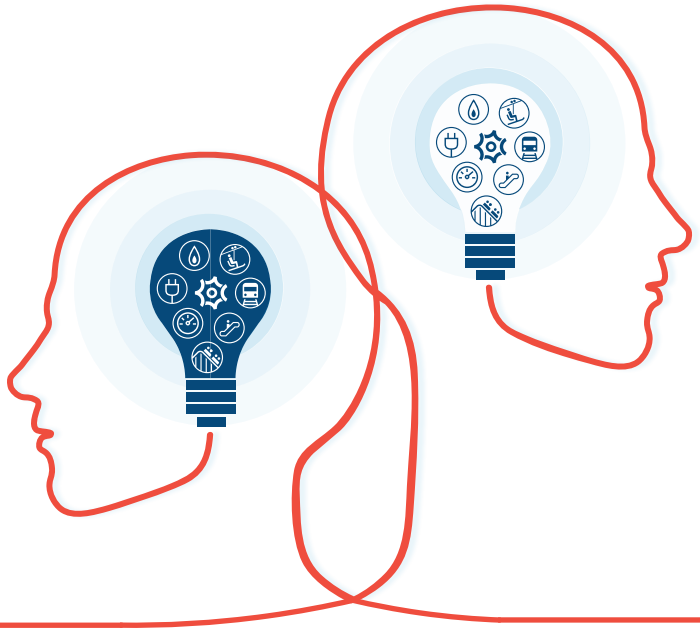
TECHNICAL SAFETY BC

2020 - 2022 BUSINESS PLAN

Modelling the Integration of Technology & Humanity



Introduction

Technical Safety BC's new 10-Year Strategy guides us as leaders in technical safety; using knowledge, influence and innovation to provide confidence in the safety system. Milestones from the 10-Year Strategy inform the 2020-2022 business plan's goals and connect core work and project deliverables with the strategic direction of the organization.

This year's business plan was designed with the organization's core values in mind:

We See Genius In Diversity

When we each bring our unique perspective to the table, in the spirit of collaboration and respect, ideas improve and our impact on the safety system becomes greater.

We Make the Complex Simple

Through simplification of our initiatives we promote understanding and engagement, making safety accessible to everyone.

We Foster Confidence

We communicate directly, listen actively, explain our decisions, and share what we know to build confidence in each other, our organization, and the safety system.

We Adapt

As society changes, we create and adopt new ideas, skills, and tools that will enable us to meet the safety challenges of a highly-connected world.

The 2020-2022 business plan builds on the past year's efforts and continues to reflect the organization's priorities to increase understanding of technical knowledge and connection to the safety system, as well as to influence behaviour choices that advance safety throughout the province. It also highlights key investment priorities which address critical market needs of today and the future.

In 2019

In 2019, Technical Safety BC delivered on multiple safety leadership initiatives to advance technical knowledge within the industry, increase client engagement and connection to the safety system and to understand decisions that influence and promotes safe behaviours by our clients and ultimately all British Columbians.

Client technical knowledge was advanced by:

- creating sample plans using predictive algorithms to help understand and identify high-hazards and potential risks related to different applications of technical equipment;
- redesigning our learning management system to increase access to educational tools and to improve our clients' experience, knowledge and skills; and
- improving our internal capacity to establish and publish cause and prevention information, and enhance understanding of technical system incidents.

New client tools were launched to improve connection to the safety system, they are:

- new online tracking of non-compliances to improve client services and experience;
- Voluntary Disclosure Program to support contractors who may have been non-compliant in the past by encouraging them to voluntarily come forward and disclose all non-compliant activities without risk of enforcement;
- new certification standards and class of contractor license for pressure welders, renewed certification standards for FSR's, and new plant operating permits for certain classes of boiler plants; and
- publication of duty holder records as a platform for data transparency and the building of a foundational structure of our public registry.

Positive behaviour changes were influenced with:

- the development of a new behavioural programs strategy to better understand safety-minded decision-making and behavioural influences; and
- the implementation of critical data governance practices to improve data management capabilities and data quality, which allows for better understanding of past, existing and future client behaviours.

In 2020

In 2020, we will continue to build on past initiatives and the three strategic priorities of Safety Leadership, Product and Processes, and People and Innovation:

01 Safety Leadership: Taking Action

Lead improvements in technical system oversight by leveraging knowledge and relationships to better manage risks now and in changing conditions.

02 Products and Processes: Simplifying Connections

Enable increased connection in the safety system through improved and innovative means allowing for efficient and positive user experience of our products and processes.

03 People and Innovation: Changing Behaviour

Leverage partnerships, research, digital innovation and insights to increase knowledge, share safety information and influence safety-minded decisions and behaviour.

We will empower our clients to make safety-minded decisions and meet safety requirements more efficiently by improving our systems and processes to better address the market needs and expectations. By leveraging knowledge and sharing insights, we will increase data transparency and make it easier for clients to understand their responsibilities and make safer decisions, and for employees to deliver work that provides the most value to all British Columbians.

Who We Are and What We Do

Technical Safety BC is an independent, self-funded organization mandated to oversee the safe installation and operation of technical systems and equipment. In addition to issuing permits, licenses and certificates, we work with industry to reduce safety risks through assessment, research, education and outreach, and enforcement.

TECHNICAL SAFETY BC

Our Vision

Safe technical systems.
Everywhere.

What We Do

We deliver safety services across the following technologies in the province:

- Electrical equipment and systems
- Boilers, pressure vessels and refrigeration systems
- Natural gas and propane appliances and systems, including hydrogen
- Elevating devices, such as elevators and escalators
- Railways, including commuter rail
- Passenger ropeways, such as aerial trams and ski lifts
- Amusement devices
- Complex and integrated technical systems involving multiple technologies

Our Services

Assessing technical work and equipment, including collecting information through physical assessment, incident investigation and registering new equipment and designs.

Certifying individuals and licensing contractors and operators to perform regulated work.

Supporting clients in the development of alternative safety approaches, and auditing their safety management plans or equivalent standard approaches.

Educating and sharing technical systems safety information with our clients and the broader public to better control risks.

Taking enforcement actions that promote an equitable safety system where all participants are compliant with regulations.

Conducting research, including contributing to provincial and national safety code development and updating regulations for the technologies we serve.

Technical Safety BC operates within a legislative and regulatory framework that includes:

- *Safety Authority Act*
- *Safety Standards Act* and Regulations
- *Railway Safety Act* and Regulations
- *Freedom of Information and Protection of Privacy Act*
- *Workers Compensation Act*
- *Ombudsperson Act*
- *Offence Act*

For further information, including our Annual Report and annual State of Safety Report, visit the 'About' section of our website at www.technicalsafetybc.ca/about

Board of Directors

Technical Safety BC is governed by a board of 11 directors that monitors performance and sets the organization's strategic direction in consultation with management. Directors are appointed on the basis of merit; they must meet the qualifications established in the *Safety Authority Act* and abide by a code of conduct.

The work of the Board is supported by committees that provide additional focus on matters such as:

- Financial affairs, audits, insurance and investments
- Governance and nominating functions, CEO performance evaluation and recruitment compensation and other human resource issues
- Technical and enterprise risk oversight
- Regulatory development and compliance
- Strategic advice and oversight

Our Strategic Priority Areas and Goals

01 Safety Leadership: Taking Action

Lead improvements in technical system oversight by leveraging knowledge and relationships to better manage risks now and in changing conditions.

2025

- Public Engagement — 03
- Economic Value is Realized — 02
- Agile Regulation — 01
- System View of Risk — 03
- Personalized Client Experience — 02
- Human Centered Scale & Accuracy — 03
- Sustainable Business Model — 02
- Safety System Participant Focus — 01

2022

- Knowledge Translates to Impact — 03
- Behavioural Programs Design — 03
- Culture of Learning & Innovation — 03
- Provincial Oversight Consistency — 01
- Lifecycle Focus — 01
- Safety Information Ecosystem — 03

Milestones from the first-half of the 10-Year Strategy

2022 Outcomes	2020 Actions	2021 Actions	2022 Actions
Comprehensive and integrated safety system approaches provide effective oversight and evaluation of risks, and clear understanding of roles and responsibility.	• Evaluate the role of auditing to provide direction as an oversight tool. • Develop risk assessment capabilities and an organizational readiness plan for the Amusement Devices Program. • Begin work with federal and provincial partners on incorporating regulatory changes to railway level grade crossings. • Implement a training provider recognition program and improve management of course records for continuing education programs. • MCP for elevating devices is launched to improve the transparency of maintenance requirements between asset owners and contractors.	• Evaluate the safety system approach of the Amusement Devices Program for further implementation. • Review the code adoption governance framework. • Develop evidence based improvements for the training provider recognition, certification and continuing education programs. • Implement quality management plans for refrigeration contractors.	• Refine risk management strategies based on measurable impact of the risk reduction program. • Further improve technical training for our clients to increase understanding of existing and emerging risks. • Continue to build capabilities in safety management approaches and support maintenance planning tools for clients.
Safety partnerships are formed throughout the province and identified under-represented client groups are increasingly engaged in the safety system.	• Increase and strengthen mutually-beneficial relationships with Indigenous communities and groups across the province to facilitate a dialogue on technical systems safety. • Lead and maintain relationships with local municipalities to improve data sharing effectiveness.	• Continue to strengthen mutually-beneficial relationships with Indigenous communities to achieve positive safety outcomes. • Review potential opportunities for harmonization of enforcement activities with municipalities that have jurisdiction under the Safety Standards Act.	• Further build relationship and engagement strategies in partnership with identified under-represented groups.
Safety regulations and approaches consider both adaptation for and mitigation of climate change, enabling technical systems and equipment to be resilient to aging and changes in the operating environment.	• Undertake research into the impacts of climate change and aging equipment in one technology.	• Develop a research-based plan to address oversight and resilience of technical systems, and to respond to climate emergencies.	• Implement actions from the climate change plan.

02 Products and Processes:
Simplifying Connections

Enable increased connection in the safety system through improved and innovative means allowing for efficient and positive user experience of our products and processes.

2025

- Public Engagement — 03
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Milestones from the first-half of the 10-Year Strategy

2022 Outcomes	2020 Actions	2021 Actions	2022 Actions
A client-centric service delivery model is designed and implemented that empowers clients and employees with better processes and tools to reduce connection barriers and maximize value.	• Design and map client first people-centric business processes that remove barriers to connection and reduce complexity in the delivery of our products. • Select a technology platform that is sustainable and scalable to support business and service transformation. • Establish and validate Master Data for core and client processes.	• Begin implementation of redesigned core business processes on selected technology platform. • Standardize product, process and information definitions. • Improve the tracking of our core and client processes to enhance the use of metrics in decision making.	• Complete substantive implementation of redesigned core business processes. • Complete refinement of master data process alignment enabling the capture and use of accurate and effective data in decision making.
Active participation in the safety system grows and is sustained through the use of improved and innovative products and channels.	• Redesign Technical Safety BC website for quick and more intuitive access to information. • Improve processes and guidelines for design registration to enhance the accountability of design, installation and safe operation. • Further develop an economic model across more technologies to better understand participation levels. • Identify and act on opportunities identified to grow and retain connection in the safety system.	• Build digital journey mapping capabilities • Automate exam bookings to improve the user experience and ease of accomplishing career certifications. • Automate utility energization with valid permits in the electrical technology. • Continuously improve our response and turnaround times for our products and service delivery.	• Integrate the client portal and website for a holistic experience for our clients and employees. • Automate payment systems to improve the ease and transaction time for clients and employees. • Automate utility energization with valid permits in the gas technology.
Fees reflect safety value and fairness, and support a sustainable business model for the organization and the safety system.	• Evaluate a simplified fee model to incorporate; fairness, risk, performance and cost.	• Fee metrics are defined, and implement a simplified fee structure for one product area. • Analyze business processes for unintended consequences on people or the environment.	• Implement a simplified fee structure for more core products. • Create process guidelines to reduce barriers & unintended consequences on people or the environment.

03 People and Innovation: Changing Behaviour

Leverage partnerships, research, digital innovation and insights to increase knowledge, share safety information and influence safety-minded decisions and behaviour.

2025

- Public Engagement — 03
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Milestones from the first-half of the 10-Year Strategy

2022 Outcomes

Data insights are used to enhance predictability of safety system risks and to refine our understanding of technical, behavioural and environmental influences on safety outcomes.

Our workplace culture recognizes the efforts of our employees, supports growth, learning and safety, and is driven by innovation.

The public and our clients value their participation in the safety system, perceive Technical Safety BC as a trusted safety partner and have access to information that supports safety-minded decisions.

Our organization and our clients know and are better prepared for the impacts of climate change, and we are doing our part to mitigate the climate crisis.

2020 Actions		2021 Actions	2022 Actions
• Expand the use of machine learning and sample plans to increase our predictive capabilities and direct assessment prioritization. • Include outcome evaluations measuring changes in behaviour in corporate initiatives.	• Develop and grow our ability to use external data to strengthen the information sharing ecosystem. • Develop measures of organizational performance to guide decision making and investments.	• Establish automated sharing interfaces, protocols and publication of insights through data sharing partnerships. • Collaborate with external organizations on behaviour change interventions. • Develop predictive algorithms to direct assessments in prioritized technologies. • Leverage technology to deliver remote assessments.	• Demonstrate and publish outcomes of behaviour change interventions. • Continuously adjust compliance actions to optimize safety behaviour and outcomes. • Use artificial intelligence to identify & reduce emerging risks. • Incorporate targeted quantitative data into structured decision making.
• Develop innovative prototypes using a structured innovation program to solve problems and improve safety outcomes. • Train employees to support innovation and evaluation of behavioural change.	• Create and begin implementation of a culture action plan that supports best practices in equity, diversity and inclusion.	• Scale selected prototypes for implementation using learnings from innovation activities. • Improve individual commitment to safety by providing avenues for employee-led activities to champion safety in the workplace.	• Complete a full evaluation of the culture action plan and submit recommendations to executive team & board for decision on further action and investment.
• Deliver thought leadership and integrated marketing engagement campaigns to improve our recognition as a trusted source of safety expertise. • Publish key data sets to inform decisions of duty holders and define future data sets for inclusion in the public registry.	• Publish and use insights collected through incident investigations to design, implement and measure changes in behaviour.	• Use evaluation results to develop targeted integrated marketing engagement campaigns to influence safety decision of key client segments. • Personalize communications to engage with clients in a timely and relevant manner.	• Publish evidence of behaviour change in specific industry/client segments. • Share information associated with the management and oversight of regulated equipment/ systems at public assembly facilities.
• Employees lead the development of a climate crisis action plan including adaptation, mitigation, and remediation goals for our organization.	• Publish and use insights collected through incident investigations to design, implement and measure changes in behaviour.	• Evaluate and define climate change interventions based on evidence. • Pilot 2 interventions and report on results.	• Begin implementation of the full climate crisis action plan. • Monitor and report on early results.

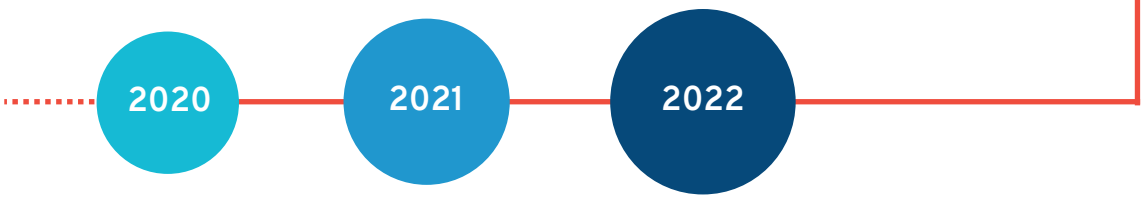
Financial Outlook

Forward-looking Statement

The 2020 budget is breakeven and aims to maintain financial sustainability whilst investing in key priorities that will allow the business to deliver on 10-Year Strategy.

The expenses budget was prepared using a structured, zero-based approach, whereby the available resources were allocated in alignment with the business planning priorities: Safety Leadership, Products and Processes, and People and Innovation. Revenues are based on market conditions and expected results of planned initiatives.

All forward-looking statements within this report should be understood to involve risks and uncertainties that could cause actual financial or operating results to differ significantly.



	2020	2021	2022
Estimated Revenue:	$73,471k	$76,410k	$79,466k

($000's)	2019 Forecast as of Q3	Budget 2020	Forecast 2021	Forecast 2022
Total Services and Related Fees	67,191	71,771	74,642	77,627
Other Income				
Monetary Penalty	(68)	200	208	216
Gain or Loss on Investments and Asset Disposal	671	500	520	541
Interest income	1,120	1,000	1,040	1,082
Total Revenue	$68,915	$73,471	$76,410	$79,466
Expenses				
Salaries & Benefits	48,059	50,269	52,668	54,858
Amortization	4,669	5,004	4,608	4,710
Building Occupancy	3,294	3,335	3,469	3,607
Audit, Legal and Insurance	725	749	779	810
Contract Services	2,124	2,289	2,381	2,476
Travel	1,710	1,824	1,897	1,973
Office & Business	2,131	2,562	2,665	2,772
Telecommunications	661	658	684	711
Information Systems	2,683	3,013	3,134	3,259
Training	898	1,087	1,130	1,175
Vehicles	932	999	1,039	1,080
Corporate Governance	445	510	531	552
Postage & Courier	225	210	219	228
Education & Public Awareness	478	667	694	722
Material & Supplies	182	304	316	329
Bad Debt	81	190	198	206
Total Expenses	$69,295	$73,671	$76,409	$79,466
Release from education reserve	$380	$200	$0	$0
Excess/(Deficiency) of revenue over expenses	$0	$0	$0	$0

Glossary

Artificial intelligence
The simulation of human intelligence processes by machines, especially computer systems.

Behavioural Programs Strategy
A combination of program elements or strategies designed to produce behaviour change or improve outcomes.

Culture action plan
A roadmap outlining how Technical Safety BC will build upon our existing organizational culture, increase equity, diversity, and inclusion across the organization, and ensure we meet the cultural milestones outlined in the 10-year Strategy.

Digital journey mapping
A visual representation of the interactions stakeholders have with Technical Safety BC, that helps us create meaningful, long-term engagement through understanding and improving on our various touch-points.

Information sharing ecosystem
The interdependent networks of people, technology, and information infrastructures that determine how information in the organization is used and shared.

Machine learning
An application of artificial intelligence that provides systems the ability to automatically learn and improve from experience without being explicitly programmed.

Master data
A representation of the business objects that contain the most valuable, agreed upon information shared across an organization.

Predictive Algorithm
A computational algorithm that produces a prediction score from an explicit set of rules and/or a set of data.

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TECHNICAL SAFETY BC

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