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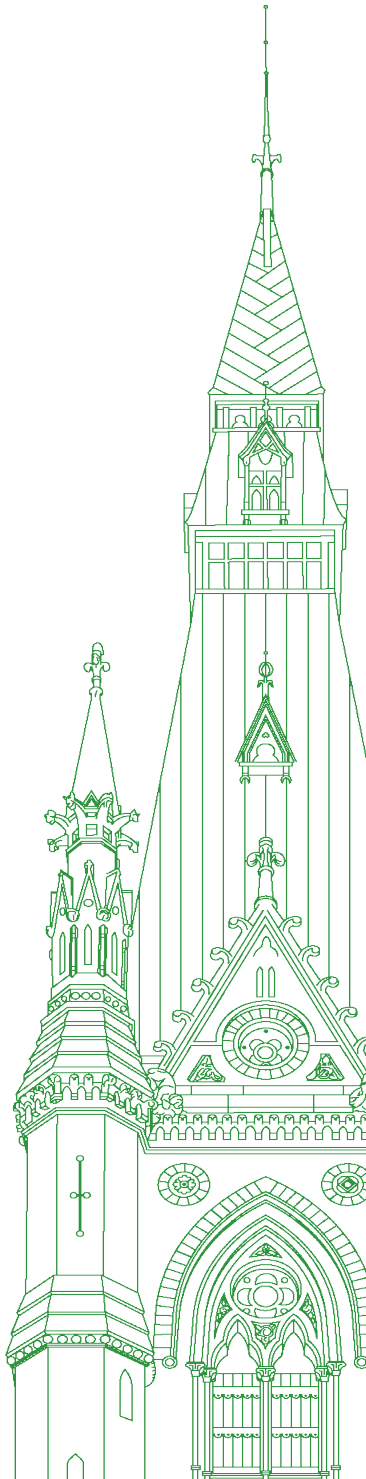

Chair: Charles Sousa

Standing Committee on National Defence

Monday, March 9, 2026

● (1100)

[*English*]

The Chair (Charles Sousa (Mississauga—Lakeshore, Lib.)): I call this meeting to order.

Go ahead, Monsieur Savard-Tremblay.

[*Translation*]

Simon-Pierre Savard-Tremblay (Saint-Hyacinthe—Bagot—Acton, BQ): Mr. Chair, I would like to ask a quick question regarding the presence of cameras.

Who were all these people?

[*English*]

The Chair: Which people are you referring to?

[*Translation*]

Simon-Pierre Savard-Tremblay: There were about four or five photographers, but they've just left.

[*English*]

The Chair: It's my impression that these were members of the media who chose to come this morning.

[*Translation*]

Simon-Pierre Savard-Tremblay: Is that all it was?

[*English*]

The Chair: That happens. I just came from Washington and its congressional meetings, and Monsieur Savard-Tremblay, it's quite a spectacle to see congressional meetings.

The media is everywhere. The media was advised—

[*Translation*]

Simon-Pierre Savard-Tremblay: Yes, of course, Mr. Chair, but we are a little less used to this in our committees.

You must be big stars, gentlemen.

[*English*]

The Chair: That star would be you.

Some hon. members: Oh, oh!

[*Translation*]

Simon-Pierre Savard-Tremblay: That's fine; I made my contribution over the last weeks.

[*English*]

The Chair: Welcome to meeting number 26 of the House of Commons Standing Committee on National Defence.

Before we begin, I want to give you a quick outline of some of the things that will be happening in the coming weeks.

As you know, on Wednesday, we will not have the PBO. In his absence, we'll try to do a threat analysis on the Iran conflict. I'll have more details in the coming hours and days with respect to that. It would be a very timely event for Wednesday.

There's also a Portuguese delegation. The naval commander and his individuals will be coming. They would like to have an informal meeting on Tuesday, March 24, at 10 a.m. The clerk is trying to organize some of the deliberations with regard to their engagement with NATO and Atlantic security.

On Wednesday, March 25, the Minister of National Defence will appear on the supplementary estimates (C), and Mr. Guzman will now appear on April 13 to make up for the fact that he wasn't here previously.

Pursuant to Standing Order 108(2) and the motion adopted by the committee on Tuesday, September 16, 2025, the committee is meeting to resume its consideration of the nexus between national defence, national security and the critical minerals sector.

Today's meeting is taking place in a hybrid format, pursuant to the Standing Orders. Members are attending in person and remotely using the Zoom application.

Before we continue, I ask participants to consult the guidelines on the table. These measures are to help prevent audio and feedback incidents and to protect the health and safety of our interpreters.

I'd like to remind witnesses and members to please wait until I recognize you by name before speaking. If you wish to speak, please raise your hand. For members on Zoom, please use the "raise hand" function. The clerk and I will manage the speaking order as best we can.

For interpretation, use your earpiece and select the appropriate channel: floor, English or French. That's also available on Zoom. All comments should be addressed through the chair.

I'd now like to welcome our witnesses. I'm going to start with you, Nadia, because I'm not going to do your name justice. I have a tendency to do that in this committee, and I apologize from the outset.

We have Nadia Mykytczuk, executive director of the Goodman School of Mines, Laurentian University; Heather Exner-Pirot, director of energy, natural resources and environment, Macdonald-Laurier Institute; and Sean Boyd, chair of the board, Agnico Eagle Mines Limited.

Welcome to the three of you, and thank you for being available to us via the virtual system.

With us here live are Jim Balsillie, founder, Centre for International Governance Innovation; and Rodrigue Turgeon, national program colead, MiningWatch Canada.

I'm going to give all of you five minutes for your opening statements. That will take a good half an hour of our time. It we stick to that timeline, we'll get through them quickly. I know members would like to ask questions and have a dialogue and interaction with all of you.

Nadia, I will proceed with you first.

● (1105)

Nadia Mykytczuk (Executive Director, Goodman School of Mines, Laurentian University): Thank you, Mr. Chair.

Hello. *Aanii*. Good morning to everyone. Thanks to the members of the committee for this opportunity to appear today.

As the chair said, I'm Dr. Nadia Mykytczuk, executive director of the Goodman School of Mines at Laurentian University. I'm also the president and CEO of MIRARCO Mining Innovation, and I hold an NOHFC industrial research chair in biomining and bioremediation. I'm based in Sudbury, Ontario, one of Canada's historic mining regions and a global centre of mining innovation. My remarks today focus on the relationship between critical minerals, research capacity and Canada's long-term defence sovereignty.

I'd like to start with one point: Canada's defence sovereignty is inseparable from its mineral sovereignty. Modern defence systems are fundamentally materials-dependent. Advanced communications systems, aerospace sensors, autonomous systems and electrified military infrastructure all rely on secure access to critical minerals such as nickel, copper, cobalt and rare earth elements.

Canada is very fortunate to possess significant mineral resources. However, the real strategic vulnerability today is not our geology; it is our processing capacity and supply chain dependence. In many cases, Canadian minerals are exported for refining and upgrading abroad before returning as inputs into advanced technologies. This reliance on foreign-controlled processing exposes Canada and our allies to supply disruption, export controls and geopolitical pressure.

Canada's defence industrial strategy recognizes that securing supply chains is key for inputs of critical minerals and essential to operational readiness and sovereignty. Put simply, geology alone does not provide security. Domestic processing capability and innovative, integrated supply chains do.

One of the most immediate opportunities to strengthen the capability lies in Canada's legacy mine waste. Across the country, more than 10,000 historical mine waste and tailings deposits contain recoverable concentrations of nickel, copper, cobalt, rare earth elements and others. These deposits represent significant elemental reserves. In Sudbury alone, for example, legacy tailings are estimated to contain 8 billion to 10 billion dollars' worth of nickel, and it is similar for copper and cobalt.

Mine waste valorization offers several strategic advantages. First, it can provide near-term domestic sources of critical minerals. Second, these projects should have shorter permitting timelines and lower capital costs compared to new greenfield mines. Third, when paired with emerging technologies, such as biomining or other low-energy recovery methods, it can reduce energy intensity while also advancing environmental remediation and reducing long-term impacts. From a national security perspective, mine waste should therefore be reframed as a latent strategic mineral reserve available for near-term development.

Canada has begun recognizing this opportunity through initiatives such as Natural Resources Canada's mining value from waste program. However, to fully realize this potential, we need to accelerate the national tailings database, resource evaluation, processing technologies and domestic mineral upgrading capacity.

This brings me to the role of research in universities. Recovering minerals from tailings is not straightforward. These materials do not behave like primary ore bodies. Each deposit requires tailored processing approaches and piloting scale-up. This is where Canada's research ecosystem becomes critical.

Canada has a strong and growing capability in metallurgy, mineral characterization, AI applied to process optimization, technologies such as biomining, and cold region mining systems. These areas intersect directly with defence priorities related to supply chain resilience, advanced materials and energy security.

Universities and colleges, of course, are foundational to this capability. We conduct the discovery research that underpins new mineral recovery technologies. We train the engineers, metallurgists, material scientists and skilled trades required for sovereign capability. We operate piloting facilities, like those that I've built at Laurentian and MIRARCO in Sudbury, that can help move technologies from lab discovery to industrial deployment. A strong defence industrial base is therefore built not only on factories, laboratories and piloting facilities, but also on classrooms.

At Laurentian University, for example, we recently launched the minerals and mining strategy, which is designed to strengthen our role as Canada's mining university during a period of geopolitical change and rising demand for critical minerals. Many of the initiatives we've outlined in that strategy, from mineral processing and advanced materials to automation and battery technologies, align specifically with emerging defence priorities.

● (1110)

In closing, I would humbly like to offer six recommendations for consideration.

First, recognize mineral processing and recovery as sovereign defence capabilities.

Second, treat mine waste valorization as a strategic reserve strategy.

Third, embed mineral and materials expertise within defence research advisory structures.

Fourth, invest in secure university and applied research infrastructure supporting defence-relevant mineral innovation.

Fifth, align critical minerals workforce development with the Canada defence skills agenda.

Sixth, ensure Canadian intellectual property arising from mineral innovation is protected within procurement and commercialization frameworks.

Canada has the mineral endowment, the research capacity and the industrial expertise to strengthen allied critical mineral supply chains. The opportunity now is to connect those strengths into a coherent strategy that supports economic prosperity, environmental sustainability and national security.

With that, I close my statement. Thank you.

The Chair: Thank you, Madam Mykytczuk. I appreciate that.

I'm going to alternate between those who are virtual and those who are here live, so I'm going now to Monsieur Rodrigue Turgeon.

You have up to five minutes, please.

[*Translation*]

Rodrigue Turgeon (Lawyer, National program Co-Lead, MiningWatch Canada): Mr. Chair and member of Parliament for Mississauga—Lakeshore, vice-Chairs, honourable members of Parliament, members of the committee; Mr. Clerk and members of your team, good morning. Thank you for having me.

My name is Rodrigue Turgeon. I am a lawyer and co-spokesperson and co-director of the national program at Mining Watch Canada.

Founded in 1999, Mining Watch Canada brings together 25 organizations which, collectively, represent several hundred thousand people across the country. The environment, human rights, indigenous rights, transparency and accountability of Canadian mining companies, both in Canada and abroad; for the past 27 years, our mission has centred on all these issues, at both the community and public policy levels.

As international institutions erode and Canada finds itself on the front line between three geopolitical powers—China, the United States and Russia—many voices are calling for the country to exercise greater control over the mineral resources within its territory. Taken to their extreme, these fears raise the possibility that foreign states might use Canada’s so-called critical minerals for economic, industrial or military purposes in a manner hostile to the country’s security and sovereignty.

The strategies of the Canadian and provincial governments regarding so-called critical minerals all relate to the purely economic issue of supply chains. Indeed, contrary to what industry and governments would have the public believe, it is by no means mandatory that these mineral substances be used for the energy transition. However, despite the security threats that have been cited for several years, we find virtually nothing in previous and recent bills tabled in the country that would give the authorities greater leverage regarding access to and control over minerals.

At present, we observe that governments seem more concerned about scaring off foreign investors or raising trade barriers than about foreign states using minerals extracted from Canadian soil against them. Paradoxically, we are even seeing a very high level of collaboration between the Government of Canada and that of the United States, including the Department of War, in the joint development, within the country, of numerous mining projects deemed critical or of national importance, and we are witnessing a diplomatic rapprochement between the Government of Canada and China.

To ensure consistency with its strategy, the Government of Canada should clearly communicate its position to the public regarding its tolerance or refusal to allow each foreign country access to the country’s critical minerals. It should then act in accordance with its position, by avoiding collaboration with foreign entities hostile to Canada’s actual security, by denying them access to so-called critical minerals and, at the very least, by avoiding expediting the issuance of authorizations to such entities.

Under no circumstances must the country’s minerals be used for the creation or proliferation of weapons used in violation of international law, including in acts of genocide, whether employed by the country itself or by a third state.

One thing is certain: further damage to the environment, the rights of indigenous peoples and local communities is to be expected if Canada insists on increasing mining production for military, national security or national defence purposes.

Across Canada and internationally, Canada and its provinces claim to stand out for their ability to produce minerals that are not only critical but also responsibly sourced. We do not agree with this vision. Governments should enshrine the United Nations Declaration on the Rights of Indigenous Peoples in mining laws, recognize that clean air and clean water are vital to Canada's national security, and focus their efforts on achieving mineral sobriety across all minerals and sectors, including national defence. In other words, Canada's overconsumption of minerals must be reduced.

There is a cost to rushing through authorizations for mining projects. This opens the door to bad projects, which are dangerous for the safety of workers, indigenous peoples, local communities and the environment. The Government of Canada must also close the door to seabed mining for military or other purposes. The national defence strategy regarding minerals referred to as critical must not rely in any way on the use of nuclear energy.

Like a large segment of civil society, we condemn the diversion of funds and efforts intended for the energy transition. The climate emergency is not merely a vague geopolitical threat, but a real danger to national security. We cannot negotiate peace with nature.

● (1115)

Thank you for your attention and for considering our recommendations and our brief on the nexus between critical minerals, national security and national defence.

The Chair: Thank you, Mr. Turgeon.

[*English*]

I appreciate that.

I will now go back to our virtual panel.

Heather Exner-Pirot, it's over to you for five minutes.

Heather Exner-Pirot (Director, Energy, Natural Resources and Environment, Macdonald-Laurier Institute): Thank you, Chair and committee members, for the opportunity to speak to you today.

When we first started talking about and prioritizing critical minerals—probably around 2019—it was largely in the context of the energy transition and the need for minerals to replace fossil fuels. Following the COVID-19 pandemic, the Russian invasion of Ukraine and American concerns with Chinese rivalry, the policy focus has recently turned to critical minerals' roles in defence supply chains. After a late start, I would say that the G7 and western nations, including Canada, are starting to take the issue seriously, and some advances are being made, but this attention has also served to reveal how serious and complex the issue is.

I want to make a few points in my opening remarks to kick off the discussion.

First is how we define critical minerals. There is a clear distinction among minerals that are important to the economy and trade, minerals that are important to electrification and minerals that are essential to defence and industrial processes but have been intentionally monopolized by China. I think the focus of defence policy should be to intervene in markets for niche products that the free market can't or won't resolve on its own because the market has been manipulated. I don't think that's nickel and lithium. I think that's gallium, germanium, graphite and rare earths.

Second is the issue of stockpiles. The issue is getting thrown around without much thought or sophistication. It's obvious that stockpiles are not the solution for most critical minerals. A stockpile would disrupt normal market functions, be too expensive to manage or be too logistically difficult, or we would be stockpiling a resource that we don't have the capability to process and refine. I think the processing and refining capacity issue is much more difficult and should be the focus of coordination with allies, in coordination with manufacturers and processors. I expect those conversations are happening behind the scenes, but it would be good to bring more political attention to them.

I want to highlight one more issue. Canada excels at resource extraction, and we have ample supplies. This would be enormously helpful in the case of a protracted conflict with an adversary, as we have latent capacity to supply raw materials into NATO defence supply chains.

We have lost much of our expertise and knowledge in how to translate raw materials into energetics, munitions and products needed for weapons. Some of this is a result of ideological preferences over the last two or three decades that have shunned research for military purposes. As I understand it, we have lost internal government capability in defence labs and have precluded NSERC funding for research focused on offensive military technology.

I bring this up because the new defence industrial strategy specifically mentions nitrocellulose, which is a by-product of forestry that is essential for energetics. We need to translate raw materials into something useful for weapons, and I suspect we have lost much of that technical ability. As much as we are focused on the value-add for raw materials in the broader economy, we need to ensure we have more value-add capability in Canada in defence supply chains.

Finally, I will point out that much of China's dominance in critical minerals has come from its willingness over the last decade to invest in the supply chain counter-cyclically. That has allowed it to take much more market share, and our reliance on private investment and the free market has meant we've been largely on the sidelines. We are now in the upswing of the commodity cycle. Some shortages and scarcity will now be resolved by the market, so I think we need to focus our scarce resources on those few goods that won't be. I would say that the NATO critical minerals list and the China export restrictions list point us in the right direction.

Thank you for your attention. I look forward to questions.

● (1120)

The Chair: Thank you very much.

I'll turn it over now to Mr. Balsillie. You have up to five minutes, sir.

Jim Balsillie (Founder, Centre for International Governance Innovation, As an Individual): Thank you for the invitation to appear today.

Your study is important and timely. I encourage you to also include economic considerations in this nexus, because the economy and our security are two sides of the same coin.

Canada's policy thinking remains rooted in the 1970s, in an economy that no longer exists, which has caused a systemic erosion of our prosperity and productivity over the past 35 years. Recent strategic actions of leverage against Canada by multiple large nation-states have laid bare that our sovereignty and security were concurrently eroding over the same period because of this outdated thinking.

The digital transformation over the past 35 years has created a new kind of economy in which wealth, power and security are rooted in the ownership of intangible assets of IP and data AI. These assets behave differently in the market than tangible goods do and require different strategies. As shown in appendix 1, they have grown to dominate, making up over 92% of the S&P 500's $55-trillion total value.

As summarized in appendix 2, the tangible and intangible economies operate in opposite ways, with the intangible economy of negative rights and economic rents governed by domestic and international frameworks that are constantly changing to create winners and losers, thus incenting strategic behaviour, including leverage.

In the ensuing appendices, I will summarize the examples I present where the U.S., the EU and China have developed sophisticated capacity and strategies to utilize these legal frameworks to advance their prosperity and security via value-added products and process technologies in the realms of defence and critical minerals. Then I'll conclude with what Canada needs to do urgently.

In appendix 3, I list examples of how in 2025, the U.S. advanced their interests via legal frameworks such as their AI white paper, the GENIUS Act for tokenization, an array of tariffs and the flexing of IP march-in rights.

In appendix 4, I summarize how the U.S. national security strategy integrated these into one document, illuminating the role of strategic standards, adding resource security, including critical minerals and doing much more.

In appendix 5, I show that while we are aware of the recent high-profile U.S. exit from 66 international organizations, they doubled down their participation in three international standards organizations that govern value chains for advanced products and process technologies for critical mineral and defence sectors and for many other sectors as well.

In appendix 6, I note how the U.S. patent office concurrently created a working group to create more patents from their SMEs and insert them into global standard organizations and, by extension, into global value chains, all to lock in and profitably grow their companies.

Appendices 7 and 8 illuminate aggressive U.S. tokenization strategies for both financial and real-world assets, including critical minerals and mines.

Appendix 9 summarizes how the EU uses standards, particularly via CEN-CENELEC, for the value chains for defence and critical minerals, just as the U.S. and China do.

Appendices 10 and 11 show soaring granting of patents for mining, defence and AI, with Canada essentially absent.

Appendix 12 summarizes how China has strategically built dominance in critical mineral value chains of processing, patents and standards alongside traditional supply chains of mines.

As you can see, Canada requires a wholesale reorientation of how a sovereign nation must be governed in the 21st-century economy if we want greater global scale from our promising companies and gifted entrepreneurs. The strategies I have identified today are all “and” strategies, not “or” strategies, when it comes to capitalizing our natural resources, but they are technical and require expertise. Absent these updated approaches, Canada will again not achieve better outcomes for Canadians. The November federal budget and the recent defence industrial strategy were missed opportunities to reorient away from the failed approaches of the past.

I will close with a quote from an expert in an article stating that in this modern economy, FDI should not be an article of faith, because without shrewd insertion into value chains of intangibles, a “country can host large foreign-owned production facilities and impressive export volumes while capturing only a thin slice of the value created.”

Thank you. I look forward to your questions.

● (1125)

The Chair: Thank you, Mr. Balsillie.

Members, I know of the report that Mr. Balsillie is speaking of, and the appendices have been distributed to the clerk. They're being translated for our purposes, but I think some of you have received them courtesy of Mr. Balsillie.

I think you brought a few hard copies, Mr. Balsillie.

Monsieur Savard-Tremblay, I'm not sure if you have a copy, but we are going to get it translated as well.

Our last witness, for five minutes, is Mr. Sean Boyd.

It's over to you, sir.

Sean Boyd (Chair, Board of Directors, Agnico Eagle Mines Limited): Thank you, Mr. Chair.

My name is Sean Boyd. I'm the chair of the board of Agnico Eagle Mines Limited.

On behalf of Agnico Eagle, it's my pleasure to speak to the standing committee today on a topic that we all know is of great importance to Canada. It's one where Agnico Eagle, given our long history and expertise in mining, feels that we can be of service to the Government of Canada.

I'll focus my remarks today on three areas where we can provide some guidance to the committee.

The first is on the defence industrial strategy, particularly in the Arctic. It's nice to see a comprehensive strategy, but we feel that the emphasis, when we talk about sovereignty, needs to start with socio-economic benefits and support in communities. Strong communities are strong sovereignty.

We have some thoughts on incentives to promote defence mineral production in Canada, not only from our long experience in mining in Canada, but also from our newly created, wholly owned subsidiary, Avenir Minerals, which has a focus on critical and strategic minerals and metals in Canada. I will also talk about the potential alignment between Canadian mining companies, particularly those operating in the north, and the federal government, with opportunities for collaboration and partnership. We have specific examples on this.

It's important to have a strategy, but it's also important to ensure that we get effective and efficient execution of that strategy. That's where mining companies come in with experience and skills, particularly in the north, working with the government to achieve the objectives.

We have to remember that mining is a tough business. We're often governed by nature and economics. We can't put deposits where we'd like them to be. There's a lot of work to do, but we still see tremendous opportunity.

Agnico Eagle is Canada's largest mining company. We've grown from a very small company to be the second-largest gold producer in the world. We've done it with 85% of our business based in Canada, and we have 14,000 employees. We have seven mines in Ontario, Quebec and Nunavut. We produce more than half of Canada's gold, which was Canada's second-largest export in 2025.

We're one of the largest corporate taxpayers in Canada, at $2.7 billion. That number will be higher in 2026. We're also the largest payer in the country to indigenous groups under benefit agreements, at over $200 million. We expect that number to rise significantly in 2026.

We're deeply committed to Canada's north. We have two mines in Nunavut, including the Meadowbank complex and Meliadine in the Kivalliq region. The Hope Bay project is on our northern coast. Since 2007, which is almost 20 years ago, we've invested over $10 billion in Nunavut. We're currently roughly 22% of the GDP of Nunavut. We have 400 Inuit employees among 4,000 employees in Nunavut. That's a significant contributor to their economies.

In 2021, following the Government of Canada's decision to block its sale to a Chinese firm, Agnico Eagle purchased the Hope Bay mine on Canada's northern coast. Since that time, we've invested over $1 billion at the site. We now have a plan to redevelop and reopen this mine with the support of the Kitikmeot Inuit Association, along with an investment by Agnico Eagle of over $2 billion. We plan to announce the go-ahead on this project in the spring.

Hope Bay is an interesting project, given the time and moment we're in as a country. Although it's not on the major projects list, the timing of moving it forward and the significant investment in the Northwest Passage really send a strong signal to our allies and adversaries about Canada's assertion of sovereignty in the Arctic. It drives national economic growth. It strengthens and sustains northern communities. It develops significant and important infrastructure for the north. It creates meaningful employment and high-paying jobs, and it advances indigenous economic reconciliation. It's an important project that forms the basis of continued investment by Agnico in Canada's north, in partnership with communities and in partnership with the government.

As we all know, Russia has spent considerably more on infrastructure in the Arctic than any other Arctic nation. It has 17 deep-water ports, while Canada has none. Canada is a frontline NATO country, sharing the largest maritime border in the world with Russia, meaning we have a sizable commitment for collective security. Really, there's no time to waste on this.

● (1130)

The Arctic region presents Canada with an opportunity to contribute to national and collective security in a way that is uniquely Canadian and can suit our national identity, and it provides an opportunity to the federal government to demonstrate not only to the world but to Canadians the importance of the north in our future. A great start is Canada's defence industrial strategy, which places a significant emphasis on Canada's north and the Arctic and on the need to provide sovereignty in this vital region, but as we say, it all depends on effective and efficient execution.

Building mines, when you do it properly, is really about building community. When it's done in the north, it's also about building the nation. To ensure its success and wide support, Canada's approach to Arctic defence must be part of a broader socio-economic strategy that understands sovereignty as being fundamentally about people, communities, the strength of communities and the opportunities that exist in communities.

One of the keys to ensuring strong communities is education. With one-third of its 40,000 people under the age of 15, Nunavut is home to Canada's youngest population. At the same time, Nunavut has the lowest high school graduation rates, with a completion rate of only about 50% resulting in only about 300 high school graduates per year across the entire territory. Obviously, when you think about investments in mining, along with investments in defence and community infrastructure, we're going to need a lot more highly skilled workers to allow us to efficiently execute them.

I'll put this into context. As I mentioned—

The Chair: Mr. Boyd, we have to wrap it up soon. I'm sorry.

Sean Boyd: When you look at $10 billion of Agnico spending since 2007, with plans to spend multiples of that over the next several years, the key to making this work is the coordination of the strategy with an effective procurement of skills, as well as skills training and development.

Thank you for the opportunity.

The Chair: Thank you very much.

We all appreciate the witnesses being here before us.

We're going to start our first round of questions with Mr. Anderson.

It's over to you for six minutes, sir.

Scott Anderson (Vernon—Lake Country—Monashee, CPC): Thank you very much.

This question is for Dr. Exner-Pirot, but I'd like Mr. Balsillie and Mr. Boyd to answer it as well.

We've talked a lot about sovereignty. Critical to sovereignty is the actual ownership of the materials. Pierre Poilievre has talked a lot about using those materials as leverage as a middle power. We don't have a lot of hard power, but we have some soft power, and we can use that as leverage.

With respect to critical and rare earth minerals, my primary concern is the monitoring of foreign ownership. Is the current 20% to 25% threshold that triggers a review sufficient?

Would you answer that, Mr. Balsillie?

Jim Balsillie: I would say control is a complex thing. As I said, FDI should be carefully monitored, not only for economic spillovers but for security spillovers.

Owning the minerals does not in and of itself give you leverage if you do not own the ability to turn them into something. It is the beginning of the potential for leverage, but in and of itself, it's not leverage.

● (1135)

Scott Anderson: Thank you very much.

Dr. Exner-Pirot.

Heather Exner-Pirot: I wish I could say it doesn't depend on the context, because sometimes people just need a number they can work with to be predictable, but it depends on the context. I think the most susceptible are junior miners and small projects. If they are looking for investment and would take it from anywhere they can get it because they might not go ahead if they don't get some investment from some kind of investor, then they're susceptible to Chinese investment.

The other aspect is that for some of the niche metals we talked about, China has a basic monopoly on processing and refining. At some point, you have to work with some Chinese interests because they're going to be the only person taking your offtake.

I don't want to do this on a case-by-case basis, but 20%.... I think Australia does 10% as a threshold. It's very different depending on the size and whether something is publicly owned or privately owned.

This is absolutely a way the Chinese have influenced junior mining operations. There's another consequence of that that people are concerned about. If you had a project, for example in the Arctic, and there was Chinese influence, they could use their leverage to do monitoring or jamming or have some presence in the Arctic that might interfere, for example, with NORAD.

Scott Anderson: Thank you very much. These are more broad-based questions.

Mr. Boyd.

Sean Boyd: I agree with Heather. It's about context, and a lot of this will depend on the opportunity and the deposit, and the importance of the deposit to the country. We're the beneficiary of a foreign investment review that resulted in us owning a project on our northwest coast, which we talked about, at Hope Bay. This was important for ensuring that that property, given its location and its benefit to the region, was in Canadian hands. We're the beneficiary of that.

When you look at critical metals, though, you have to balance the need for capital and the need for skills in the context of whether a project can be an important part of the country's economic future. You have to weigh and measure that. As the government looks at that, it should also take into consideration the skills that exist in the country in moving those particular projects forward.

It also bears on where the country plans to invest in infrastructure. As we open up new areas, we should be mindful of where the critical projects are, of the impact the infrastructure is going to have on investments, of making them more investable and of understanding where the ownership currently lies with those major projects.

Scott Anderson: Mr. Boyd, what is the one thing the federal government can do to encourage companies to invest in mining in the north?

Sean Boyd: Mining is difficult and challenging, particularly in the north, so I think it's to improve certainty. The government has gone a long way in moving the permitting and approval process forward in a timely fashion. If we look at something like our Hope Bay project and the restart, it's taken multiple years and we still have permits, so it's tough.

It's about anything we can do to work in partnership with the government to understand the opportunity, but as we see it, the key to unlocking it all is going to be skills. It's not only about procuring skills from outside of Canada, but also about training to make sure we have the skills to realize the potential.

Scott Anderson: Mr. Boyd mentioned regulatory certainty. Mr. Balsillie, could you pick up on regulatory certainty as a driver of economic certainty?

Jim Balsillie: Of course, economic certainty is critical, but you also need the certainty that you have the ability to turn it into something that gives you the economics and leverage you're looking for. Regulatory certainty for a mine is one thing, but the regulatory certainty that you're creating products that are anchored into the global supply chains and value chains is equally important, or you're only competing on the commodity part of the economy.

Scott Anderson: Dr. Exner-Pirot, how exposed are northern mineral projects to single points of failure, those being roads, ports, one power source and those sorts of things?

Heather Exner-Pirot: I'm sure Mr. Boyd can answer this too, but I will say there's one operating mine in the Yukon right now. It's a silver mine, so it's not a critical mineral that's obviously important to the economy. Because Yukon is lacking in energy infrastructure, especially electricity infrastructure, they've had to curtail their production many times this winter, and last winter as well.

Electricity is maybe the main bottleneck to expanding northern mines right now. Probably for Agnico—and Mr. Boyd can answer this—they bring in their own energy. They bring their diesel generators, but for some smaller projects, if that's not possible or if there are some policies that prevent relying on diesel, that is absolutely an inhibitor. I can think of a copper mine, Casino in Yukon, for example, where access to electricity is probably the biggest barrier for being able to move that project ahead.

● (1140)

Scott Anderson: Mr. Boyd, do you have something—

The Chair: I'm sorry, Mr. Anderson.

Thank you very much to all of you.

I'm going to pass it over to Viviane Lapointe for six minutes, please.

Viviane Lapointe (Sudbury, Lib.): Thank you, Chair.

I'd like to welcome Dr. Mykytczuk to the committee and thank her for her appearance here this morning.

Last week, many of us attended PDAC, the large mining conference that was held in Toronto, and the federal government announced the creation of the Canadian digital core library, which will digitize decades of drill core samples using advanced technologies and AI.

Can you tell us, from a strategic perspective, how improved access to this kind of geological data helps Canada better understand and secure its critical mineral resources?

Nadia Mykytczuk: I'd be happy to answer that, MP Lapointe.

The announcement of the partnership, with CDL and Laurentian University being the academic leads on that project.... It is a very exciting nation-building project. We have millions of metres of drill core that has been, in many cases, held in private company libraries—some in the Canadian geological survey, the Ontario geological survey and other provincial repositories—but there has not been a large effort to digitize that data and make it available.

This project is ambitious. It is looking to scan that inventory of core, aiming to scan a million metres of core in the first year using a variety of multispectral and other scanning technologies to provide a broad cross-section of elemental characterization on the drill cores and to make that data available to digital and AI analysis. That will allow for us to go back to a lot of the deposits that were drilled maybe decades ago and overlooked. It will save per project even hundreds of thousands of dollars for drill campaigns that would otherwise still need to be done in areas where we may already have a lot of knowledge wrapped up in drill cores.

It will position Canada to very quickly reassess its potential for new mining development and to go back and look at core that was never analyzed for other elements that are now on the critical minerals list, like rare earths and others that might be associated with that mineralogy. It is a very important project and one that will quickly help Canada add to its knowledge of its mineral reserves.

Viviane Lapointe: Thank you.

We know that Canada has the geology for many critical minerals, but a lot of the refining and processing still happens abroad. We heard from Vale, which was a witness here in a previous week, and it said it has to import nickel to keep its refining operations going in Sudbury.

In the geopolitical situation we are in now, what risk does this kind of dependence create for Canada's ability to secure the materials needed for its defence and energy systems?

Nadia Mykytczuk: Is that also for me, Viviane?

Viviane Lapointe: Yes.

Nadia Mykytczuk: I'm sure Sean and others will speak to this as well.

The capacity we have is still underutilized. In the example you mentioned with Vale in Sudbury with our two smelters and the nickel refinery, there are times when there's not enough feed going through the process. We are starting to lose midstream processing capacity at operational mines. We are not building them fast enough. We are still relying, and have relied for decades, on exporting a lot of the raw materials and concentrates elsewhere.

There is a huge potential to maximize the usage of existing facilities by helping those facilities diversify processing capability to allow for a variety of custom feeds, whether they're for recycling or secondary material recovery, to make sure that our existing capacity and operations are used fully. They could then accept different types of materials during downtimes. That, I think, is a key piece for us to look at in shoring up domestic supply chain and midstream processing capacity.

● (1145)

Viviane Lapointe: Mr. Boyd, I had an opportunity to talk to some of your colleagues at Agnico Eagle Mines last week at PDAC, and I want to applaud Agnico Eagle for being a partner in that drill core library that we were just mentioning.

I want to ask a question. We know that climate change and increased accessibility are changing the strategic landscape in the Arctic. How does that shift affect the urgency of strengthening Canada's presence and economic activity in the north?

Sean Boyd: There's a definite sense of urgency around geopolitical concerns, obviously, and sovereignty in the north. As we look at global warming, it's certainly going to open up the opportunity to move around and create access. The challenge we have now, when we think about northern operations, is that we're dealing with a two- to three-month barge season. You effectively have to get your materials and energy supplies up in that small window. As that window broadens, I think it creates more opportunity. It does make it difficult in terms of road building, permafrost and construction. I think that has to be built in.

When we look at the question of how to take advantage of what we have, it's important, to your last question, to use existing infrastructure. The core scanning is a tool. When you think about it, a lot of the old mines were left with tremendous potential, with holes undrilled, due to commodity prices. When you look at the gap between what we're promising the world with our ability to deliver critical metals, there still needs to be lots of deposits discovered. A quick way to get started is to revisit old mining districts. Not only are you benefiting from infrastructure; you're also benefiting from the knowledge of deposits and using core scanning as a tool, and from dealing with and being able to leverage off of community partnership as well.

You have to build all of this into the mix when you're looking at economic opportunities and mine building. Mine building isn't as much a science as an art, particularly when you're working in the north. It will take tremendous partnerships, but using a lot of the history of what we've already built in Canada is an important start.

The Chair: Thank you, Ms. Lapointe.

Monsieur Savard-Tremblay, you have up to six minutes, sir.

[*Translation*]

Simon-Pierre Savard-Tremblay: Thank you, Mr. Chair.

I'd like to thank all the witnesses for being here and for their presentations.

Mr. Turgeon, I've heard a number of presentations, and I think it makes sense to talk about how to optimize infrastructure, update it and improve how it operates. Clearly, the use of critical minerals set out in the defence strategy is crucial and will be a daily challenge. If I understood you correctly, you support that use, but not at the expense of human beings, the air they breathe, the water they drink and their rights.

What exactly are we talking about when we talk about industry and critical mineral extraction by a Canadian company? I'd like you to talk about that, because it seems so easy to register as a business and begin operations, claiming to be of Canadian origin. Having a post office box gives businesses the benefits of a flag of convenience, which could include tax benefits and even a listing on the Toronto Stock Exchange.

What are we talking about? Is it really beneficial to have a business that claims to be of Canadian origin but is actually foreign-owned? Setting aside the human side of things, is that beneficial from a strictly financial standpoint? Is it actually profitable?

Rodrigue Turgeon: Thank you for your question, sir.

You're absolutely right: We need to define the terms. I think today's meeting is a chance to talk about critical minerals. One of the witnesses here today talked about how one of the biggest companies in the world does not extract critical minerals, or very little, at any rate. Critical minerals are not Agnico Eagle's main line of work; it actually produces gold, which is not on the list of critical minerals.

Let's review the definition of critical minerals that was established under the Canadian critical minerals strategy. The real issue is supply chain security. That leads to the following questions: What supply chains are we talking about? Are we talking about Canadian supply chains or those of our allies?

If you follow that line of thinking and actually look at the mines that are being proposed as strategic or critical interests for the Government of Canada and the provinces, you realize that many of them are being developed where massive investments have been made by foreign entities, foreign states and departments that are clearly linked to potentially threatening interests. That's why the Government of Canada and the provinces need stricter conditions for access to and control over minerals. That's what we aren't seeing in proposed legislation.

I'll reiterate what I said earlier. It sure looks like the government actually wants to fling wide the door to foreign investment. We really have to think about how we can control supply chains if we want to define them as being of Canadian origin.

● (1150)

Simon-Pierre Savard-Tremblay: What exactly is the threat?

I remember the Department of Industry saying a few years ago that, this time, it would take this issue seriously and get Chinese capital out of the mining sector. You would know better than me whether or not that was done properly. I feel like it's complicated, because there are all kinds of ways to set up umbrella companies or fake head offices, to register a business and pretend that it's not actually owned by a foreign power. There are ways to hide connections. What are the most common strategies?

Rodrigue Turgeon: It's important to note that some 50% of the world's mining companies are registered here in Canada, most of them in Ontario, where the TSX, the Toronto Stock Exchange, is located. That gives them access to all kinds of strategies and ways to optimize taxation and regulatory compliance. That's how it works. That's why we mentioned the conference of the Prospectors & Developers Association of Canada, the mining sector's largest international conference, which is being held in Toronto for those reasons. Just because companies are registered here doesn't mean they will ultimately serve Canada's interests. This is where we need to clarify the situation and ensure that the Government of Canada is more transparent about its understanding of foreign entities and foreign states that are identified as part of strategic and critical supply chains. The government has not done that yet.

You mentioned a few things the Minister of Finance said in 2022 about how some companies linked to the Chinese government had to cease their activities. This kind of measure has not become more common in recent years. That's why the government has to be more transparent and consistent with its critical minerals strategy. Otherwise, it will look like this strategy is just designed to accelerate mining projects to create wealth for mining companies, with no real connection to Canada's supply chain defence strategy.

Simon-Pierre Savard-Tremblay: We know that, from the moment the government decided to increase the percentage of GDP spent on defence, one of the first things it did was play with the existing categories. I'm not criticizing that; I see it as legitimate. Before increasing actual funding, the government started by adjusting categories so existing spending would be considered defence spending. In many cases, that's legitimate. I'm not disputing that. For the Coast Guard, for example, there are situations where that is completely justified.

You're telling us that this is also the case for gold. Is gold being lumped in with critical mineral extraction?

Rodrigue Turgeon: The mining and gold lobbies are exerting a lot of pressure. Let's not forget that gold is number one in terms of the value of minerals extracted in Canada. It accounts for about 20% of mineral output. The gold lobby is very powerful. Besides gold and natural resources, we have to consider the impact of increased military spending on the environment and the climate.

The Chair: Thank you very much, Mr. Savard-Tremblay and Mr. Turgeon.

[*English*]

I am going now to the five-minute round.

Mr. Kibble, I'll go over to you.

● (1155)

Jeff Kibble (Cowichan—Malahat—Langford, CPC): Thank you, Mr. Chair.

Thank you to all witnesses for their opening statements.

Ms. Mykytczuk, I appreciate your comment about how Canada's strategic vulnerability is our processing capability. What steps should we be putting in place to make processing more feasible, specifically in human resources and building a skilled workforce?

Nadia Mykytczuk: Historically, Canada had a lot of that mainstream capability. Many of the major operators did a lot of processing, optimization and piloting. For example, Sheridan Park Vale, now Vale Base Metals, used to have over 60 personnel looking at different process optimizations and training the next round of metallurgists and process engineers. We've lost a lot of that capacity. Another Canadian example, Sherritt Technologies, recently closed their operations, with over 60 experts in process design and metallurgy also being let go.

Now is not the time to be closing these facilities. We should be very quickly establishing regional centres of expertise—much like Mr. Boyd said—and building on operations that already exist where we can leverage some of that capacity.

Jeff Kibble: I want to quickly ask about waste and tailings.

There's a historical waste site on Vancouver Island, in my riding, with copper and possibly cobalt. You said something about efficient recovery. Can that be extracted and then left in a clean state when that process is over?

Nadia Mykytczuk: Absolutely. This is a huge opportunity for Canada with a very large inventory of legacy sites.

Consider that these are mineral resources already sitting at the surface. We have process knowledge to rapidly develop process flowsheets for these near-term materials. We could develop a lot of these tailing sites within five years, as opposed to a 15- or 20-year timeline for new mines. We should be looking to leverage the process knowledge within Canadian institutions to extract those reserves in the near term.

Jeff Kibble: Thank you very much.

Mr. Boyd, I want to speak to timelines for project approvals. We heard about a Yellowknife project the other day that was taking 14 years to get approval. We have oil and gas offshore prohibitions, and large protected areas, many under the 30 by 30 plan. What steps could be taken by the government to speed up the approvals process in this area that's so critical to our national defence?

Sean Boyd: The challenge we face as an industry is the overlap of the approvals that are required and the sequential movement of files through the various regulatory approval bodies. Our approach would see the files go in and be reviewed simultaneously by many departments. That would help. I think we've seen moves in that direction going forward.

What was happening is that the federal overlays that came in at operations of over 5,000 tonnes a day or proposed operations of over 5,000 tonnes a day created a duplication. Essentially, we need to eliminate that duplication. Not only does it take time, but it costs money and uses up resources. I would start there.

Jeff Kibble: Mr. Turgeon, you said in your testimony that it was important we know what foreign companies are operating in Canada. I see that MiningWatch Canada is a lobby group founded in 1999. Are you still a registered lobby group?

Rodrigue Turgeon: We are not.

Jeff Kibble: You are not a registered lobby group anymore. That's interesting.

With regard to foreign companies operating in Canada, who's the largest donor for your organization?

Rodrigue Turgeon: That's a good question. I would have to look at it. We can submit the information.

Jeff Kibble: I can share with you that it's the United States-based anti-development, anti-commercial agricultural group the 11th Hour Project, which is funded by the Schmidt family group. That's outside American influence that's paying for some of the awards today.

You were advocating closing the door on seabed mining. Does that include oil and gas?

Rodrigue Turgeon: We're talking about minerals.

Jeff Kibble: You're open to oil and gas, but you're advocating that we don't do mineral seabed mining.

Rodrigue Turgeon: That's not what I said. The topic of today's hearing is about hardrock mining, I believe, because we're talking about criticals, but we're definitely not supporting oil and gas activities overseas.

● (1200)

Jeff Kibble: On seabed mining in Canada, are you advocating for or against oil and gas mining in Canada?

[*Translation*]

Rodrigue Turgeon: As I said, we focus on hard rock mining and oppose seabed mining. However, we certainly support all measures aimed at protecting the climate from the oil industry.

[*English*]

Jeff Kibble: Okay. That doesn't clarify it, but thank you.

Quickly, then, you also mentioned no use of nuclear power for defence-related projects. How would you contend that we power our defence-related projects, especially in the north? Would it be through carbon-based fuel or through windmills?

[*Translation*]

Rodrigue Turgeon: For 27 years now, our organization has strongly opposed only one mineral substance, and that's uranium, given the risks it poses to local populations in terms of tailings and accidents, on both the—

[*English*]

Jeff Kibble: Is it specific to uranium mining? You said nuclear power for defence projects—

The Chair: Mr. Kibble, we're over time on this one. My apologies.

Jeff Kibble: Thank you, Chair.

The Chair: Mr. Watchorn, we'll go to you for five minutes.

[*Translation*]

Tim Watchorn (Les Pays-d'en-Haut, Lib.): Thank you, Mr. Chair.

Mr. Boyd, you said that mining companies, including yours, invest a lot of money in the north to build mines and maintain a presence.

I would like to know how the government, specifically the Department of National Defence, mining industries and local communities can work with you to ensure that the infrastructure developed by mining industries is useful to all three entities. I would call it a triple bottom line.

[*English*]

Sean Boyd: I think that's the way forward. Government doesn't have a bottomless pit of money to invest, so it needs to be done strategically. As we've said from the start, the Canadian military and the Department of National Defence need to know what the mining companies are thinking and doing. They need to know where the best rocks are. The industry needs to know generally what the Canadian military is thinking.

One thing we've already started is.... We are working with the Department of National Defence right now on a high-level co-operation framework covering areas like personnel opportunities; technical knowledge sharing; community and indigenous relationships and partnerships based on our experience; and Arctic infrastructure and logistics. We would argue that we have superior logistical capacity to the Canadian military in a lot of respects, having built a number of mines. It's really about how we can collaborate. It's important that these discussions have begun. We've actually moved them along a fair amount in the last year.

This is where we're going to get alignment, because we understand what the community needs are. We understand what the Canadian government is looking at doing in its major infrastructure projects. We have an understanding of what the Canadian military is doing. It's really about coordinating all these efforts and sharing the knowledge we've gained from 20 years of doing business in the north.

[*Translation*]

Tim Watchorn: Excellent.

So there's a lot of infrastructure. Other companies have airstrips, ports and roads. Some even have surplus housing that could be used to help our military presence in the Arctic. That's what you're saying.

[*English*]

Sean Boyd: Yes, that is correct.

We're actually looking at ways we can get the Inuit associations to draw down on the indigenous loan guarantee program and invest in certain infrastructure as we think about some of these big projects. It's really a matter of coordinating the programs that are in place and also understanding where the strategic leverage comes from with government investment, combined with investment by companies in the north.

[*Translation*]

Tim Watchorn: Thank you.

Ms. Mykytczuk, as an engineer, I find your biomining processes fascinating. Can you tell us more about how biomining works? How can tailings on Canadian soil be exploited?

Nadia Mykytczuk: Thank you for the question. I will answer in English.

[*English*]

Biomining process technologies have been around for over 50 years. There have been over 300 commercial operations globally. Canada has yet to deploy a large-scale biomining process.

We're using naturally occurring bacteria as the catalyst to break down minerals. These are often found in mine waste deposits and have adapted to the particular conditions of a site. Rather than using heat or chemicals, we use bacteria to act as the catalyst to break down minerals, and then release those into solutions so we can recover them.

This is a tested technology, but it has not had the time to mature and be deployed at commercial scales in Canada. It is one of the ideal solutions to deploy for reprocessing tailings or low-grade materials that would be too costly to put back into a smelter or a large capex operation.

We're working very hard to accelerate this with our partners to have an additional tool or processing technology for various materials that could be deployed quite quickly.

● (1205)

[*Translation*]

Tim Watchorn: Is it profitable to move in that direction as opposed to pure extraction? Is it economically viable?

[*English*]

Nadia Mykytczuk: We're in the process of demonstrating economic viability. The key thing we need to consider when we're reprocessing tailings is that we're not simply going after one or two elements. We have to valorize and extract all the value in those tailings so that we're also solving the environmental liability and looking at the usually large array of minerals in a particular material.

We are working with a techno-economic assessment to show that this is in fact viable and that there has been a lack of imagination in trying to take all of the value out of the materials we've mined in the past.

[*Translation*]

Tim Watchorn: Thank you.

[*English*]

The Chair: Thank you.

Monsieur Savard-Tremblay, you have two and a half minutes.

[*Translation*]

Simon-Pierre Savard-Tremblay: Thank you, Mr. Chair.

We're going to settle one thing, Mr. Turgeon.

The gentleman to my right, in every sense of the word, decided to go after the messenger. I don't get the impression that you're a spokesperson for the White House. Are you under the influence of the Americans? Answer briefly, because we're not going to waste too much time on this.

Rodrigue Turgeon: Absolutely not.

I just want to clarify that I thought the question about funding for my position was for our entire organization.

We're not funded in any way by the Government of Canada or the mining industry, so we have other sources of funding: donors, individuals, member associations and foundations. The foundations that pay my salary are the Echo Foundation and the Trottier Family Foundation, both of which are Montreal-based. I am in no way here at the behest of American interests.

Simon-Pierre Savard-Tremblay: Perfect, thank you. You don't strike me as being very MAGA.

That said, at the end of our last exchange, you were saying that we had to think about the increased spending and the possible consequences. Do you want to expand on that?

Rodrigue Turgeon: I'm actually quite surprised that the only reference to the climate crisis today, aside from my testimony, was when another witness pointed out that climate change would create opportunities in terms of access.

Let's be clear: Climate change is a national security threat. We absolutely have to consider the fact that, if a country increases military or national defence spending in the critical minerals sector, that will have an impact on the environment. That's unacceptable to us.

There were already major concerns about whether Canada is able to supply the minerals for the energy transition alone. If we add national defence needs to that, where are we going to get these minerals and under what conditions? That is the question we have to ask ourselves.

Simon-Pierre Savard-Tremblay: Would it be better to increase extraction while also developing the circular economy, recycling and mine tailings recovery? Is there a way to do that?

Rodrigue Turgeon: The predominant approach here is sobriety, reduction at the source. Indeed, to ensure the best economic conditions for local communities and for the country, we need to move towards processing, as my colleague to my right pointed out earlier. As the witness from Laurentian University pointed out, recycling, reuse and mine waste valorization are things to consider, always taking into account the same conditions vis-à-vis the environment.

Simon-Pierre Savard-Tremblay: I assume I'm out of time. Is that right, Mr. Chair?

[*English*]

The Chair: Yes. I apologize.

Ms. Gallant, it's over to you for five minutes.

Cheryl Gallant (Algonquin—Renfrew—Pembroke, CPC): Thank you, Mr. Chair.

Mr. Balsillie, how vulnerable does China's control of over 80% of critical minerals and rare earth processing make Canada's defence industrial base today? What specific binding policy changes would you recommend to build value-added IP into our rare earth processing?

Jim Balsillie: Thank you for that.

IP is interrelated with AI and AI sovereign computing and data. It's also related to standard setting.

We have made ourselves low participants in the value chain—a commodity country. That, in parallel, has made us vulnerable to predation and leverage. We've painted ourselves into this corner because of inattention.

The number one thing I would say—I've written about and advocated for this for a long time—is that the PCO or the PMO has to create an economic council or secretariat with expertise in this realm. It's a technical realm. We spend $7.5 billion every year on research with absolutely no strategies to capture the benefit of that. We've had no strategies for data in the past 15 years of the data economy. We've had no strategic participation in these standard economies. This is Pogo: I've seen the enemy; the enemy is us.

My one recommendation is to build expert capacity, whether it's with an economic council or a secretariat in the PCO, so we can begin to catch up to what other nations have been doing for 25 years.

● (1210)

Cheryl Gallant: What steps must Canada take to pivot away from having our critical minerals and rare earths processed by our greatest military adversary? Should we be focusing on the processes and AI, as you described?

Jim Balsillie: We have no sovereignty to turn these minerals into products. We don't. It's an abdication that no other country in the world has made. We must reorient. It's because our thinking is rooted in the 1970s, when production was sufficient. It's not. The ability to turn these things into products and have leverage so you're not easily being weaponized against is where the action is.

I could give you much more than I shared today about what the EU, the U.S. and China have been doing to capture these value chains. We need to get into the game. It's an abdication of responsibility. It's as simple as that.

Cheryl Gallant: How should the government reform defence procurement rules so that in the contracts involving critical minerals-derived technologies, the intellectual property and economic benefits remain in Canada, rather than flow to foreign subsidiaries and adversaries?

Jim Balsillie: The very first thing we need to do is create a sovereign patent pool for the things we do research for, and manage the residual rights so they can be shared across companies. Then when a company gets bought, all those rights don't leave with it.

The second thing we need to do is create some kind of sovereign compute data AI sandbox.

The third thing we need to do is.... We talk about being part of the EU SAFE stuff for financing. We have nothing to sell because we have not participated in chiselling into the value chains. Yes, we need capital. Yes, we need procurement, but absent the geo-expertise and strategic ability to chisel into value chains, this will not work.

We've spent tens if not hundreds of billions of dollars over the last 20 to 30 years, and we're consistently last place in productivity innovation. It's 100% attributable to inattention to how the innovation game is played globally. It's baffling to me.

Cheryl Gallant: Drawing from your RIM experience with secure technologies, what specific barriers have prevented Canada from scaling domestic defence tech champions that rely on our critical mineral resources, and what concrete changes to R and D funding, tax policy and procurement would you urge this committee to recommend?

Jim Balsillie: We've had a naive and sentimental conception that this is some kind of free market globally, when in fact these are all public-private frameworks advancing their companies globally. We leave our companies at the altar while favouring foreign companies to come here, take them over and capture all the value.

We need a proper assessment of spillovers for where we support and where we buy—the nature of foreign investment. I'm not against it, but you have to manage it for spillovers, just as every country does, and no one more than the U.S., the EU and Australia. We then have to be creating institutional infrastructure of standard setting with our companies, which we do not do, intellectual property for our companies, which we do not do, and sovereign compute with data strategies for our ecosystems, which we do not do.

There has been an inattention to how 92% of the world works, and then we wonder why we don't do better. It's a self-inflicted wound way of thinking that's made us a prisoner.

My one recommendation is to create capacity for how these things work, and understand that there are institutions, technocracies and cross-cutting ways that you can begin to capture. This is not about money. This could be reoriented in less than a year if we actually attuned to how the game is played globally.

● (1215)

The Chair: Thank you, Mr. Balsillie.

Thank you, Ms. Gallant. I appreciate that.

Ms. Romanado, you have up to five minutes.

Sherry Romanado (Longueuil—Charles-LeMoyne, Lib.): Thank you very much, Mr. Chair. Through you, I'd like to thank the witnesses for being here.

Before I begin, as this is my first intervention today, I want to say my thoughts are with the cadets and family members of those affected by the accident in Sainte-Rose-de-Watford, Quebec. I want to say a special thank you to the first responders. We lost a cadet over the weekend in a tragic bus accident, so my thoughts are with their families.

[*Translation*]

My thoughts are with the accident victims.

[*English*]

My first question is for Dr. Mykytczuk.

You referenced research and the importance of research in this domain. I'm not sure if you're aware that as part of the defence industrial strategy, we've created BOREALIS, which is “modernizing Canadian defence and national security innovation by accelerating the delivery of advanced technologies”, “aligning federal innovation efforts toward mission needs” and “connecting partners from government, academia, and industry”.

Essentially, what we'll be creating are what we call DISHs, or defence innovation secure hubs. They're intended to “provide secure, mission-oriented environments that support sustained collaboration” across three pillars and “enable research, development, and experimentation activities aligned with defence and security needs.”

I understand that Laurentian University has some expertise in this regard. What are your thoughts on how applied research programs and testing facilities that scale new mineral recovery technologies from laboratory discovery towards industrial deployment can help build the domestic capabilities needed for secure and resilient critical mineral supply chains?

Nadia Mykytczuk: Thank you for the question. I'd like to combine it with some of the suggestions that Mr. Balsillie just made in terms of having a strategy.

Applied research doesn't happen in a vacuum. Institutions across Canada, whether they are government research labs or academic ones, have often operated in silos. I'm very happy to hear about BOREALIS and DISH. I think this will help create regional centres of excellence that hopefully can then be connected across the critical mineral spectrum and across the supply chain by having a strategy that links expertise.

These are multidisciplinary problems, whether they are for electrification or for defence production technologies. There are a lot of synergies between those knowledge bases and the capacity, but there need to be overarching strategy and guidance to ensure that quick pivots can be possible in these applied research centres, whether for deploying a decarbonization technology, for battery production, for surveillance or for another deployment.

Sherry Romanado: Thank you.

My next question is for Dr. Exner-Pirot.

You mentioned one of the mines in Yukon. You mentioned that because of a lack of electricity, it had to reduce production, if I understood correctly. Could you elaborate a bit more on the importance of perhaps investing in dual use? My colleague referenced it as well.

As you know, Canada has made a commitment to reaching a 5% GDP target by 2035, which would incorporate 1.5% GDP that could be used for dual use: both for defence and for civilian use. Could you elaborate a bit on how we could perhaps leverage that to make sure we are providing the resources we need in Arctic exploration and mining?

Heather Exner-Pirot: Any operation needs communication infrastructure, transportation infrastructure and energy infrastructure. The military needs that, mining companies need that and communities need that. The more you have it, the cheaper it can get, and you can reach some scale and it's better for everybody.

Especially when we're talking about doing more basing and having more operations in the military, even just the NORAD sites themselves can be very energy-intensive if you're trying to capture a lot of data, if that's what you're doing. Obviously, the more data you capture, the more energy you're using and the more data you can capture.

Everyone is looking at ways to increase energy infrastructure, but it's obviously very expensive. As Mr. Boyd said, the more we can leverage each other's energy infrastructure and use it for these multiple uses, the more that everyone can share in the scale.

We're obviously focused on transmission quite a bit, but that can be very expensive in the north because you're looking at very long lengths and maybe long distances from the generating facilities. Another option that mining operations are considering is trucking in LNG. Yukon is moving towards some of that. Diesel is very versatile and very useful, but obviously it is also expensive and quite polluting, so microreactors are looking like a potentially very good medium-term solution.

The American military is moving forward. I think they'll have a test microreactor at the Eielson Air Force Base in Alaska. Most people think that's probably a very good fit. The extent to which the Department of Defense can advance that and do some testing and some of the first-of-a-kinds for microreactors would be very beneficial and useful for mining companies and communities.

● (1220)

The Chair: Thank you very much.

Mr. Bezan, you have five minutes, sir.

James Bezan (Selkirk—Interlake—Eastman, CPC): Thank you, Mr. Chair.

Thank you, witnesses, for your great testimony today. It's really important as we're talking about how we continue to drive forward with our sovereignty and defence capabilities and how critical minerals tie into that.

As mentioned, the Conservative leader, Pierre Poilievre, has talked about wanting to do more with leverage. Mr. Balsillie talked about leverage as well. Other witnesses also mentioned that we need leverage in what we bring to the table. We don't want to be just hewers of wood and drawers of water. We have to move forward and create extra jobs, as well as provide extra value not just to our Canadian economy but in what we actually bring to the table—not just the raw resources.

My question is for Mr. Balsillie, Professor Mykytczuk and Professor Exner-Pirot.

We're talking about how we need to do more on the defence research side, how we need to own the IP and how that cross-pollinates with the critical mineral sector. We have in Canada 10 of the 12 critical minerals on the NATO list. As I think one of the witnesses said, we have an amazing endowment. Let's talk about how we capitalize on that and how we actually turn it into leverage that can be used in our conversations on everything from defence, security and trade to how we drive forward in being a leader in the world rather than a follower.

Defence Research and Development Canada is a research organizations, and I think we need to talk about bringing in some of that skill set, as well as how that goes back into our universities, which are producing the next generation of employees.

Jim Balsillie: I'm happy to respond to that.

The defence industrial strategy reads like it was written in the 1970s. I'm very pleased that they're going to buy from Canadian companies. The money is going to be spent. There are absolutely no systemic strategies to capture the value from that. We've done this for decades. We do all this great research and don't get the economic benefits from it. First of all, we don't generate the IP, as we should. We don't maintain control of it, and we don't have strategies to insert that into the rules for what value is.

It's very simple. If somebody has the patent for a left-hand drive car and somebody has the patent for a right-hand drive car, and if they set the rules for a right-hand drive car, then the person who owns that gets really rich, and the person who owns the other gets steak knives. Setting the standards is very political. This has to be an integrated....

By the way, if you've ever looked at the USMCA, it substantially governs how we're allowed to participate in standards and how we're allowed to manage our IP and data. We're shackled in many of those rules, to put us into a low value-added position.

These are all examples of frameworks where others use them to expand their wealth, power, leverage and security. We have not attended to that, and the chickens have come home to roost.

James Bezan: That's what you are really referring to. The EU, the U.S. and especially China have taken away Canada's ability to have, one, sovereign control of it and, two, financial benefit from owning it.

Jim Balsillie: We don't know that the battle is going on. We've abdicated from it. I'm simply saying to build the expertise right at the centre of the PCO—an economic council, an economic secretariat—and start being front-footed. We have all the potential to be much greater, but we cannot be stuck in 1970s thinking. I could multiply the information I've shared with you today, and it would all go back to the same point.

● (1225)

James Bezan: Would other witnesses want to comment?

Heather Exner-Pirot: Yes, I would love to jump in here.

At the end of the day, we're talking about our defence industrial supply chain. This has economic implications, but we have to be able to defend ourselves, fight in wars and protect ourselves and our alliance.

Canada has only 43 million people. We will never have a totally sovereign, independent defence supply chain. We depend on being part of an alliance. The best thing we can do within that alliance to be that good player and get leverage and influence is provide some raw materials to that alliance so that the defence supply chains in the United States and Europe can ramp up in the event of a conflict.

If there's a war of attrition, China would win today, so it's very important that we have latent capacity. Then we could ramp up quickly, and we could be the arsenal of democracy and make sure there are the raw materials to fight a protracted war.

To my earlier point, we did go through a period in Canada where we did not allow financing for defence companies. We have not been allowing research for military purposes. I see that we've changed it on the financing side, which is good. We want our defence companies to be able to access loans and lending, but I still think we are not there yet on the research side. We haven't changed our mindset to wanting to create researchers who can do research that is used for military offensive purposes, which we need in this country to be able to fight wars.

The Chair: Thank you both.

Mr. Malette, you have up to five minutes, sir.

Chris Malette (Bay of Quinte, Lib.): Thank you, Chair.

Mr. Boyd, during a recent visit to Australia, Prime Minister Carney welcomed Australia into the critical minerals production alliance, which was an initiative launched under Canada's G7 presidency in 2025 to expand critical minerals production and processing capacity and to diversify supply chains from mine to market. Both Canada and Australia hold vast reserves of critical minerals that are key to defence.

Further to the discussion we had on the last line of questioning, how will the new critical minerals agreement between Canada and Australia strengthen co-operation in securing reliable supplies of strategic minerals? In your view, what impact could this partnership have on diversifying and reinforcing defence supply chains among allied nations?

Sean Boyd: If you think about Canada and Australia, they both have important endowments of critical metals and deposits. The key behind all this is to find the deposits that currently make economic sense to develop. You can decide, “Oh, these metals are important”, but unless you have those deposits in the right places and can make an economic case that they need to be developed, you're not going anywhere.

Those alliances would allow us to share information, but we already share information at the industry level among mining companies. We already share those technologies. It's going to come from both Canada and Australia understanding they have the endowment, and then from working together in partnership with the government on selective strategic infrastructure to make regions within both countries investable for investors.

That's the bottom line. We forget about all this. I've spent time in Washington. They're gung-ho. They're going to do this. They're going to do that. They're going to put capital here. The missing link in all this is having deposits in the right place that make economic sense, and having the skills to develop them.

The key, again, is processing. Canada was a leader in mining and processing when we had the Falconbridges, Norandas, Incos and Alcans running refineries and building mines. We need to get back to that type of mindset. It may be 1970s thinking, but that's going to underlie the start of the value creation chain.

In terms of what we do after that, I would agree with Mr. Balsillie, Nadia and Heather. Start to capture the technology and research that will allow us to take advantage of and improve the economics.

Chris Malette: My next question is for Ms. Mykytczuk.

How should Canada balance the urgency of developing critical minerals with environmental stewardship and indigenous partnership? It's something that hasn't been top of mind in our discussions today.

● (1230)

Nadia Mykytczuk: Thank you for bringing that important aspect to the forefront.

Certainly, globally, everybody looks to Canada to lead an environmentally sustainable and equitable reconciliation with first nations. As has already been outlined by some of the other witnesses, we simply can't meet the demands of decarbonization and defence by leaving a massive environmental legacy. Having capacity, technologies, zero-waste mining, equitable mining projects and partnerships with equity ownership by first nations is entirely within the realm of possible and doable in Canada. That has to be at the forefront of discussions on new projects.

In our case, when we're looking at tailings reprocessing, we're absolutely able to have that win-win-win if we think strategically not only in extracting that value but also in reducing and removing environmental liability so communities don't have the long-term impact of mineral development.

Chris Malette: Do I have time for one more question, Mr. Chair?

The Chair: Yes, go ahead.

Chris Malette: Thank you.

My next question is for Dr. Exner-Pirot.

In your view, should Canada define economic security within the context of critical minerals and defence supply chains?

Heather Exner-Pirot: We should define it and prioritize the economic value of minerals. I think gold is extremely important to the Canadian economy, even though it's not a critical mineral.

In the context of defence spending and the defence industrial supply chain, it's clear to me that we should be focusing on things we would need if we had to quickly ramp up the defence supply chain for NATO. Usually, what you need for military applications is a very small portion of the market. You don't need the global nickel supply chain or the global copper supply chain. You need a small portion of that to feed your defence supply chain.

In terms of defence spending, what you could classify as NATO spending to get to the 5%.... Beyond the minerals on the NATO mineral list and the things China has put export restrictions on, let's make sure we have some minimum capability in processing and using those things.

The Chair: Thank you, Heather.

Thank you, Mr. Malette.

Monsieur Savard-Tremblay, you have two and a half minutes, sir.

[*Translation*]

Simon-Pierre Savard-Tremblay: Thank you, Mr. Chair.

Mr. Turgeon, we have heard you advocate for eco-friendly practices and such.

Now I'm going to ask you a tough question. You talked about a more modest or somewhat less ambitious approach. Given China's enormous power, can we really do that? Wouldn't we be condemning ourselves to an uneven playing field?

Rodrigue Turgeon: We don't think it's up to us to answer that question. It's up to the Government of Canada to identify threats to Canada's so-called supply chains. Then the government must act in a manner consistent with the threat assessment. Transparency, integrity and consistency in the Canadian critical minerals strategy are crucial.

If China is identified as a threat, Canada will have to respond to the extent of its capabilities, taking into account the mining industry's overall impact on national security. I think it's important to remember that today's discussion is not only about national defence, but also about security. We know for sure that, if we increase the impact on the environment and the climate by encouraging more mining, that will have a direct impact on the safety, health and lives of Canadians. That's a given. We see it every year. The climate crisis is a threat, but it has real consequences for our society as a whole, including the mining industry.

That's why, if we want to have a resilient economy and support local communities, we must act with humility and respect the planet's ability to provide these resources. Let's not forget that it's not just about figuring out where the deposits are; it's also about having the ability to mine them within the time frames imposed by the climate emergency and by the national security or national defence emergency. Let's not forget that, from prospecting to opening a mine, it can take between 10 and 20 years. There's also a limit to the number of workers that can be recruited in the mining sector to operate the number of mines desired. We must use all these indicators to focus on priorities. We can't supply all the minerals we want, so we should act with sobriety.

● (1235)

Simon-Pierre Savard-Tremblay: Yes, you used the word “sobriety”.

How long did you say it takes? You said 10 or 15 years.

Rodrigue Turgeon: From the discovery of new deposits to the opening of a mine can take as few as 10 years or as many as 20. Earlier, witnesses talked about the idea of reopening old mines that were closed at a time when prices were lower.

Let's be honest: The main interest there is gold deposits, and the market value of gold tumbled dramatically at the beginning of the millennium. In other words, we're not talking about rare earth deposits that have hardly ever been mined in this country, such as graphite and other resources on the critical minerals list.

Simon-Pierre Savard-Tremblay: Thank you.

The Chair: Thank you.

Mr. Bezan, you have the floor.

[*English*]

James Bezan: Getting back to Ms. Exner-Pirot's comments about supplying more of our critical minerals as raw resources to our allies, just take a look at the lithium we mine in Canada. One of the mines in Quebec sends only about a quarter of its lithium to the United States because that's all the capacity the United States has to refine lithium. The rest of it goes to China. Even among our allies, we don't have sovereign control, nor do our allies have sovereign control, over the further upgrading and processing of the critical minerals that are so important to our national security and sovereignty.

Mr. Balsillie, you talked about missed opportunities within the defence industrial strategy, as well as in the last budget. You mentioned that we should be setting up a secretariat within the Privy Council Office.

When we look back on the war in Afghanistan, the Conservative government of the day set up a secretariat of the key ministers and deputy ministers to make sure that the civil service was driving the agenda to get the job done of procuring what we needed and supporting our troops in theatre. Do we need the same type of mentality and leadership to ensure that we get the job done to leverage our critical minerals and the downstream value-added and IP?

Jim Balsillie: Yes, that's exactly what I'm saying. These are nuanced issues. You have to be careful, because people will misconstrue this as autarky, which is not at all what I'm saying.

If you listened to what I said in my testimony, I said it's an “and” issue. It's a 1970s issue and a contemporary issue. If we do not start to do the value-add, own reasonable parts of processing and reasonable parts of the value-added technologies, control reasonable parts of the data and AI, and reasonably participate in standard-setting activities, we are going to an economic structure.... We have evolved to something much closer to the Democratic Republic of Congo and Russia rather than, say, a sophisticated Scandinavian economy. We have all the potential to do more. There's been an abdication of this.

I'm 100% saying that if we orient to this and do the “and”—which is not about money, but about expertise and orientation—we will see our prosperity, our security and our leverage soar. We've let our leverage go, but in this world, you corral your leverage if only for resilience. If we push these things to foreign countries, whether they're allies like the United States or have complex relationships like China, we're still subject to leverage and predation all day, every day.

James Bezan: Do you believe we should be making amendments to the Defence Production Act to ensure that not just the mining and stockpiling of critical minerals are covered, but the processing of critical minerals is also covered under the Defence Production Act as part of our sovereign control?

Jim Balsillie: You could do that. You could do it through the budget. You could do it through updated approaches in the defence industrial strategy. We could do it with proper considerations for the $7.5 billion that Canada does in research funding every year. We could do it in purchasing requirements under PSPC—how they do it. We could do it with proper sovereign compute, which has yet to be implemented, and the utilization of our data. We could do it with updated spillover analysis in FDI things and by having the kind of tool kit that Australians and Americans have in institutions like CFIUS.

It's a web of frameworks. That's what I tried to show you. This is a web structure, and that's why you have to create expertise and understand its tentacles in an integrated manner.

● (1240)

James Bezan: Where tangible versus intangible comes into play is in making sure that we have more connectivity between both levels and government leadership, but not necessarily ownership in all segments of that web.

Jim Balsillie: Yes, the tangible is not really contested. You own the oil in the oil sands and the minerals in a mine. How to turn them into something much more valuable, that 92%—

James Bezan: You don't necessarily own them if it's done through FDI, foreign direct investment.

Jim Balsillie: They're physically owned in Canada. You're right that there are complex control issues there, but the possession is here. The possession of the ideas is through legal restriction. It works by totally different rules. We don't have that expertise in our negotiation with treaties like the USMCA. We don't have it in our research strategies. We don't have it in our data strategies. We don't have it in our standard setting. We don't have it in our FDI. We don't have it in how we support our companies. We've been last place in the OECD for the last 40 years on this. We have eroding productivity, and it's 100% attributable to that lack of attention to this expert realm.

I reiterate that it's an “and” function, not an “or” function. I'm completely supportive of our natural resources. We have all the potential to get much more out of them. It's about doing both together, not one or the other.

The Chair: Thank you, Mr. Balsillie.

Ms. Lapointe, you have five minutes.

Viviane Lapointe: Thank you, Chair.

Mr. Boyd, several allied countries are now seeking to diversify their mineral supply chains away from geopolitically risky jurisdictions. How can Canadian mining companies contribute to building more secure and more resilient critical mineral supply networks among trusted partners?

Dr. Exner-Pirot, I'll let you know that I'll be asking you the same question, except instead of asking what Canadian mining companies can do, I'll be asking you what the government can do to contribute to building resilient supply networks.

Sean Boyd: That's a really good question. Canadian companies have been at the forefront of putting investments to work in other countries, both in politically friendly countries and in countries that have tougher geopolitical environments. We have that expertise, and we're basically lending that expertise now.

We have enough expertise to do what we need to do at home. To be successful, Canadian companies should be taking that expertise, whether it's from exploration, from project development or from mine operations. We're extremely good at that. We're predominant players in many continents because of the skills we bring to the table. There's a real lack of skills.

Agnico has been aggressively courted by U.S. interests to bring our expertise into the United States to help them develop critical metal deposits. We have that expertise. We should be selective where we use it, and we should use it in instances where we're getting more direct benefit to our own companies and to our own countries.

When we look at ownership, Agnico Eagle is 50% owned by American institutions, 25% owned by European and Asian institutions and only 25% owned by Canadian institutions. Even with that 70-year history, we're based in Canada and run by Canadians, with a largely Canadian board of directors. What's more important is to be able to control critical deposits here in Canada, but we shouldn't just be insular. We should look outward. We should invest in important geological districts to have some control over those metals and minerals.

Viviane Lapointe: Dr. Exner-Pirot.

Heather Exner-Pirot: The number one thing is to be more competitive so that our allies naturally want to buy from us. Then it isn't a choice of cheap China or expensive Canada, and we're providing a comparable product at a comparable amount. Better regulation, better policy and better export infrastructure all help to bring the cost of the Canadian product down.

In terms of the defence supply chain, when we say just “critical minerals”, it tells me that we're still not quite at the right level of sophistication. When we start to have a product-by-product plan.... What is our plan for gallium with NATO? What is our plan for graphite with NATO? What is our plan for indium? Who is going to do it? Canada is not going to do all 12 of the NATO minerals, but are there three, four or five that Canada can take the lead on and say we can do the production and the initial level of refining? Then look at who else in the alliance is already refining some of these products that could expand.

It actually takes a lot of coordination. That is obviously made more difficult by the fact that the United States has been a lot more of an adversarial partner to the rest of the alliance. That's why I think working closely with Australia is fantastic. There's a lot Canada and Australia could cover on that list between the two of them. There are obviously some European countries that have excellent chemical and refining capacity, but they don't have the raw material. We need to work with them as we move up the value of the supply chain from the raw material into the final component that goes into a weapons system.

● (1245)

Viviane Lapointe: Dr. Exner-Pirot, we've seen China increasingly describe itself as a near-Arctic state, and it has shown a growing interest in Arctic resources and shipping routes. What does Canada need to do to ensure that our natural resources, our sovereignty and our strategic interests in the Arctic remain secure?

Heather Exner-Pirot: With China, the thing I worry most about in the Arctic is that they see it as an attack vector. It's an approach for them. It's the most exposed flank. The primary thing we need to do is have a presence and have monitoring and interception capabilities to deter them from even thinking about entering North America through the Arctic.

I'm not that worried about them stealing resources. Sean can tell you how hard it is to build a mine in the Arctic. China can't just come in under the radar and start extracting copper or something like that. We also want to make sure there's enough private sector free market money so that people aren't reliant on Chinese funding to get Arctic projects off the ground.

The Chair: Thank you, Ms. Lapointe.

I know we have some extra time. I'd like to ask two questions, if I may, and then I'm going to pass it back to members to ask a final round of questions.

Mr. Balsillie, you have a number of research vessels in the Arctic. A few of us just came back from Washington. All the talk down there is about ensuring that Canada protects its sovereignty and does its part in the Arctic Circle. The Americans certainly want to see Canada step up and initiate the necessary steps to protect our sovereignty and ultimately the western hemisphere.

In the research work you do with those vessels, do you share intel with our navy and with Canada?

Jim Balsillie: I've endowed and supported the Arctic Research Foundation, which I created and have provided with several tens of millions of dollars over the years. I continue to do it personally. We have about a dozen terrestrial science stations as well as several research vessels. Absolutely we've had naval people on our vessels. We crew it.

In the Arctic, one thing I've learned is that there's no separation between the economy, the environment, communities and security. There's no hermetic separation. We're doing a lot of work in Grays Bay for the road up there. We're doing a lot of the science work for extending Churchill. We're in the Kitikmeot Sea. We're in Yellowknife in all of the advanced.... We're at Great Slave Lake for power there, and there's much else.

We co-operate extensively. It's a missing piece in the ecosystem. We're delighted to do it. It's a real opportunity to step up the game where you coordinate these pieces, because if you're sensing for environment, you're also sensing for the economy generally and for security.

The Chair: Thank you for that.

Mr. Boyd, I think you referenced in your opening remarks the lack of deepwater seaports up in the north for some of our fleets. You have extensive work up in the north with indigenous...and with existing sites.

I'm just wondering about repurposing some of those facilities. Because of your private sector engagement, you're also improving our infrastructure up in that part of the region, with air bases possibly as alternatives. Can you share with us what you are suggesting or what you are doing in this very realm with regard to the infrastructure spend in the Far North?

Sean Boyd: That's a good question. Part of the offer that's on the table for the Department of National Defence is about when the Meadowbank mine closes. There's an 800-person camp, a large airstrip and a totally contained facility. We've said to the Department of National Defence that at some point they should look at this as something ready-made and already built. They could downsize it. They could upsize it. They could do what they want, but they should look at it. They've asked us to send them the plans.

The other thing we've put on the table, as we move forward with Hope Bay in the Northwest Passage on the northern coast, is that there is an opportunity to use our logistical capacity and help the Canadian military build some sort of installation around the Hope Bay facility, whether it's for training or whatever else it could be. We've also put that on the table, because it's all about logistics planning and barge season. We know we can do it a lot quicker and at a much lower cost than if the military was to do something like that on its own.

Those things are part of the discussions to help use our logistical capacity, our experience and our relationships in communities to get dots on the map quicker in the Far North.

● (1250)

The Chair: Thank you, sir.

We have a few more minutes, so Mr. Bezan or Ms. Gallant, did you want to lead off with another round of questions? Then I'll come to the other two. I'll try to fit everybody in if I can.

Cheryl Gallant: Thank you, Mr. Chair.

Mr. Balsillie, what measurable milestones and accountability mechanisms would you propose to ensure that investments in critical minerals actually translate into sovereign IP and military readiness?

Jim Balsillie: This is a technical realm. One of the expressions I use is that in the tangible economy, if you get 90% right, you get 90% of the benefits, and in the intangible economy, if you get 90% right, you get 10% of the benefits. It's very easy to leak out. The answer that other nations have had for decades is to create institutions that oversee that.

For instance, Germany has the Fraunhofer institutes, with 30,000 employees, 80 research centres and one centralized manager of all the IP. You need to have it be very strategic and very structural. It's the same for your data, because data has economies of scale and scope.

The only way to do this is some kind of Crown corporation. Would you trust a private corporation with your health data? You have to govern it so that it has to be democratically accountable.

Canada was built on institutions. Then when it's right, we privatize them. We have to put that thinking cap back on in this changed world, with institutions for IP, institutions for data, and more strategic participation in the rules around the globe. Again, we're spending all the money; we're just not getting the outcomes.

You need a central locus of expertise that starts to implement this. All of those things have been absent for decades, while the rest of the world has cranked up their expertise in them.

Cheryl Gallant: Given that agentic AI and foreign-controlled digital infrastructure are amplifying our risk to command-and-control systems and are processing our own critical minerals to power these technologies, what urgent steps should the Department of National Defence and CSE take to partner with and procure from Canadian innovators instead of foreign providers?

Jim Balsillie: These agentic systems are very threatening because they can be very clever in cyber-breaches, so that's a place to up our game, but we have pretty good cyber expertise in Canada. I think that's a long suit.

The more important thing you have to understand is that when it comes to AI, there's a thin line between strip mining and participating in this factor of productivity. The most important thing is that you can't separate the inference application, the data and the compute. They all blend as one now. If that's not under sovereign democratic control, like our military, police forces, hospitals and water treatment plants, then it tends to go to strip mining. It's an institutional approach for AI data.

You can allow companies to use it, just as you allow companies to use our Quebec hydro no problem, but it's a utility. Our pensions are a utility. That's the kind of thing we need to do, and then you'd put in systemic rules so that it doesn't leak out. However, right now, our farms are run by John Deere and International Harvester. Our payments and tokenization are run abroad. All of our AI systems are run abroad, so we're very vulnerable to leverage.

● (1255)

Cheryl Gallant: How far off is the world from the next disruptive communication innovation, and which resources and assets should Canada prepare to have ready upon its arrival?

Jim Balsillie: I think we're getting it on all fronts right now. One thing I alerted you to, which surprised you, was the amount of tokenization that's going on. Then you get Jared Kushner and Witkoff, whose sons started World Liberty, meeting with Putin and the head of the sovereign fund on rare minerals. The Trumps just tokenized real estate two weeks ago in the Middle East. They're going to be tokenizing rare minerals. Do we control our own “sovereign chain”, as it's called, in tokenization? Farms are going to get tokenized. It's the new rails. It's an opportunity, so I would say that tokenization is big.

The leverage of infrastructure in AI and cloud, for who gets control of the money, is big. I'm very excited for Canada because I'm an entrepreneur, so I'm always optimistic. We have a bit of reorientation and a bit of expertise. You will see very dramatic differences in a very short period of time. This is all fixable.

Mine is an optimistic message. If we didn't have a solution, I don't think I'd come to testify, because it would just be saddening. We have all the ability to reorient here, and that's why I said you're at this nexus. Put the economy into it and really push this stuff.

The Chair: Thank you, Mr. Balsillie.

The time is coming to an end.

Mr. Watchorn and Mr. Savard-Tremblay, you can have one question each.

Tim Watchorn: I'd like to talk with Mr. Boyd about refining and processing. Everybody is saying we have to stop extracting minerals and sending them somewhere else for processing. How do we create an environment here in Canada so that companies can process? Is there something we can do in the short term or the medium term?

Sean Boyd: It's going to take some time. I think the quick wins are potentially looking at older operations that already have permits in place and have tailings facilities that can be reopened. Those are the quick wins.

It's not just gold. We can see the federal government's investment in the Thompson area in Manitoba for nickel. If you look at Gaspé copper as well, there is a potential to reopen. You have to start there.

Processing is about the economics, really. We built this country based on processing facilities being next to big base metal mines. You have to find the mines and the big deposits, and then you have to be willing, in this environment, to put in processing facilities. I can tell you that the environmental standards and the ability to build these things in a more environmentally friendly way are far superior than they were four or five decades ago.

Tim Watchorn: Thank you.

The Chair: Mr. Savard-Tremblay, the last question goes to you.

[*Translation*]

Simon-Pierre Savard-Tremblay: Thank you, Mr. Chair.

My question is a broad one. We don't have time for a full round, so this question isn't for anyone in particular. Whoever puts their hand up first can answer it.

Should we make this discussion a key component of the Canada—United States—Mexico Agreement negotiations, or would it be better not to try too hard to get this down on paper, given the, at times, chaotic relationship with the United States?

Whoever wants to answer the question is welcome to do so.

Rodrigue Turgeon: Regardless of what ends up in the next agreement with the United States, it's vital to include measures to ensure that any action related to so-called critical minerals or other minerals is carried out in a manner that respects indigenous rights and everything Canada wants to achieve. Canada wants to construct an image, but it also wants to take concrete action for national defence, national security, the economy and the environment. That must be present in any agreement with any foreign entity.

[*English*]

Jim Balsillie: In that realm, the U.S., by law, has had 26 advisory committees for the last 50 years, with 700 experts, that insert these structures. Canada has nothing. If you search for USTR advisory committees, the first sentence will literally restate what I have said. If you search for Canada international trade advisory committees, there's nothing.

If you want to advance your norms, whatever they may be, you'll have to create an infusion structure that puts them into words. I've read the USMCA. It's a million words. It was written by the U.S. over many years, and they dropped it on us.

We have to start being front-footed, because this is another set of legal frameworks. I didn't spend as much time on that as I spent on other legal frameworks, but it structures the environment, the sovereign control of IP, the sovereign control of standards and the sovereign control of data. We'll have to start to push back on these realms if we want to advance the prosperity, sovereignty and security of Canada.

● (1300)

The Chair: Thank you very much.

Certainly, in the comments made most recently and in our discussions on our trip to Washington, a lot of think tanks, academics and others are reinforcing that Canada has the potential and the ability, frankly, to move things forward in a more positive way, as we do.

With that, folks, if there's nothing more, with all of your concurrence, this meeting is adjourned.