUPPORT



In the spring of 2024, Fort Severn, a remote First Nation community in Ontario, faced a severe water infrastructure crisis. The crisis, which lasted from late winter to spring, resulted in severe water shortages and a state of emergency being implemented for the community.

However, in the face of adversity, the community came together with local organizations and businesses, including Hedgehog Technologies, Bower Electric, The Learn and Uplift Foundation, and Fresh Market Foods in Sioux Lookout. Together, they coordinated a response effort that included flying 960L of drinking water into the community.

Thanks to these efforts, the Fort Severn water system is now operational, and the state of emergency has been lifted. The challenges faced by Fort Severn highlight the unique difficulties faced by remote communities in accessing clean water and maintaining infrastructure. Harsh weather conditions, limited access to resources, and aging infrastructure make these communities more vulnerable to water crises.

It is essential to recognize and address these challenges to ensure the health, safety, and well-being of these communities.

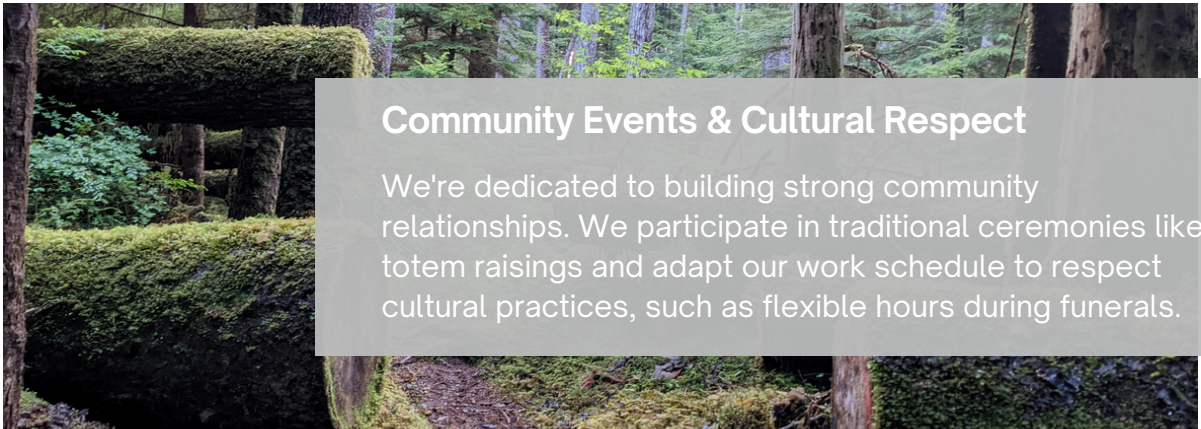
# MEASURING SUCCESS

Hedgehog targets SDG goals which are reflected through our culture, the industry, and our communities.



## Sustainable Metrics:

- 2MW solar array to power the Masset community.
- 11 local Haida members hired for building the solar farm.
- 960L of water donated to Fort Severn First Nations.



## Community Events & Cultural Respect

We're dedicated to building strong community relationships. We participate in traditional ceremonies like totem raisings and adapt our work schedule to respect cultural practices, such as flexible hours during funerals.



## Fort Severn Water Shortage Crisis

Hedgehog Technologies, Bower Electric, The Learn and Uplift Foundation, and Fresh Market Foods in Sioux Lookout coordinated a response effort that included flying 960L of drinking water into the community.



# People



## Overview

Diversity is essential to our success, bringing unique skills, expertise, and perspectives that drive innovation, growth, and community contribution. The impact of our people-focused approach is evident in various areas, including the quality of our work, customer satisfaction, technological innovation, and the overall culture and values at Hedgehog Technologies.

By hiring and retaining the right people, we build a strong and talented team capable of solving complex problems.

# FEATURE: HEDGEHOG MENTORSHIP AND CO-OP PROGRAMS



Through our mentorship and coop programs, we provide valuable opportunities for aspiring professionals and students to gain hands-on experience, develop essential skills, and contribute to meaningful projects.

For aspiring engineers, we offer co-op programs and job shadowing days. Students visit our office for a day to gain insight into the life of an engineer and experience hands-on learning opportunities. These initiatives aim to inspire and prepare the next generation of talent for success in the field.

In our Young Leaders Program, experienced professionals within the company mentor eager mentees in their respective fields. Mentors offer guidance, support, and insights from their own experiences, helping mentees navigate challenges, set goals, and unlock their full potential. This personalized approach fosters a culture of continuous learning and professional development, empowering them to advance in their journey to becoming leaders.



# PEOPLE OVERVIEW

Empowering the next generation through mentorship and collaboration.



“When employees learn from one another and exchange experiences, they foster collaboration and accelerate professional growth.”

- Bala Zhou, Bookkeeper



At Hedgehog Technologies, we foster inclusive behaviors across our organization and offer competitive benefits and recognition programs to support employees throughout their careers. As part of this commitment, we invest in our team's success by promoting continuous learning, ensuring they acquire the skills needed for the future.

Furthermore, we extend mentorship opportunities to everyone. These relationships can be formal or informal, serving functional or cause-based purposes. Regardless, when employees learn from one another and exchange experiences, they foster collaboration and accelerate professional growth."



# FEATURE: EHRC “GREENING A GENERATION” VIDEO SERIES



Focused on engaging all Canadians, and in particular young Canadians, [Electricity Human Resources Canada \(EHRC\)](#) Greening a Generation project will highlight electricity's importance in our energy sector in addition to providing a guideline as to how the electricity industry will be available to young Canadians as a vehicle to address key issues as well as we provide career opportunities in the electricity and renewable energy sector for years to come.

As part of the Greening a Generation campaign, Hedgehog Technologies was prominently featured in eight videos, showcasing their significant contributions to renewable energy projects. Among these were two notable project videos that focused on the Haida Gwaii solar project and the Fort Severn Solar Indigenous project.

These videos highlighted Hedgehog Technologies' innovative approaches and their commitment to integrating sustainable energy solutions within Indigenous communities. The Haida Gwaii solar project demonstrated the potential for solar energy to transform remote areas, while the Fort Severn project underscored the importance of collaboration with Indigenous communities to create sustainable and culturally respectful energy solutions.

Videos can be accessed here:

- [Fort Severn Solar Project](#)
- [Haida Gwaii Solar Project](#)
- [Electrical Career Interviews](#)

# MEASURING SUCCESS

Hedgehog targets SDG goals which are reflected through our culture, the industry, and our communities.



## Sustainable Metrics:

- 50% gender parity in executive positions.
- 75% visible minorities in executive positions.
- New benefits plan introduced that is more affordable.



## Monthly Cultural Team Lunches

Every month, our team selects a culture represented within our group to highlight. We order food from that culture and discuss the significance of the food, aiming to celebrate our diversity and bring our differences together.



## Young Leadership Program (YLP)

Our Young Leadership Program mentors young professionals through personalized mentorship, hands-on workshops, and networking opportunities. We empower the next generation of leaders to achieve their full potential.



# Governance

## Overview

At Hedgehog Technologies, we are dedicated to promoting governance that aligns with the Sustainable Development Goals (SDGs). Our mission is to help organizations integrate sustainable practices into their operations, contributing to a more equitable and sustainable world.

Through our comprehensive governance approach, we empower organizations to achieve positive social and environmental outcomes while driving business growth and competitiveness.



# FEATURE: PARTNERING FOR MARINE INNOVATION AND SUSTAINABILITY



In 2023, Hedgehog Technologies entered a strategic partnership with International Submarine Engineering (ISE) to advance marine innovation and sustainability. Hedgehog Technologies, renowned for its innovative solutions in marine technology, joined forces with ISE, a leader in submarine engineering, recognizing their complementary strengths.

Both organizations share a history of successful subsea projects and align closely in their commitment to environmental stewardship and responsible business practices. The partnership between Hedgehog Technologies and ISE was founded on principles of collaboration, innovation, and sustainability.

Through resource sharing and strategic alignment, the two organizations combined their expertise to create solutions tailored to the unique requirements of marine projects, pushing the boundaries while minimizing environmental impact.

# GOVERNANCE OVERVIEW

Well-crafted technical standards raise the quality and safety for everyone, especially new entrants to the industry.



“We participate in ASTM International’s committee F24 for Amusement Rides and Devices together with a diverse team of very experienced professionals”

- Andreas Huster, Principal Engineer



Many of our staff are technical experts and are making important contributions to the development of technical standards.

These standards are often referenced in contracts between businesses and form the basis of government regulations. We participate in ASTM International’s committee F24 for Amusement Rides and Devices together with a diverse team of very experienced professionals that cover all stakeholders, including designers, engineers, manufacturers, operators, inspectors, regulators and patrons.

At ASTM F24, we are active in task groups that develop standards for Risk Assessments, Electrical/Control Systems, and Amusement Ride Modifications after initial commissioning.

# FEATURE: CEO MICHAEL WRINCH JOINS TECHNICAL SAFETY BC BOARD



In 2023, CEO Michael Wrinch took on a new role as a board member for Technical Safety BC (TSBC), marking a significant addition to the organization's leadership team. His appointment comes at a time when TSBC continues to strengthen its mission of safeguarding public welfare through the regulation and oversight of technical systems and equipment in British Columbia.

His background in engineering standards will support the development and enforcement of safety codes, standards, and regulations. He will enhance TSBC's capabilities in conducting inspections, audits, and assessments to ensure compliance with safety standards.

By joining the TSBC board, Michael Wrinch will help guide the organization in its mission to protect the public of British Columbia. His leadership and vision will further enhance TSBC's ability to ensure that technical systems are safely managed, thereby improving safety and well-being throughout the province. His addition to the board is expected to strengthen TSBC's regulatory framework and its commitment to public safety.



# MEASURING SUCCESS

Hedgehog targets SDG goals which are reflected through our culture, the industry, and our communities.



## Industry Leadership and Participation:

- Association of Consulting Engineers of BC
- Small Firms Council
- Engineer's Canada Board
- ASTM Major Modifications Task Group



## Technical Safety BC Board (TSBC)

In 2023, CEO Michael Wrinch assumed a new position as a board member at Technical Safety BC (TSBC). His appointment comes at a time when TSBC continues to strengthen its mission of safeguarding public welfare.



## Securing Partnerships

In 2023, Hedgehog Technologies entered a strategic partnership with International Submarine Engineering (ISE) to advance marine innovation and sustainability.



We thank you for your  
continued support in our  
efforts to contribute to  
the SDGs.

---

## Contact

Hedgehog Technologies  
3001 Wayburne Drive, Unit 275  
Burnaby, BC, V5G 4W3  
604-210-0204

[www.hedgehogtech.com](http://www.hedgehogtech.com)   
[info@hedgehogtech.com](mailto:info@hedgehogtech.com)   
[@hedgehogtech](https://www.facebook.com/hedgehogtech) 