

RioTinto

Rio Tinto Iron and Titanium Quebec Operations

2023 Sustainable Development Report

Sorel-Tracy Critical Minerals and Metallurgical
Complex
Havre-Saint-Pierre Mining Facilities



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Message from the Leadership Team

The Leadership Team of Rio Tinto Iron and Titanium Quebec Operations is pleased to present the organisation's 2023 Sustainability Report. This year, we've opted for a new format that aims to be as simple, transparent and reader-friendly as possible.

In early 2023, we set ourselves a mission and vision as a management team. Whenever we make a strategic decision that will have an impact on our future, we refer back to those core statements. Our vision is based on our values of care, courage and curiosity, which you can read more about in the following pages. You'll also find highlights from the past year and more information on our operations, our people, our economic and environmental impact, and our social performance in the communities where we operate.

The year 2023 was marked by its fair share of challenges, including events with furnaces 1 and 3 at the reduction plant. We also saw market conditions deteriorate, leading to a considerable drop in demand for many of our products. In responding to these developments, we had to make some difficult decisions.

But when we see the resilience, courage and ingenuity of our RTIT Quebec Operations teams at the Sorel-Tracy Critical Minerals and Metallurgical Complex and the Havre-Saint-Pierre Mining Facilities, we know that we can rise to any challenge.

As we've said before, with every decision we make and every action we take, we're striving to position RTIT Quebec Operations for the future while actively working to manage the impact on our employees, our customers, our partners, and the company.

Stay safe,

Jean-Francois Gauthier
Managing Director, RTIT Quebec Operations

Tracy Allain
Business Partner, Finance

Maxime Dufour
Business Partner, Health, Safety, Environment, Industrial Security and Operational Safety

Jimmy Dufresne
Director, Standards and Methods, and Interim General Manager, Finished Products

Jonathan Faucher
General Manager, Primary Operations

Jean-Francois Jomphe
Interim General Manager, Mining Facilities

Stephane Lehoux
Interim Director, Engineering and Contractor Management

Samuel Moreau
Director, Asset Management

Evangéline Plante
Senior Business Partner, Human Resources

**Leadership Team members at the time this report was produced.*



In 2023, Rio Tinto Iron and Titanium Quebec Operations set a vision for the future to help the organisation achieve its ambitions.



Mission

As a proud and engaged team, we work together to safely deliver innovative, sustainable, green solutions to our customers and the world by getting the most out of our mines and operating the largest Critical Minerals and Metallurgical Complex.



Values

Care

We act with care by prioritising the physical and emotional safety and wellbeing of those around us.

Courage

We act with courage by showing integrity, speaking up when something is not right, and taking decisive action when needed.

Curiosity

We act with curiosity by welcoming diverse ideas and collaborating to achieve more together than can be done alone.

People and community

- We are all proud and engaged. We can all make a difference and live up to our full potential.
- Zero by Choice: Health – Safety – Environment.
- Strong partnerships with our communities.
- Taking ownership and acting with a strong customer-focused entrepreneurial mindset and a relentless drive for excellence.
- Standards and the Rio Tinto Safe Production System (RTSPS) are a way of life.

Highlights of 2023

Every plant strives to achieve its full potential. Here are a few highlights of how we improved performance in 2023.

Ore Pretreatment Plant
2023 injury reduction plan = -25% injuries.

Control Laboratory
Automated analysis system created for the Steel Plant and ISO 17025 accreditation obtained.

Ore Pretreatment Plant | Warehousing and Shipping
Dashboards developed and shift changes optimised.

Powder Plant
Plant's 55-year anniversary celebrated.

Mining Facilities
Historic blasting successfully executed.

UGS Plant
Turbo-injection
Injection increased from 45m³ to 49m³.

Production increased by 8,000 tonnes per year. Done by internal employees with no major investment.

PP, SP, CCR*
Hi-Ti project resumed with hybrid shovels
Gains: \$1.5 M/year in increased quality and reduced greenhouse gas emissions.

*Product Processing, Slag Processing, Centralised Control Room

Operations Services
Screening and the Recirculation Services now be operated by Operations Services.



Mining Facilities
Two new trucks acquired to increase availability.

Scandium Plant
Work standardised with the help of on-site signage (5S).

Reduction Plant
New planned shutdown management structure introduced and shutdown performance improved.

Steel Plant
Overhead crane reliability: Reliability plan developed and implemented for air conditioning units.
Gains: 80% reduction in lost production opportunities.

Mining Facilities
Pit emptied by end of June in compliance with standards.

Plant Services
Processes automated at Scandium Plant and can be controlled remotely by operators.

About the mine and plants



Tio Mine and Terminal

The largest solid ilmenite deposit in the world sits 43 kilometres from Havre-Saint-Pierre. There, Rio Tinto Iron and Titanium Quebec Operations operates an open pit mine in Quebec.

The mine is notable not only for its size but also for the quality of the ore extracted there. The mined ilmenite is crushed on site and transported by railcar to the port terminal, then sent by ore carrier to the Critical Minerals and Metallurgical Complex.

It is 880 km by boat from Havre-Saint-Pierre to Sorel-Tracy.



UGS Plant

At the Upgraded Slag (UGS) Plant, part of the titanium slag produced at the Reduction Plant is purified to meet the specific needs of our customers, mainly for the pigment production market. The plant uses a unique process involving hydrochloric acid to remove impurities from the slag. This process was developed specifically for ore from the Havre-Saint-Pierre mine.

Over 98% of the acid used is regenerated and reused in the process.



Ore Pretreatment Plant

Bulk ore and anthracite are received at the port facilities of the Critical Minerals and Metallurgical Complex. These raw materials are then stored in piles or inside domes. This is also where finished products are shipped out.

Ore and anthracite are prepared at the OPP before going to the reduction furnaces.



Scandium Plant

The RTIT Quebec Operations Scandium Plant is the first of its kind in North America and the first green scandium plant in the world. It's where we extract scandium from the residue of the UGS Plant process.



Powder Plant

The Powder Plant manufactures many different grades of high end value added iron and steel powders.

Steel and iron powders are mainly used in the automotive market for manufacturing high precision mechanical parts.



Reduction Plant

The Reduction Plant is the heart of our operations. Inside its nine electric arc furnaces, we combine molten ore and anthracite in a chemical reaction that produces titanium slag (enriched titanium dioxide), iron, and carbon monoxide.

The slag is then poured into wagons, cooled down, crushed, and sent to the UGS Plant, where it is sized and partially refined into UGS.

The liquid iron is poured into ladles. One part is cast as ingots for our customers and the other part goes to the Powder and Steel Plants.

The carbon monoxide is recovered and reused as fuel throughout the Critical Minerals and Metallurgical Complex.



Steel Plant

The Steel Plant produces various grades of steel in the form of square and round billets of various lengths. RTIT Quebec Operations has a reputation for producing high-quality steel.

Steel billets are made from liquid iron.



Critical Minerals and Technology Centre

Research and development gave rise to RTIT Quebec Operations and continue to drive our growth strategy to this day. The creation of our Critical Minerals and Technology Centre in 1967 confirmed the strategic role that research and development play in the organisation's activities.

Mission

The Critical Minerals and Technology Centre's mission is to improve our processes, with the aim of expanding our markets and enhancing the value of our products. One of our key strengths is having a team of specialists covering a wide range of scientific and technological fields who can provide state-of-the-art services and support to RTIT Quebec Operations, Richards Bay Minerals (RBM), QIT Madagascar Minerals (QMM), and the Group's customers.

Today, RTIT Quebec Operations is one of the 100 Canadian companies most active in research and development. Research has an impact on all areas of activity at our RTIT Quebec Operations, from mining to finished products. The research process is one of constant synergy between research staff and production operations personnel, with all research conducted on site. The Critical Minerals and Technology Centre features state-of-the-art equipment and highly specialised instruments, including reactors and other equipment to simulate our processes in the lab and during pilot tests, as well as inductively coupled plasma spectrometers, X-ray spectrometers, atomic absorption units, image analysers, scanning electron microscopes, and a 3D printer for metals.

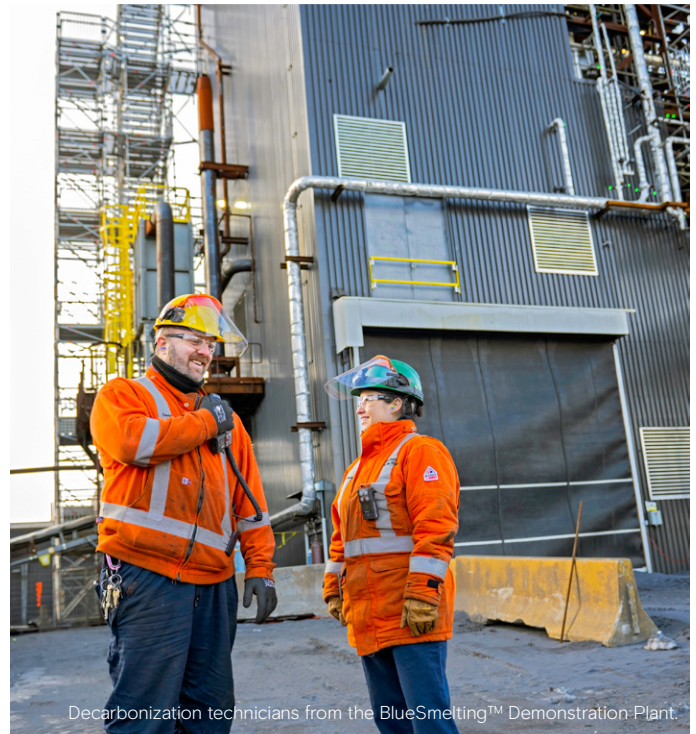
BlueSmelting™ Demonstration Plant

Scientists at the Critical Minerals and Technology Centre in Sorel-Tracy have pioneered BlueSmelting™, a technology that involves the pre-reduction of ilmenite ore before it is processed in reduction furnaces. By integrating BlueSmelting™ into our process, we could reduce the amount of energy required to transform the ore by using gases such as green hydrogen as reducing agents.

RTIT is building a demonstration plant to validate this breakthrough technology. The team leading the BlueSmelting™ initiative is using an agile approach, taking the plant from concept to commissioning in just 14 months—and doing it safely.

This is the first stage in the development of BlueSmelting™. When fully implemented, the technology could reduce emissions from operations at the Sorel-Tracy Critical Minerals and Metallurgical Complex by up to 30%—the equivalent of taking 145,000 cars off the road.

BlueSmelting™ could also help decarbonise other Rio Tinto operations around the world, as well as the steel industry as a whole.



Decarbonization technicians from the BlueSmelting™ Demonstration Plant.

Employees

At RTIT Quebec Operations, we're explorers, solution seekers, and innovators. Our three values—care, courage and curiosity—guide how we work and how we treat each other.

Hard work, dedication, and outside-the-box thinking are qualities that make all the difference on our teams.

Number of employees

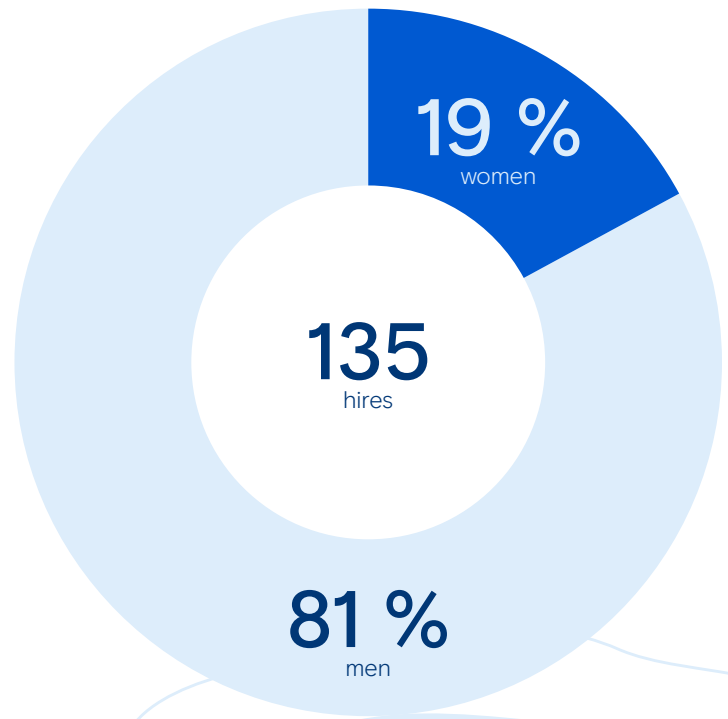
Mining Facilities



Critical Minerals and Metallurgical Complex



Hires in 2023





Training

Havre-Saint-Pierre

8,826
hours
of training

272
employees
in training

Sorel-Tracy

90,935
hours
of training

1,363
employees
in training

Everyday Respect

In 2021, the Rio Tinto Group initiated a cultural shift towards Everyday Respect, everywhere the Group operates. This major shift follows the report on everyday respect at Rio Tinto produced by Elizabeth Broderick & Co., an internationally recognised firm.

Rio Tinto is committed to creating a work culture consistent with its organisational values of care, courage and curiosity. By making this change to become an organisation where everyone, at every site, feels safe and can thrive, Rio Tinto is putting that value of courage into action.



At Rio Tinto Iron and Titanium (RTIT) Quebec Operations in Sorel-Tracy, we've made this culture change happen by:

2019

Renewing our Respect Policy and introducing measures to enforce it.

2022

Training our managers on "Building Everyday Respect – Leading with care, courage and curiosity."

2022

Training our employees on "Building Everyday Respect through care, courage and curiosity."

2023

Holding thirteen listening sessions held with some 100 contractors.

2023

Launching facilitation workshops with unionised employees. A full 90% of hourly employees at the Powder Plant have participated in a facilitation session.

Commemorative events

at the Havre-Saint-Pierre Mining Facilities

Thirty years since the plane crash

July 28 is a date etched in the collective memory of all Havre-Saint-Pierre residents. This year, to commemorate the 30th anniversary of the tragedy in which five colleagues lost their lives in a plane crash, a committee organised a sober and symbolic ceremony for the families and employees of the Mining Facilities.

The families of the victims, local elected officials, and the Mining Facilities management committee went to the mine, where buses were waiting to take them to a new interpretation site at the Tio Mine's Léo waste rock pile. The relatives of the deceased saw the accident site and were then taken to a cross erected in memory of the victims for the commemoration ceremony.



Sixty years since the train accident

On 21 September 2023, we marked the 60th anniversary of a tragic train accident in which six mining pioneers lost their lives and eight others were injured.

The relatives of those who died were invited to a commemorative event held on the railway line, at the accident site, where a cross was erected a few years ago.

A maple tree was planted next to the cross in memory of the deceased workers and their families. Every fall, the stately tree's red foliage will remind us of the courageous pioneers who are no longer with us and the precious legacy they left behind. A commemorative plaque was unveiled at the event, and volunteer family members read "Accident", a poem written at the time by local poet Roland Jomphe.



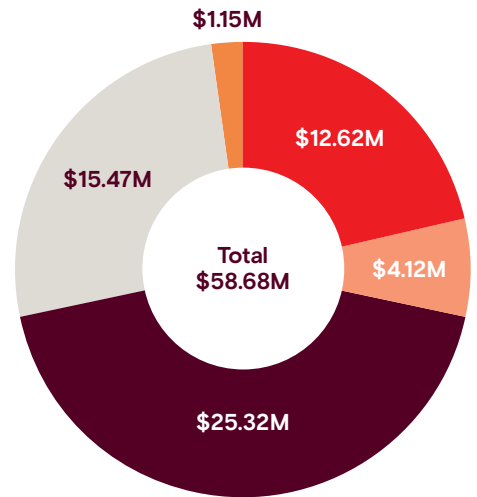
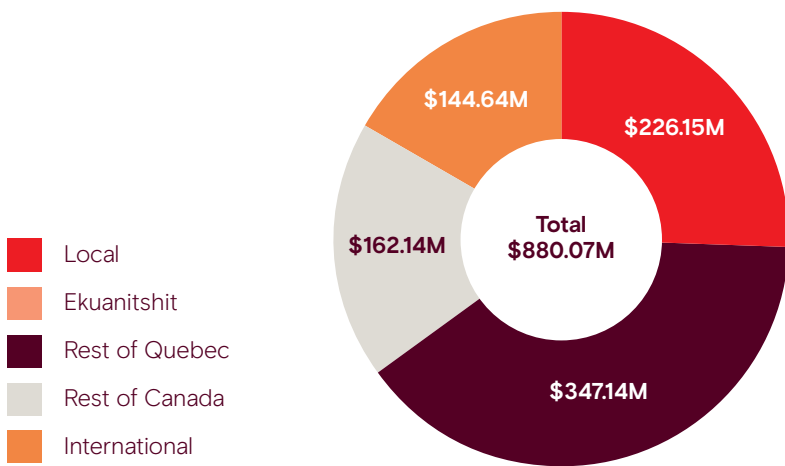
Economic benefits

Regional economic benefits for 2023

RTIT Quebec Operations is committed to fostering regional economic development, working with local suppliers, and spending in the community whenever possible.

Breakdown of expenditures at the Sorel Tracy
Critical Minerals and Metallurgical Complex

Breakdown of expenditures at the
Havre-Saint-Pierre Mining Facilities



- Local
- Ekuanitshit
- Rest of Quebec
- Rest of Canada
- International



Environment

In 2022, Rio Tinto set ambitious global decarbonisation targets to reduce the company's emissions by 15% by 2025, reduce Type 1 emissions (produced by the company) and Type 2 emissions (indirectly related to energy consumption) by 50% by 2030, and achieve net zero carbon emissions by 2050.

Building on its two flagship initiatives to decarbonise the Critical Minerals and Metallurgical Complex—the BlueSmelting™ Demonstration Plant and the use of biocarbon—Rio Tinto is also pursuing four environmental priorities:

Air	Water	Greenhouse gases	Tailings
<p>We're taking action to optimise air quality by:</p> <ul style="list-style-type: none"> Ensuring adequate furnace hood ventilation Managing dust collectors Installing leak detectors and monitoring equipment performance Reducing fugitive dust Reducing noise in the community 	<ul style="list-style-type: none"> Using robust systems to ensure compliance for all effluents Reducing water consumption and improving recirculation 	<ul style="list-style-type: none"> Increasing energy efficiency and optimising CO gas usage Carrying out decarbonisation initiatives 	<ul style="list-style-type: none"> Optimising the P-84 tailings facility Improving cleanliness and good order around plants Developing alternative valorisation methods



P-84 tailings facility

Air

Critical Minerals and Metallurgical Complex

The activities of RTIT Quebec Operations can generate dust. We therefore monitor air quality at the site using EcomSmart equipment, which measures key parameters and transmits results in real time.

Having accurate, real-time data allows us to improve our performance and optimise our response times. Using the measurements and taking wind direction into account, we worked with our supplier to develop a new platform that helps us target dust-generating activities and act at the source to minimise and eliminate their impact on all internal and external stakeholders.

Since launching the platform, we've been able to pinpoint activities where the necessary dust control measures aren't being applied and improve the performance of the control measures. Action is taken as soon as a problem is identified, reducing the impact on the community.

Every action taken upstream allows us to significantly reduce the impact of our operations beyond our sites.

The platform is part of the monitoring equipment used in the new Primary Operations Centralised Control Room.

Eau

Mining Facilities

Investing in the environment

Between 2018 and 2024, RTIT Quebec Operations invested \$31.9 million in environmental capital projects:

- Balancing pond at the water treatment plant
- Increase in pumping capacity at Grondin
- Permanent water treatment plant for the mine
- Filtration system for the Actiflo system
- Ongoing project at Effluent Elac166
- Automation of the RH-Léo pumping station
- Resurgence at Aiguillage Sud

Critical Minerals and Metallurgical Complex

By making water management an operational responsibility, we've been able to implement sustainable solutions to ensure our effluents comply with all applicable regulations. Multidisciplinary teams continue to work on the solutions to make sure they are robust.

Greenhouse gases

We have a solid programme aimed at meeting ambitious decarbonisation targets. We're building on two major forward looking initiatives—our BlueSmelting™ Demonstration Plant and the biocarbon trials in our reduction furnaces—to reduce our greenhouse gas emissions. Efforts are also being made on a daily basis to optimise our CO gas consumption, and energy efficiency activities are in the pipeline.

Energy and greenhouse gas emissions at the Sorel-Tracy Critical Minerals and Metallurgical Complex

915,948 mt CO₂ eq

Tailings

We created a by-product management committee to turn our tailings into by-products and achieve closed-loop management. We're also ensuring that all areas apply the 3R-VD principles = Reduce-Reuse-Recycle-Valorise-Dispose.

Highlights

White noise

The many vehicles on the Critical Minerals and Metallurgical Complex site are a major source of noise for neighbours. That's why they must be fitted with a white noise back-up alarm. Since 30 July 2023, contractor vehicles must also comply and be fitted with a white noise back-up alarm.

Recycling

The Critical Minerals and Metallurgical Complex site is equipped with all the necessary recycling infrastructure. Large scrap is collected in 20-yard containers and then sorted and recycled by a contractor. Household waste is recovered from waste and recycling bins in common areas.

The Environment Team carried out awareness activities in 2023 to increase collective efforts to recycle household waste.

Communities and Social Performance

Social investments

When we talk about social investments, we're talking about the amounts we contribute through our donations and partnerships programme, as well as the time our employees spend working with regional organisations to understand the challenges and issues facing the communities in which we operate.

Our approach fosters long-term thinking, so that our team can respond to the needs and wishes of these communities in a more strategic way—to be rigorous and thoughtful throughout the investment process in order to provide financial support to high-impact projects that effect meaningful change.



Our donations and partnerships programme has four main pillars:

1. Social

Provide essential health services and support social, community and volunteer initiatives that complement existing public services in order to improve the quality of life of vulnerable groups and encourage everyone to lead healthy, active lives.

- Association de la déficience intellectuelle de la région de Sorel
- Association de la fibromyalgie du Bas-Richelieu
- Centre d'action bénévole du Bas-Richelieu
- Centre d'action bénévole de la Minganie
- Centre Le Volet des femmes
- Familles en fêtes
- Fondation des bénéficiaires des CHSLD Pierre-De Saurel
- Fondation Hôtel-Dieu de Sorel
- Groupe d'entraide leGESTE
- Halte-Soleil
- L'Ardoise – Centre populaire en alphabétisation
- L'Espoir de Shelna
- La Traversée | Centre de crise et de prévention du suicide
- Maison L'Ancre
- Maison de la musique de Sorel-Tracy
- Ville de Saint-Joseph-de-Sorel

2. Regional economic development

Foster the emergence of a regional economy rooted in sustainable development and industrial ecology, encourage a strong entrepreneurial culture, and support a diversified arts and culture scene.

- Azimut diffusion
- Sorel-Tracy Chamber of Commerce and Industry
- Parc régional des Grèves

3. Education

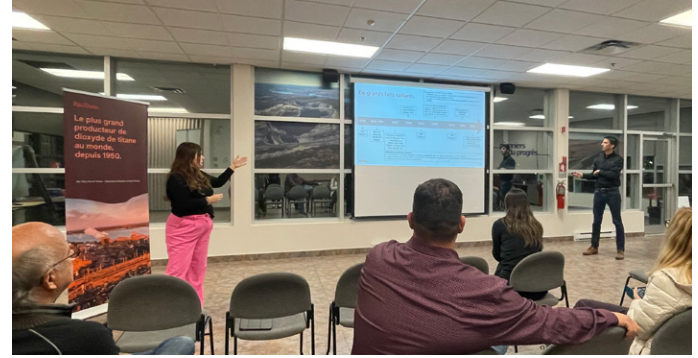
Promote training, education, and graduation and partner with initiatives aimed at training and retaining skilled workers.

- École Martel
- École secondaire Bernard-Gariépy
- École secondaire Fernand-Lefebvre
- Fondation du Cégep de Sorel-Tracy
- Course des jeunes

4. Environment

Protect ecosystems and biodiversity, especially in protected areas, and improve the quality of the natural environment.

- Biophare
- Société d'aménagement de la Baie de Lavallière



Regional workshop with external stakeholders

Building on its 2018 regional consultation, RTIT Quebec Operations met with community representatives in 2023 to refresh and further its understanding of the challenges and opportunities surrounding regional development. We're committed to working as an engaged stakeholder to help our communities grow and thrive and want to align our actions with regional needs and priorities as per Rio Tinto's Communities and Social Performance Standard.

This regional initiative had three main objectives:

1. Inform key regional actors of the strategic projects being led by RTIT Quebec Operations.
2. Gain a better understanding of regional issues and the needs of neighbouring communities.
3. Inspire and engage regional actors and work with them on shared initiatives.

Key takeaways and next steps

The regional actors who attended want to drive a transition from an industrial culture to an innovation culture that mainstreams global environmental concerns.

Discussions are now underway on a number of key topics. Others could be added if they emerge as priorities for the region and generate sufficient interest and involvement.

Coming out of the workshop, initiatives and discussions were launched on the following topics:

1. Training
2. Housing + newcomer welcome and integration
3. Regional pride

Terres d'en haut citizens committee

The Terres d'en haut citizens committee has been in existence for over 25 years. Members are elected during an annual meeting. The committee meets twice a year with RTIT Quebec Operations and holds an annual citizens' meeting for the public.

In 2022, the committee adopted a governance charter to provide a clear framework for its activities. The charter lays out a mandate, objectives, and member commitments, as well as the committee's structure, governance, and ways of working.

The current members of the committee are Patrick Cyr, Maxime Dumontier, Alexandre Joyal, and Alexandre Lévis.

Dialogue process

RTIT Quebec Operations strongly believes in leading an ongoing, open, and proactive process of dialogue, consultation and engagement. We strive to listen actively to community concerns, give them due consideration, address them, and take the necessary measures to respond.

Over the past year, we hosted and attended a series of meetings to strengthen our ties with the community. We met with the mayors and general managers of the municipalities near our operations, the representatives of organisations that receive support from RTIT Quebec Operations, various socioeconomic stakeholders, and the main contractors who work in our facilities.

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Meetings with the mayors and general managers of neighbouring municipalities, heads of organisations, and main contractors

2

Terres d'en haut citizens committee meetings

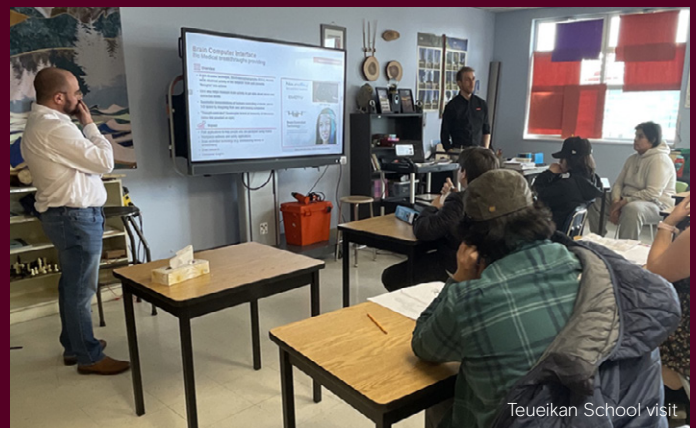
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Events attended by our representatives:

- Sorel-Tracy business achievement awards
- Hôtel-Dieu de Sorel Hospital Foundation fundraising dinner
- Sorel-Tracy Chamber of Commerce and Industry golf tournament
- City of Saint-Joseph-de-Sorel golf tournament
- Hôtel-Dieu de Sorel Hospital Foundation golf tournament
- Fibromyalgia Association golf tournament

Uauitshitun Agreement with the Innu First Nation of Ekuanitshit

- Over the course of 2023, regular meetings were held by the partners of the joint working groups for the Uauitshitun Agreement
- Students at Teueikan School got a visit from members of the leadership team for a presentation on RTIT Quebec Operations and the career opportunities within the organisation
- Mine tour with the BEAHR programme
- The executive committee's investment priorities for 2023 were youth, access to sports, and Innu and Acadian culture



Teueikan School visit



For information or
to voice concerns



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We want to hear from you!

Don't hesitate to drop us a line at rtft.info@riotinto.com to share your thoughts on our social, environmental, or business performance.