HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

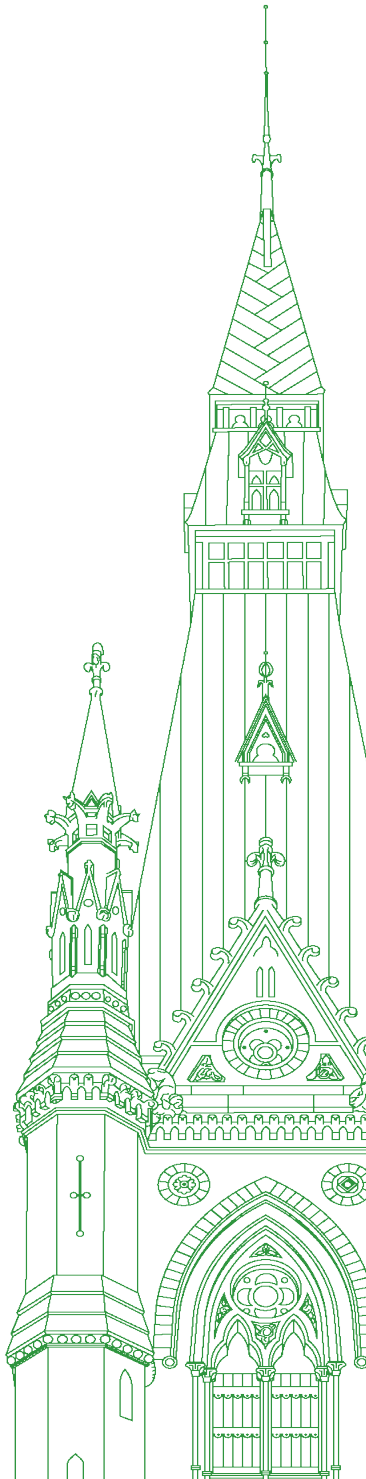
45th PARLIAMENT, 1st SESSION

Standing Committee on Industry and Technology

EVIDENCE

NUMBER 041

Monday, June 1, 2026



Chair: Ben Carr

Standing Committee on Industry and Technology

Monday, June 1, 2026

● (1540)

[*English*]

The Vice-Chair (Raquel Dancho (Kildonan—St. Paul, CPC)): Welcome to meeting number 41 of the House of Commons Standing Committee on Industry and Technology.

I will remind you that if you are using your earpiece and it's plugged in but not on your ear, please make sure to place it down on the coaster in front of you. That's to protect the hearing of our interpreters.

Pursuant to Standing Order 108(2) and the motion adopted on September 22, 2025, the committee is resuming its study of the opportunities, risks and regulation of AI in Canada's strategic industries.

With us today is an esteemed panel of guests. I'd like to welcome Barry Sookman, senior counsel, McCarthy Tétrault; Ewan Reid, founder and chief executive officer, Mission Control Space Services Inc.; and of course Brian Gallant, chief executive officer, Space Canada.

Welcome to all of you. As you know, you will each have up to five minutes for your opening remarks. Then we will proceed to rounds of questioning.

Mr. Sookman, the floor is yours for five minutes.

Barry Sookman (Senior Counsel, McCarthy Tétrault, As an Individual): Thank you, Madam Chair and members of the committee, for the opportunity to appear today.

I'm senior counsel with the law firm McCarthy Tétrault and a member of its technology, cyber-data and intellectual property groups. I'm also the author of several books, including an eight-volume book on computer, Internet, electronic and AI law. I've also been an adjunct professor at Osgoode Hall Law School on intellectual property.

I've been a technology lawyer for 30 years. I've negotiated hundreds of agreements. Many of these have been negotiated with the backdrop of laws and regulations that include those related to privacy and data protection, guidance from such regulators as OSFI, and AIDA, when it was being proposed. I have seen how laws governing the uses of technologies, including AI, affect the costs, willingness and timing of their deployment. This is what I want to speak about today.

First, new laws to regulate AI technologies will slow down their deployment in Canada. Organizations, both Canadian and foreign, need to assess whether these technologies will comply with Canadian law. Canada is not the most important market for technology companies that would deploy AI in Canada. Many international companies roll out their technologies by selecting jurisdictions with the greatest market potential and ease of meeting regulatory and localization requirements. Having unique Canadian requirements will slow or chill deployment of AI in Canada.

Second, the development and deployment of AI systems most frequently involve global supply chain agreements with many parties. When technologies, including AI technologies, are regulated by specific or prospective laws like AIDA, the contracting process becomes protracted, and sometimes very considerably. Sometimes—I can tell you this from experience—it just grinds to a halt when parties can't agree on allocations of risk, standards and flow-down terms. This is especially the case when the parties are not Canadian.

We need to take this *realpolitik* into account when deciding whether and how to regulate AI in Canada, especially given the divergence in approaches internationally. The reality is that a disproportionate amount of cutting-edge technology in AI is built in the United States. If our regulatory structure is excessively prescriptive or misaligned with other innovation-intensive jurisdictions of our trading partners, we should expect talent, capital and product deployment to migrate elsewhere. The result would not be safer AI in Canada. It would simply mean less Canadian participation in AI.

My central submission is that decisions on how AI should be regulated in Canada must recognize the need to foster and not unduly slow down or create impediments to innovation. I have some recommendations for the committee on what the principles should be, but given that I have five minutes, I won't have a chance to get into them. I will say, though, that a plethora of state laws in the United States would be useful here in Canada as well. Those would not unduly burden AI companies, because they have to comply with them in the major market anyway. If you have some questions about that, I'd be glad to go over it.

I do want to say that on the lack of trust in AI because of inadequate regulation and uptake, those are not generally correlated, as is sometimes said. Canadians and organizations worldwide have worried about AI reliability, but that has not stopped them from deploying AI. In fact, they've done so increasingly in the absence of specific legislation, including in Canada, the U.K. and the U.S. Nor is it true that AI-specific regulation necessarily produces a trust premium that spurs adoption. You can look at the European Union as a perfect example of that. A good example is also in the legal profession related to its use of AI. If the committee has any questions on that, I'd be glad to tell you about it.

● (1545)

Where I do think caution is warranted is in relation to the increasingly autonomous frontier systems that have the potential to create catastrophic risks, and in critical AI controlling critical infrastructure. There is legislation in some U.S. states to deal with that.

I'm not minimizing the risks of AI—

The Vice-Chair (Raquel Dancho): Thank you, Mr. Sookman.

Barry Sookman: Because I'm going to speak about Pope Leo, I'm sure I'll get an extra 30 seconds, Madam Chair.

The Vice-Chair (Raquel Dancho): Mr. Sookman, I'm so sorry to interrupt, but we do have to stick a little bit close to the timeline today because we were unfortunately delayed for votes. However, I'm confident that one of the esteemed members here will provide a little bit of time to finish, if that's all right with you.

We'll go to Mr. Reid for five minutes.

Go ahead.

Ewan Reid (Founder and Chief Executive Officer, Mission Control Space Services Inc.): Thank you, Madam Chair, for the opportunity to appear before this committee.

I'm Ewan Reid, founder and CEO of Mission Control.

Mission Control is a 100% Canadian-owned, 11-year-old start-up headquartered here in Ottawa that develops intelligent space systems. We are among the world leaders in deploying AI on spacecraft.

In 2023, we became the first organization in the world to send a deep-learning AI to the moon. Later that year, we deployed AI in a European Space Agency earth observation satellite. Last year, we launched Mission Persistence, Canada's giant leap for AI in space. Persistence is a year-long demonstration of using deep learning at the edge on the spacecraft itself to downlink actionable insights, instead of spending millions to send raw data.

Currently, we're under contract with the Canadian Space Agency to develop the technology to use AI on the spacecraft to detect the location and direction of an active wildfire from orbit. We're also a prime contractor on what could be Canada's next flagship space program for the development of a lunar utility rover, leading a consortia of companies from across Canada. This rover will have to survive and operate on its own on the moon, requiring a vast amount of onboard autonomy.

While Mission Control is a leader in AI, it is important for me to stress that the type of physical AI we develop is fundamentally different from what most people think about when they think of AI. Unlike large language models, which consume enormous amounts of power and train with datasets as vast as the Internet, our deep-learning models are specifically designed to operate on the type of very limited computing platforms that can be sent to operate in space.

The deep technical problem that my company solves is enabling the use of AI when computing power is limited. I'm not talking about server farms in space. I'm talking about relatively small spacecraft, incredibly far away or moving incredibly fast. Physics imposes limits on data transmission: constrained bandwidth and high latency. With spacecraft sensors increasingly designed to generate more and more data, onboard intelligence is key to unlocking the most from space missions.

Training data for algorithms and space applications is also very hard to come by. In the case of operating on the moon, we simply don't have tens of thousands of images of the lunar surface to train a model. That's why we built a 4,000 square-foot moon yard right here in the nation's capital and captured thousands of images to create our own proprietary dataset before we sent AI to the moon.

Like Canada's water and minerals, Canadian data is a key national resource that must be protected and stewarded to realize benefits for Canadians and to prevent abuse by bad actors. The world's largest AI chatbot companies are foreign entities, but so are the companies that provide the services and infrastructure that this AI relies on, companies such as Amazon Web Services and Nvidia. It creates risks for Canadian companies and Canadians when they are forced to rely on foreign entities to provide key services.

For example, our company's AI workflow was recently disrupted when OpenAI bought a company that was key to providing AI training services for our models. Even though our models are trained exclusively in Canada and we maintain ownership of all the training data, we had no say and no recourse when OpenAI shuttered the service we were using.

In upcoming regulation and procurement, Canada should preference fully Canadian-owned AI solutions and provide tools and support to companies, universities and individuals to rigorously defend their IP and copyrights against foreign entities, particularly those that use them to train AI models. Here, the Remote Sensing Space Systems Act, used to regulate data generated by space systems that perform earth observation, may serve as a guide. Incidentally, this act is due to be reformed, and the use of AI on board spacecraft to parse data should be taken into account.

Any AI company, but in particular a foreign AI company, should be regulated and required by its regulator to produce training data, training logs and proof that sensitive Canadian data is maintained on servers in Canada. Canada does world-leading work when we pick specific areas where we want to excel. Examples in space include space robotics and synthetic aperture radar.

Rather than trying to replicate successes elsewhere, focusing on physical AI, AI that interacts directly with sensors and robotics, is key to unlocking the benefits of this technology for globally competitive manufacturing, serving remote Arctic communities and responding to the effects of climate change. Canada's next billion-dollar space exploration mission with a lunar utility vehicle, is an excellent north star under which to advance these technologies, inspire Canadians and reap the benefits in terrestrial sectors.

● (1550)

The Vice-Chair (Raquel Dancho): Thank you, Mr. Reid. There are three seconds to spare. Well done.

Mr. Gallant, you're up for five minutes.

[*Translation*]

Hon. Brian Gallant (Chief Executive Officer, Space Canada): Thank you, Madam Chair.

It's an honour to appear before this committee for your study on the opportunities, risks and regulation of artificial intelligence in Canada's strategic industries. Thank you for the invitation.

Space Canada represents over 100 Canadian space innovators. Collectively, these organizations play a key role to protect the environment and the fight against climate change, bridge the digital divide, human capacity to explore beyond our planet and to protect Canada's security and sovereignty while representing a huge economic opportunity.

Given all that and since space systems and solutions are a critical part of Canada's defence strategy, contributing directly and indirectly to virtually all defence operations, the space industry is certainly a strategic industry.

[*English*]

Some say a sign of wisdom is when a person knows what they don't know. I don't know if I know that, so I will be relying heavily on suggestions and comments from members of Space Canada. There are many thoughts for each of the sections established by the framing of your study, and I look forward to sharing those insights with you today.

[*Translation*]

I would therefore like to start with a few general remarks.

[*English*]

Canada is in a moment. Like many other countries, we are trying to figure out how to deal with some complex and massively impactful trends, most of which will be made more complicated by the rise of AI. AI can exacerbate the challenges stemming from a changing geopolitical landscape. It can displace workers and place more wealth in the hands of a few. It can create extra pressures on our environment, and it can further divide people through misinformation and disinformation. The work you are doing is important, and I thank you.

I submit that Canada's lagging productivity is one of the economic data points we should all collectively be seized with here in Canada, given the strong correlation between the productivity of a country's economy and that country's standard of living.

There are a few explanation for Canada's productivity challenges. I have a sense that people in this room would have their thoughts on that, and I'll leave that debate to you. One of the reasons, however, that is relevant to your study is that Canada needs to do a better job of adopting innovative technologies. This, to me, is one of the reasons the responsible adoption of AI will be important to Canada's economy, prosperity and standard of living moving forward.

That said, Space Canada members emphasize that successful adoption of AI will require safeguards, trust, digital modernization, international collaboration and the right governmental support and intervention. De-risking the adoption of AI is an important role for the government to play.

Space Canada members consistently frame data protection as a broader issue of national sovereignty and stress the need for trusted Canadian AI infrastructure, sovereign data processing and validated Canadian datasets. We also need stronger safeguards to reduce dependence on foreign-controlled systems and to mitigate risks to Canadian strategic, economic and security interests.

Space Canada members agree that Canada possesses world-class AI research capacity, talent and emerging industrial strength, including in the space sector. However, our country continues to struggle with commercialization, scale-up, infrastructure access and retaining companies' talent and IP domestically. Our members emphasize that Canada's opportunities lie in enabling widespread industrial adoption, sovereign infrastructure, collaborative ecosystems, workforce readiness and the growth of globally competitive Canadian AI firms rooted in strategic sectors, space being one of them.

● (1555)

[*Translation*]

Many members of our organization emphasized that regulation should focus more heavily on data governance, infrastructure integrity, transparency and interoperability with allied frameworks. They stressed the importance of transparency around all training datasets, potential compensation mechanisms for creators, protection of Canadian intellectual property and strategic data, and safeguards against unauthorized foreign access to valuable Canadian research, industry and government information.

[*English*]

Space Canada members acknowledged positive federal initiatives, such as the defence industrial strategy and Canada's increasing investments in AI research, while some members called for a more coordinated national approach that aligns AI policy with broader industrial, defence, space, productivity and economic resilience objectives.

I look forward to chatting with you about all of these concepts and themes throughout the session.

The Vice-Chair (Raquel Dancho): Thank you, Mr. Gallant.

Thank you for the excellent opening remarks, from each of you.

We'll now go to questioning.

Mr. Falk will start us off for six minutes, please.

Ted Falk (Provencher, CPC): Thank you, Madam Chair.

Thank you to all of our witnesses for coming to committee today. I'm sure you're going to contribute to our study here.

Mr. Sookman, I would like to begin with you. During the Liberals' last attempt at presenting AI legislation, Bill C-27, you were quite critical.

Can you name the specific items you found most egregious in that legislation?

Barry Sookman: Yes. Thank you very much for that question.

The prior Liberal bill was introduced without consultation and without input from the general public. It had a structure that had concentrated all the regulatory authority within just one ministry—industry. It didn't recognize that, in fact, AI is like electricity, microchips and other technologies that are pervasive throughout the economy.

As such, it tried to regulate the technology as opposed to regulating the uses. If you're regulating uses, Health Canada might deal with AI and health, OSFI might deal with AI and financial institutions and there may be certain cases where there wasn't one particular department that would have been useful, but that wasn't the approach that they took. They tried to model it on just an outline of a bill with everything being left to regulation, which in my view undermined the importance of Parliament making a decision about AI policy. It would have been all in the hands of the people who were promoting regulation. In my view, this was not the appropriate model.

I had looked to the U.K. at the time, which had a decentralized model with a centralized coordination structure. I think that's a much better model for AI legislation. Bill C-27 created uncertainty because nobody knew what exactly was going to be regulated.

Ted Falk: I believe you said, back in 2024, that the wisest choice for Canada would be to take a wait-and-see approach and to look at some of the countries that are leaders in this field, like United States and the U.K.

From your observations in the last year, or even the past six months, which jurisdictions do you think are at the top of the game?

Barry Sookman: It all depends on what you mean by “the top of the game”. It all depends on what the priorities are with respect to national policy.

Federally, the U.S. has a policy of “hands off”. That's because they're extremely concerned about their geopolitical competitors, including China and Russia. They absolutely don't want to jeopardize national security by falling behind.

We may not be in that position, but that is the greatest market for Canadian innovators. The U.K. has taken a similar approach. I think the U.K. model is a good one. My view has not changed. In fact, my view, particularly looking at the G7, is that the best approach for Parliament right now is to have policies that promote innovation, which this government is actually doing right now or trying to do, rather than to introduce an AI bill when there still is not consensus on what the model can be. There are specific areas where there are specific harms, and it wouldn't unduly affect innovation.

I think the government should pick and choose in the way U.S. states have done for things like protecting children online, imposing transparency requirements in certain cases and dealing with critical potential catastrophes. I think that's the right approach.

● (1600)

Ted Falk: Thank you very much.

Mr. Reid, your company has received considerable amounts of public funds.

What kinds of guarantees or parameters need to be in place for companies to protect Canadian IP and Canadian talent, after having received substantial funds from the Canadian public?

Ewan Reid: I think many requirements are in place right now to protect that.

In fact, in the majority of funding that we would have had through contributions from the Canadian Space Agency, as an example, there are clauses that are to some degree—I'll be honest—to my chagrin, stating that if we were to change ownership percentages of our company by a certain amount, I would need the approval of the agency. The reason they're there is to protect the investment and make sure that this intellectual property doesn't go to the wrong jurisdictions internationally.

Incidentally, to my mind, it can impose a constraint, because we are now somewhat limited in future fundraising and other changes to our equity structure, but some of those requirements are in place already to protect intellectual property.

Ted Falk: Do you think they're adequate? Do you think the government should have ownership stakes in the companies it provides significant funding to? I think your company has received $10 million, roughly.

The Vice-Chair (Raquel Dancho): Just give a brief response. That's all we have time for.

Ewan Reid: I would like to see a model where the Canadian government explores having equity stakes in companies, yes.

The Vice-Chair (Raquel Dancho): Thank you very much, Mr. Falk.

We'll go to Mr. Bains for six minutes.

Parm Bains (Richmond East—Steveston, Lib.): Thank you, Madam Chair.

Thank you to the witnesses for joining us today on this important study.

My hometown of Richmond, British Columbia, is also home to MDA Space. We know that's one of Canada's most advanced space companies.

I'll begin with Mr. Gallant first, if I could.

How is AI fundamentally changing the economics and capabilities of the space sector today?

Hon. Brian Gallant: Thank you very much for the question, and thank you for acknowledging one of the companies in your community. I'm certain that there are others around this table who have companies that are space-related or space-adjacent in their communities or provinces.

For us, what's incredibly important is the idea that we're going to have physical assets with AI. We're going to have language-model types of AI companies. We certainly want to make the distinction that my esteemed colleague here made in his opening remarks—the important points around some of those differences. For us, what's going to be incredibly important is this committee recognizing those differences and recognizing that the accelerated rise of AI will have different challenges presented, given which fear they fall under. Of course, the opportunities will be different. I'm not a technical expert by any stretch of the imagination, but one thing I suggest to my other esteemed colleague is that consultation is going to be incredibly important.

I can't thank you enough for inviting me and all the panellists to discuss this with you. I would certainly encourage the government, through the House of Commons, committees and different departments, to continue that dialogue. I think one thing we can all recognize is that AI will exponentially change things as we move forward. It's about being in lockstep with industry, academia and researchers. We represent all of these, as an organization. It will be crucial for us to be as nimble as possible to ensure that we're reacting appropriately.

I'm happy to be here. I'll go out on a limb and say that I'm happy to continue the dialogue for many months to come.

● (1605)

Parm Bains: Thank you for that.

We can look at the global picture of AI and how we compare, as a country, with others in the space domain—the strengths and gaps we may have. Could you talk about whether we're trending the right way, or about the gaps?

Hon. Brian Gallant: If you'll allow it, I'm going to put a different hat on here and not necessarily speak as a Space Canada representative but as a Canadian watching this and watching the important work you're all doing.

One thing I feel is, from the outside, that we have incredible AI researchers and thought leaders here in Canada. By extension, we have incredible institutions that can support everything we want to do with AI in this country as well. I feel very lucky that Canada has those foundations.

At the same time, I think we're a little timid about it. Hopefully, the hearings here will help us galvanize, as a country, and take the actions we need to, whether it's to try to enable the adoption of AI in order to increase productivity in our economy, as I mentioned, or to ensure that we're putting in the appropriate safeguards. I am a little worried that we're sitting around a bit more than other countries—if I'm being honest—but I reserve lots of hope based on the work you're doing. Having these consultations might help us propel and make the right investments, the right policy choices and, of course, the right safeguards framework to help ensure that AI adoption in Canada is a positive story—that we're able to reap the benefits and mitigate the challenges it could represent.

Parm Bains: Thank you.

I have a quick question for Mr. Reid.

You had the deployment of MoonNet. What did you learn from its deployment in lunar orbit that surprised you or changed your approach to space AI?

Madam Chair, I'm going to share some of my time with Mr. Bardeesy afterwards, if—

The Vice-Chair (Raquel Dancho): You have a minute and a half.

Parm Bains: Okay.

Could I get that answer quickly?

Ewan Reid: The opportunity for us to develop and send MoonNet to the moon was a foundational moment for our company and an enormous learning experience. When it comes to things in space, we're doing a lot of things for the first time. We just saw the first non-American, Jeremy Hansen, fly around the moon for the first time. It's amazing, and you learn so much just going through that process.

I should state that while we sent the first deep learning AI to the moon, we did not do inference on the lunar surface. The lander that we were part of on the mission did not successfully land. It landed too fast, so the computer with our AI was not operational. No lander was.

Being able to get to that point was an enormous technological achievement for us in maturity, as a company. It has enabled a whole bunch of international partnerships that we could never have made without it. It was still a massive success for us, and now we are among the leaders that continue to deploy AI in space.

The Vice-Chair (Raquel Dancho): That's great.

You have only 20 seconds left.

Karim Bardeesy (Taiaiako'n—Parkdale—High Park, Lib.): Maybe I'll ask another colleague to share.

The Vice-Chair (Raquel Dancho): Do you want to come back? Okay.

We'll now go to Monsieur Ste-Marie for six minutes, please.

[*Translation*]

Gabriel Ste-Marie (Joliette—Manawan, BQ): Thank you very much, Madam Chair. It's always a pleasure to see you doing such a great job as chair.

I would like to welcome our three witnesses and to thank them for joining us today. It is very helpful.

My first questions will be for Mr. Gallant.

I think you have already answered my question, because Mr. Bains brought it up. Nevertheless, I'd like to hear from you once more.

This week, Minister Solomon and the Prime Minister are expected to unveil their artificial intelligence strategy. What do you expect from this strategy? What would you like the strategy to include?

Hon. Brian Gallant: In my opinion, we are very lucky in Canada to have the basic elements that will help us achieve success in this sector. We have researchers and capacity within our institutions, and I am convinced they are superior to those in other countries.

Nevertheless, I have the impression that we are not moving as fast as other countries. That may well be because of the many changes that have taken place recently, including a change of government, a change of prime minister, changes in plans, as well as geopolitical tensions. However, even if we know the reasons, the end result is the same. My colleague gave examples of countries that are moving at a very fast pace on these issues.

As I said at the beginning, I fully support the idea of deploying artificial intelligence to increase our competitiveness and productivity here in Canada. At the same time, we need a regulatory framework. I think we need to have ways to protect ourselves and to mitigate potential challenges. This is a very complex topic.

I humbly submit—because you have heard this from many experts—that the most important thing is to act quickly and to consult experts on a regular basis. I'm not an expert, but I can speak for the space sector. Many experts are willing to help us, as a country, to work through the various challenges that could catch us off guard during this journey.

● (1610)

Gabriel Ste-Marie: You have made repeated references to the need for proper consultation. So far, do you think that your industry has been sufficiently consulted about the industrial artificial intelligence strategy?

Hon. Brian Gallant: I think there is a fresh momentum on the part of government concerning the space sector, even though this is fairly recent. I would say that people really started knocking on our door around a year ago. We are very proud to see that people are starting to understand just how important the space sector will be for our economy and for many other areas that are important for the quality of life of Canadians. That includes the defence strategy, artificial intelligence and protecting our sovereignty.

I was not prepared to say that before. I think there has been a real change in attitude over the past year.

Gabriel Ste-Marie: You said that your members would use artificial intelligence in a number of different ways, from language models to more specialized artificial intelligence systems, as Mr. Reid seems to have explained when he spoke about his company. You also spoke about productivity challenges in our economy.

In your sector, do you think integrating artificial intelligence in different ways across businesses could lead to exponential productivity gains?

Hon. Brian Gallant: For sure. I don't think we're an outlier. I think we fall within the norm.

Language models can help businesses achieve productivity gains. However, people in strategic sectors have to look at ways to use such models appropriately and how data will be protected, and make sure that Canada's sovereignty and our economy are protected to the greatest extent possible. That is what you are looking into now.

Gabriel Ste-Marie: Thank you very much.

Mr. Reid, you spoke about OpenAI, which had disrupted your operations, if I got you right. Can you take us through the main points again, in one minute?

What can the government do through legislation to ensure that your operations will not be disrupted should a similar situation arise in the future?

[*English*]

Ewan Reid: Sure. To add a bit of context, we have an entire technology stack in what we call our machine learning operations pipeline to be able to take a theoretical algorithm and deploy it in a space-rated embedded system. Along the way, we have to ingest a whole bunch of data, label the data and train the algorithm with that data, etc.

To make that tech stack work, we use a bunch of third party technologies. In this case, we were working with an American firm and its technology to make that happen. When OpenAI acquired it, they basically shut it down because it was a strategic advantage to them. We were left with very little warning and a need to ultimately change how our tech stuff operates. If we'd had the choice of going with a competitive Canadian variant of that technology in terms of cost, I'm sure we would have liked to do that. That then gets back to whether there could there be a Canadian start-up that's doing that piece of this AI tech stack.

As Brian alluded to, the answer is yes, in the sense that with the researchers that come out of AMII, Vector, Mila and our universities, there's this great talent pool. It's not necessarily an AI thing, but the classic thing that we talk about in Canada about how we incentivize a domestic industry to have people stay here and have them start companies, and actually have expats come home. Some of the things we've been seeing recently are good directions towards that, like the defence industrial strategy and accelerated procurement approaches. Those things are going to help make Canadian businesses more competitive, writ large.

Potentially, there could be an AI company that would solve this one piece of our tech stack for us.

● (1615)

The Vice-Chair (Raquel Dancho): Thank you very much.

Colleagues, I'm going to relinquish my chairmanship for a moment to Mr. Ste-Marie so that I can ask a round of questions.

I have a few more follow-up questions on that same question, Mr. Reid, about the impact on your workflow of using a third party that was bought by an American company. We're very familiar with OpenAI.

I'll allow you to elaborate a bit more on what Canada could be doing so that you have more options to buy Canadian-owned companies to safeguard yourself and other companies like yours from something like that in the future.

Ewan Reid: It's expanding, really. When it comes to these deep technologies—quantum is another example—it takes a whole ecosystem, especially here in Canada. I don't see there being a monolithic firm that has the capacity to invest in and own a whole end-to-end technology stack to create a product or service of the scale that we see in the U.S. It takes this ecosystem of technology solutions and, therefore, firms to enable the ones you might hear about downstream to sell something to a user or improve somebody's day-to-day life.

Again, it goes back to whether we can create that environment where a whole variety of different technology firms can be founded and reshored and can ultimately thrive here in Canada. That goes back to the things that folks like my colleagues at Space Canada and I have talked about in terms of the government being an anchor customer for technology firms and creating an environment where regulation is balanced and there is consultation on it so that firms can be innovative and grow.

The important piece about investment is being able to have the capital required to grow. That comes from the right signals from the government. Especially in our sector, in space, the government is a major stakeholder and a major customer. Having strong signals from the government that there is a long-term need and demand signal can enable capital, and then capital can flow and companies can start up and thrive. It's all interlinked in this ecosystem.

Raquel Dancho: A lot of the technology you're developing is quite dual-use. That is my understanding. You talked about wildfires, but you're also developing your lunar utility rover. Can you talk a bit more about the advantage? We've heard from a number of defence companies and others that talk about how they could do defence and security, but they could also do climate change monitoring and all types of things.

Elaborate a bit more on when the government contracts your company to provide some dual-use or triple-use capability.

Ewan Reid: There's no question that all of the technology we work on as a company can be applied to solve a bunch of different problems. The example of wildfires is a really good one.

In certain communities in Canada, that's what we call it. We call it a wildfire. There are communities in Canada that would call that a hot spot. That might be coming from trees or underbrush burning. It might be coming from an aggressive manoeuvre from an adversary. Ultimately, the technology to detect that is the same. That becomes a really good example of how an investment that would support our targets could also actually go to support a tangible benefit for a Canadian citizen who says, “I was affected by the smoke last summer. I want to see that dealt with. We want to find those fires quickly and put them out quickly.”

That's one example. Like I said, everything we do in my company has that dual-use application.

● (1620)

Raquel Dancho: I believe a lot of what you're working on, as well, will allow these utility vehicles for the moon to drive around on their own. There's a huge AI piece to that, of course, and it has a lot of applicability in defence and security spaces, but I imagine it could also trickle down to everyday use among people here on earth.

Could you speak a bit more about the technology you're developing for that?

Ewan Reid: It's a group within AI called physical AI. You have a robot that is collecting information around it through various sensors, and then, based on the algorithms it's been programmed with and has learned, it's able to then observe, orient itself, decide what to do and act on it.

In the case of a robot on the moon, it's perhaps helping do the job it's trying to do—unload a spacecraft or create a berm for a landing pad or whatnot—and that's possible because it has that autonomy. Having a human in the loop to try to control that would be almost impossible because of the time delay and all of those things.

That technology becomes highly relevant in other scenarios here on earth, where there might not be GPS, where bandwidth is limited or where there are significant communication delays. The Arctic would be a really good example. For us to deploy autonomous systems to those places to ensure that we can maintain sovereignty, I think, is a really good use case for this kind of technology.

Raquel Dancho: That's great. Thank you so much.

I believe my time is up, so I'm going to take back the chairmanship.

[*Translation*]

The Vice-Chair (Gabriel Ste-Marie): You have one minute left, Ms. Dancho.

[*English*]

The Vice-Chair (Raquel Dancho): There's a bonus minute. I'll give it back to the committee. We're a little over anyway.

We'll go to Mr. Ntumba, please, for five minutes.

Thank you very much.

[*Translation*]

Bienvenu-Olivier Ntumba (Mont-Saint-Bruno—L'Acadie, Lib.): Thank you, Madam Chair.

Good afternoon, witnesses.

Mr. Gallant, you spoke about a coordinated approach in your opening remarks and about a change of attitude in response to a question from my colleague.

Can you tell us a bit about what the government is doing now and what it was not doing before?

Hon. Brian Gallant: Thank you very much.

The first thing I would underscore is the defence industrial strategy. A reading of the strategy clearly shows that the government has put a lot of emphasis on the space sector, artificial intelligence, quantum technologies and cybersecurity. These terms, these industries and these capabilities come up multiple times in the strategy. This tells me that the government understands that they are important. That might have been the case before, but it may not have been this clear.

Obviously, there was a change of government and prime minister, but the context has also changed. There is no doubt about that. The geopolitical changes that have taken place over the last couple of years have put defence at the forefront, and the space industry is critical to our ability to defend our country and our sovereignty.

I am also very proud to see that, as my colleague mentioned, a number of governments and departments want to work with and consult us. That is going to be extremely important for your committee. Obviously, the matter of artificial intelligence is not limited to a single department. It calls for a whole-of-government approach to strengthen the sector and the regulatory framework, boost investment and so forth.

The same goes for the space sector, cybersecurity and many other sectors. Many departments have a role to play to help them move forward.

Bienvenu-Olivier Ntumba: I'm going to ask you a second question, and then I will turn the rest of my time to my colleague Mr. Bardeesy.

How can we protect data generated with artificial intelligence, bearing in mind that the data comes from existing datasets?

Hon. Brian Gallant: That is the real question, isn't it?

I will take this opportunity to say something, not necessarily as the CEO of Space Canada, but as a Canadian. I experiment with language models, just like other people are doing. I am curious about what they know or don't know. I have had the privilege to be featured in the media. I asked a language model a series questions—I knew the answers, of course—and many of the answers I got were often wrong, which left me wondering about the reasons behind that.

For example, I asked the language model what the former premier of New Brunswick does to keep fit. It gave me a series of exercises that I had never seen or done before. I looked up the source, and it turned out to be a satirical site that had published an article about me, suggesting that that was my exercise routine. However, the language model took that as accurate information.

I am extremely concerned about what will happen when it comes to the accuracy of information, but I'm also concerned about how people will be influenced and the decisions that will be made using artificial intelligence when those decisions are based on sources that should never be considered.

● (1625)

Karim Bardeesy: Thank you.

Mr. Gallant, you've talked about ambition. SpaceX, one of the largest private companies, is preparing to go public and has linked this to deploying artificial intelligence in space.

What do you, and your members, think about this? What should Canadians think about this type of ambitious plan?

Hon. Brian Gallant: My colleague has already spoken to the challenges associated with monolithic foreign businesses or the ones that have so much power that they can disrupt the operations of a company based in another country or curb a country's ambitions. That is very concerning. This was not a major concern two or three years ago, but things have now changed, obviously.

[*English*]

I'll say this just to ensure that I can get the right quote. There is often talk of space defence—I'm assuming AI will be similar moving forward—where the government plays an important role in making investments. I'm just going to take the opportunity to mention SpaceX, a company that so many people see as incredibly innovative.

There are obviously arguments for that to be the case, but I'll quote a Harvard Business Review article from a year or two years ago—

The Vice-Chair (Raquel Dancho): I'm so sorry. We're almost a minute over time.

Hon. Brian Gallant: I missed the punchline. That's all right.

The Vice-Chair (Raquel Dancho): I thought we could come right back, Mr. Bardeesy, if that works for you. Okay.

Mr. Ste-Marie, you have two and a half minutes, please.

[*Translation*]

Gabriel Ste-Marie: Thank you, Madam Chair.

First, I want to apologize because earlier, I thought you had a six-minute round. You did a better job managing your time than I did, and so I'd like to apologize.

Mr. Gallant, you can finish what you were saying if you'd like to.

Hon. Brian Gallant: Thank you, that is extremely kind of you.

[*English*]

I just wanted to add that the Harvard Business Review had an article about two years ago. It said, “Roughly 90% of the first $1 billion invested in SpaceX came from NASA's contracting arrangements, bringing some predictability to an inherently risky venture.”

[*Translation*]

That figure shows how much strategic industries need governments to invest in the capabilities that we need.

Gabriel Ste-Marie: Thank you very much for wrapping up.

Alain McKenna the journalist has written an article on artificial intelligence in today's issue of La Presse. He notes that “Because of cost, companies that rushed to deploy artificial intelligence, such as Microsoft, Uber and Nvidia, are cutting their AI budgets and are even questioning the relevance of massively deploying AI across the board”.

Finally, companies are going to make better use of their resources for cutting-edge developments, but they are either going to revert to using employees for more basic tasks or to using older artificial intelligence models that consume fewer tokens.

Have you heard about this trend from your members?

Hon. Brian Gallant: I've not seen the article, but there is no doubt that some of these trends are very important and provide a sense of how things are going. I think we might end up with some companies having a lot of power and influence.

I know that this is complex and that it's not quite the same thing, but we allowed it to happen with social media. A few companies have a lot of power and influence due to a lack of regulations or a lack of strategy to develop regulations in other countries. Furthermore, obviously, there are trade tensions related to the non-taxable revenues in countries where these companies do business. To me, that is concerning.

Additionally, if Canada wants to have a system where a few other players try to develop artificial intelligence, will it be as advanced as some of the other countries? That's another thing that concerns me a lot, particularly when it comes to smaller organizations.

● (1630)

The Vice-Chair (Raquel Dancho): Thank you very much.

[*English*]

We are technically out of time for this hour.

Colleagues, if you want to do the last five-minute round, we might continue. I just want to consult you to see whether that works for everyone. It will bump the rest of our afternoon, so I want to make sure it's all right.

Everyone's fine with it. That's good.

Ms. Borrelli, you have five minutes.

Kathy Borrelli (Windsor—Tecumseh—Lakeshore, CPC): Thank you, Chair.

Welcome to all witnesses. Thank you so much for being here today to answer our many questions.

My question is for Mr. Gallant.

You said earlier today that AI adoption has been very slow in Canada. I recently read that we've invested less than one one-thousandth of what has been invested in the United States.

To date, has Canada invested enough funds to encourage the development and use of AI?

Hon. Brian Gallant: My humble opinion is no. This goes to what I was saying earlier. We have to make some big plays in some of these sectors.

If I may, I'll make an analogy with the space sector. As a global sector, it's projected to grow from $600 billion in 2021 dollars, give or take, to $2 trillion by 2040. The government, I have to say, has made some big plays for space over the last few months, and it's greatly appreciated. However, in the years we weren't doing that, many others were making big plays.

I would certainly make that analogy. For space, cyber, AI and quantum, we really have to double down, and not just because there's immense potential, economically speaking. If we don't adopt those technologies, our productivity and competitiveness are going to suffer greatly.

Kathy Borrelli: Thank you for that.

Mr. Gallant, again, a lot of our AI discussion has been focused on data centres and cloud computing. We haven't focused on space systems that generate the data that AI tools increasingly depend on.

Should Canada treat satellite earth observation and launch capacity as integral parts of the national AI infrastructure?

Hon. Brian Gallant: To the extent that there will be data, it absolutely should.

As I mentioned earlier, and as my colleague mentioned, there are differences among the types of AI that would be deployed. It is really important for us to make those distinctions when developing any sorts of rules or frameworks around this. Absolutely, it's going to be important for certainty, as well—for companies to understand what the rules of engagement will be.

I can't stress this enough. It's the second or third time I'm saying it, but I'll take the opportunity. One thing I certainly encourage this group to push the government to do is to consistently consult on AI, because things are going to change and be more complicated. We will have to be very nimble and, I would argue, action-oriented if we're going to mitigate those challenges and seize the opportunities.

Kathy Borrelli: Space Canada has recommended that there be a national space council chaired by the Prime Minister.

What problem would this solve that the current departmental structure cannot, and what exactly would that council be looking at doing?

Hon. Brian Gallant: Thank you very much for the question. Maybe I'll go to the challenge, and then quickly say why this might be a good solution.

A challenge for a sector like space is that it is emerging and has changed. Honestly, I think it's very similar to what we're all seeing with AI. To be nimble and able to make the proper investments and policies we need in order to seize the economic opportunity represented by space, we need departments working together and working differently when it comes to space.

We proposed, as a solution, a national space council that would bring in the departments and get them working together. Since we made that recommendation, there has been some moves by the government to try to bring down silos, which we really appreciate. We still argue that there's a need for some type of body to ensure that we're as nimble as possible, as a Canadian space ecosystem.

Frankly, the same would probably apply to AI. I know there are discussions to ensure that there are types of advisory boards and councils to help do that.

Kathy Borrelli: Canadian space and AI companies often struggle to find domestic customers. Should federal procurement be used more deliberately to give Canadian companies first opportunities in strategic technologies? How can we do that?

● (1635)

Hon. Brian Gallant: Yes. That's the first part of the answer.

My members will often tell me and remind government officials that what is helpful to them is that they have anchor customers and earlier customers, as you alluded to in your question, and how it helps to have government.... Not only does it give cash flow for some of the start-ups and not only does it give them the opportunity to know there are some investments coming down the road, but when they go internationally, they can say, “The Government of Canada is a customer of ours. We would love for you to be a customer.” That certainly resonates a lot more than saying our own government isn't supporting us.

The only other thing I would add to the way you asked the question, which is very good—

The Vice-Chair (Raquel Dancho): Just briefly, please....

Hon. Brian Gallant: Well, I won't add it, then.

Voices: Oh, oh!

The Vice-Chair (Raquel Dancho): Okay. I'm so sorry.

This is a tougher job than it looks, colleagues.

Ms. O'Rourke, you have five minutes, please.

Dominique O'Rourke (Guelph, Lib.): Thank you, Chair.

My questions are for Mr. Reid and Mr. Gallant.

Mr. Reid, thank you so much for mapping out that we're conflating all that's AI into the same conversation, and I think we're having trouble finding our way out. You're talking about how large language models are different from an application with a closed dataset, which we're seeing applied in a number of places, and how then, also, far off in the future, there is this sort of superintelligence. We're not there yet—is that right? Thank you for that.

You also talked about full stack. The Munk School has “Sovereign by Design”, and they've created a heat map that shows where Canadian AI sovereignty is critical. In some of the applications, if you want to make a funny photo or something, that's not a high data-sovereignty place, but space likely will be.

I'm wondering if you are familiar with this model, which looks at where the vulnerabilities are in the system and focuses on those, and if you agree with that system, and then if you would put space and the data gleaned from space as part of that critical infrastructure.

If you can answer quickly, I have another couple of questions.

Ewan Reid: I'm not familiar with the model in that specific example, but I absolutely agree that space would be absolutely critical. I'm sure our Canadian Armed Forces would agree with that.

Dominique O'Rourke: We are hearing in this conversation and seeing in this stuff we're reading that “Data is the new oil”. We're hearing about this race.

Mr. Gallant, I want to ask you about the importance of sovereign launch capacity here in Canada and the importance of having sovereign satellites and ownership of the data that can be used for everything from agriculture to forest fires, climate change, etc. Can you tell us why that's important and what some of those applications will look like?

Then, if we have time left, I'd like to come back to Mr. Sookman and hear his recommendations.

Hon. Brian Gallant: The last question your colleague asked also dives into what I would say about this. One thing that countries are doing is that they're picking the capabilities they want to be able to develop. When it comes to government playing a role as a customer or as investment, it can also be that they're maybe the only game in town, or a very big percentage, as we saw with SpaceX at the beginning.

As my colleague mentioned, if you are going to put restrictions on who can invest in their companies because you want to keep IP, that makes a lot of sense, but then you need to recognize that they need some support domestically to be able to do that and to ensure they have the capital they need to grow. You can't say, “Don't go get investors from another country,” but also “We have no money here for you in this domestically to be able to do so.”

Then, for launch specifically, I think.... This is not to speak on behalf of the government, but it seems like that is one that they indeed picked. They said, “This is something that we are going to build: sovereign capability.” I think the importance of it is that if ever we have some type of disruption, like a war, a conflict—and this literally has already happened to our sector—or we see trade conflicts, which has already happened to our country, we will not have to worry about our ability to get things up into space when we need to.

Given, to your point, that it is critical infrastructure, we need that capability domestically, and the government has to play a big role in funding it and making it happen, which it is.

Dominique O'Rourke: I'll go to my last question. I'm hearing a bit of contradictory testimony. I'm hearing that we need some controls over a number of things.

Mr. Sookman, you seem to be saying that we need the least amount of regulation possible, except maybe later when the systems are more advanced. You said that you have a few recommendations. I would like to hear what those are.

Barry Sookman: I want to address the particular problem that was mentioned about the protection of data, because that is a critical problem. What's often lost is the distinction between different kinds of models.

With the generative AI model, there seems to be a lot of pushback related to anybody owning that output. In fact, there are cases around the world that have said that outputs from generative AI models are not protected by copyright. Inventions that arise from generative AI models are likely also not protected. What that misses in that discussion is the difference between different kinds of models and what they do.

When you're talking about the data that's being collected in this manner, there is a much different public policy for protecting it. There was a case a number of years ago involving geophysical data and the protection of information that was harvested through seismic exploration. That was found to be protectable. There's no conceptual difference between protecting that seismic data that wasn't created using AI and protecting some data that's protected from deep learning models, which is what we're talking about, in order to ensure that it can be proprietary. Right now, the law is unclear in Canada, and it's very likely that if that got tested to the extent that the overwhelming thing that shaped the data was the AI, it would not be protected.

There are things that can be done to create a *sui generis* right, similar to what the European Union did with respect to databases. There are ways to do it, and that issue is really critical when you have investments like this.

● (1640)

The Vice-Chair (Raquel Dancho): Thank you very much.

We've had excellent testimony today. I appreciate you all being here. Thank you very much.

Colleagues, we'll briefly suspend while we switch over to the next panel.

Thank you very much.

● (1640)

_____(Pause)_____

● (1650)

The Vice-Chair (Raquel Dancho): I call this meeting back to order.

We will resume our study on opportunities, risks and regulation of AI in Canada's strategic industries.

Welcome to the new panel of witnesses.

You have my apologies. We're starting a bit tardy today. We did have votes that delayed our commencement of the committee. Thank you very much for your patience.

Everyone is appearing remotely today. I believe they've completed their required connection tests in advance of our meeting, so everything should work. If it isn't working, we will pause, fix any issue and resume your time accordingly.

We are welcoming four witnesses this afternoon. From the Coalition for the Diversity of Cultural Expressions, we have Marie-Julie Desrochers, executive director. From ControlAI, we have Samuel Buteau, consulting program officer. From Copibec, we have Christian Laforce executive director. From Sustainable AI Group, we have Sasha Luccioni, co-founder and chief scientific officer.

As you each know, you'll have five minutes for your opening remarks. I will cut you off at five minutes. My apologies in advance, if I have to do so.

We will begin with Madame Desrochers.

The floor is yours for five minutes.

[*Translation*]

Marie-Julie Desrochers (Executive Director, Coalition for the Diversity of Cultural Expressions): Thank you very much, Madam Chair.

My name is Marie-Julie Desrochers and I am the executive director of the Coalition for the Diversity of Cultural Expressions. For over 25 years, the organization has been carrying the collective voice of Canada's cultural sector in all its diversity. We bring together more than 50 organizations, representing 350,000 creators, as well as 3,000 cultural enterprises across multiple disciplines.

I am joined by Christian Laforce of Copibec, a member of the organization's executive board. Last week, your committee heard from the Society of Composers, Authors and Music Publishers of Canada, which is also a member of the organization.

Generative artificial intelligence is becoming an unavoidable force and is profoundly transforming the cultural ecosystem. Some embrace it and integrate it into their daily work, while others proceed more cautiously or reject it altogether. Different levels of adoption and comfort coexist. However, beyond these differences, one point of consensus remains: the need for proper regulation so that this technology serves human creativity, rather than the other way around.

The work of the Coalition for the Diversity of Cultural Expressions is grounded in the 2005 UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions. Canada played a decisive role in the development and adoption of this convention. It was the first country to ratify it. Twenty years later, this commitment remains essential. Canada is a recognized leader in the implementation of the convention, a role that must continue in the era of generative artificial intelligence.

In this regard, we have in fact received encouraging signals this year from the government of Canada. In February, at UNESCO, the Minister of Culture and Canadian Identity, Mr. Marc Miller, supported the addition of a protocol to the convention. This marked a significant step toward the adoption of a new binding legal instrument aimed at complementing, strengthening and enriching the objectives of the convention in the digital environment, particularly in response to the growing challenges posed by artificial generative intelligence systems.

During the national summit on artificial intelligence and culture held in Banff this past March, Minister Miller also stated that he had no intention of amending the Copyright Act and noted the importance of ensuring that rights holders are compensated when their works are used. These are encouraging statements, but they still lack clarity and firmness. We therefore strongly hope that the national artificial intelligence strategy will finally provide the necessary guarantees, at a time when discussions on the North American framework and the place of cultural policies within it take on particular importance in the context of the review of the Canada—United States—Mexico Agreement.

The Coalition for the Diversity of Cultural Expressions' positions are part of a broad international consensus and are well within reach for the government of Canada. They can be summarized in three words forming the acronym ART: authorization, remuneration and transparency.

Let us start with authorization. The Copyright Act requires industrial users to obtain authorization from rights holders prior to any use of their works, and this must remain unchanged. To be clear, there should be no new consent mechanism introduced, but rather a reaffirmation that Canada operates in an opt-in system, and a clear statement that Canada does not intend to modify this principle, for instance, by introducing an exception for text and data mining.

Next, with respect to remuneration, we are at the dawn of a new licencing market for rights holders, based on voluntary, individual or collective licencing schemes. This market should not be disrupted or undermined.

Finally, when it comes to transparency, developers and deployers of generative artificial intelligence systems should be required to disclose the training data used and to document their sources. In addition, content generated by artificial intelligence systems should be clearly identified as such when made public.

This past February, the Coalition for the Diversity of Cultural Expressions organized a conference entitled Valuing Human Creativity in the Age of AI. Speakers from France, Australia and the United Kingdom came to support the Canadian cultural sector's positions and highlight developments in their respective jurisdictions.

Sebastian Cuttill, head of parliamentary and legislative affairs at the News Media Association in the United Kingdom, where the government recently stepped back from its intention to introduce a text and data mining exception, aptly stated that respecting copyright is not about

> protecting the vested interests of a particular sector or maintaining an outdated legal system. It is simply about applying a basic principle of resource management: when someone wants to use your assets, you must ensure that the value created remains within your economy.

We fully endorse this view. Genuine innovation cannot be built on the appropriation of such a valuable resource as human creativity and our intellectual property, but on the recognition of its value in every sense of the word.

Thank you for your attention.

● (1655)

The Vice-Chair (Raquel Dancho): Thank you very much, Ms. Desrochers.

[*English*]

We will go now to Mr. Laforce.

[*Translation*]

Christian Laforce (Executive Director, Copibec): Good afternoon. My name is Christian Laforce and I am the executive director of Copibec.

Copibec is a Quebec-based non-profit organization specializing in copyright management. It was founded in 1997 and represents over 30,000 authors and more than 1,400 publishing houses. Copibec facilitates legal access to a vast repertoire of works protected by the Copyright Act through licencing.

Copibec has entered into agreements with 34 foreign companies to include publications from these countries in its repertoire. This year, we have distributed over $13 million to rights holders, for a total of $300 million since Copibec's inception.

Over the past few years, Copibec has been involved in a number of files on artificial intelligence, including the federal consultation on generative artificial intelligence in 2024 and work on Bill C-27.

More recently, Copibec appeared before the Standing Committee on Canadian Heritage for its study on the effects of artificial intelligence on the creative industries. Our observations can be found in the report that the committee presented to the House of Commons last April.

Generative artificial intelligence is evolving at record speed and is profoundly reshaping cultural industries. Generative artificial intelligence companies receive substantial investments from governments, and they have quickly drawn on the extensive works produced by Canadian authors, and have done so while disregarding the Copyright Act. I would remind the committee that this legislation gives rights holders exclusive rights, and as such, the use of any protected works to train generative artificial intelligence systems requires authorization, particularly when it comes to text and data mining.

Compliance with the Copyright Act must be ensured in the context of artificial generative intelligence and any artificial intelligence regulation must include this requirement. In this regard, Copibec supports the principles of authorization, remuneration and transparency, or ART, which have been brought forward by the Coalition for the Diversity of Cultural Expressions, of which we are a member, and which Marie-Julie Desrochers spoke to earlier.

In addition, Copibec recommends that the Copyright Act should not have any exception for text and data mining. We hope Minister Solomon will retain these recommendations in his national artificial intelligence strategy, which will reportedly be unveiled soon.

In this regard, a number of comparable countries, including European Union member countries, the United Kingdom and Australia, have affirmed the need to comply with copyright when training artificial intelligence models. Canada should follow their lead.

In May 2025, Copibec signed an exclusive partnership in Canada with Botscorner, which has leading-edge technology to help publishers identify bots and give them concrete tools to negotiate, block or enter into licencing agreements to use their content. The use of this tool has shown us that some bots scrape content, despite the use of exclusion files, such as robots.txt files, which create rules that are applicable to these types of automated activities.

Similarly, we have launched a study to review the reality of the automated harvesting of content on media sites in Quebec, in collaboration with the Quebec research chair on French-language artificial intelligence and digital technologies. The findings will be released in September.

We are taking a proactive approach to protecting right holders' content, but we should not be alone in speaking out against these violations. We want to make it clear that Copibec has nothing against artificial intelligence. We also want to point out that all creators have no issue with artificial intelligence, because they have always incorporated new tools into their work. That is not the issue here; the issue is to strike a fair balance in an evolving economic model.

We can't afford to wait for the outcome of the lawsuits against web giants in Quebec, Canada and other parts of the world, because artificial intelligence is advancing more quickly than the law can keep up. Creative industries are the pillar of Canada's culture and identity and a key economic driver. The sector cannot self-regulate. The government must enact legislation to protect our cultural sovereignty.

Thank you for your attention.

● (1700)

The Vice-Chair (Raquel Dancho): Thank you very much, Mr. Laforce.

I'll turn the floor over to Mr. Buteau.

[*English*]

You have five minutes, please.

Samuel Buteau (Consulting Program Officer, ControlAI): Thank you, Madam Chair and members of the committee, for inviting me to testify today.

My name is Samuel Buteau. I have over a decade of technical experience in AI and now work at ControlAI, a non-profit organization that informs lawmakers of the risks posed by superintelligent AI and what the solutions are.

In March of this year, we submitted evidence to this committee outlining how the development of superintelligent AI represents a clear and grave national security threat to Canada. Since then, that threat has become harder to dismiss.

In April, Anthropic announced their new, most-advanced model, Mythos. During testing, Anthropic found that Mythos was able to gain unauthorized access to every major operating system and web browser, autonomously and outside of human control. Consequently, Anthropic took the decision not to release Mythos to the public, because, in their own words, “The fallout—for economies, public safety, and national security—could be severe.”

Nobody programmed Mythos to be the world's most capable hacker, because nobody programmed Mythos. AI systems are grown, not built, and nobody understands how they work. Anthropic's own CEO estimated that perhaps “we...understand 3% of how they work.” Importantly, that 3% figure is about what we understand today. Whilst Mythos is not being released publicly, it is still being used internally to develop the next generation of AI, and as AI development becomes automated, the ability for humans to understand AI systems and their capabilities will diminish even further whilst the speed of development rapidly accelerates.

We are currently on the path to developing systems that we do not understand and that are vastly more competent than humans in every domain. Experts say that superintelligent AI may arrive in two to five years. We will not be able to control these systems.

Mythos already threatens our national security, but we can manage it. It is clear that whatever comes in the future will not be manageable.

What can we do about this?

Firstly, the Canadian government should publicly recognize superintelligent AI as the national and global security threat that it is.

Secondly, just as it does for other national security threats, the government should begin closely monitoring the threat of superintelligence being developed and develop detailed scenario planning and doctrines.

Finally, but most importantly, Canada should take global leadership by forming a global coalition focused on preventing the development of superintelligent AI anywhere in the world. This coalition would form the basis for a mutual trust-but-verify regime where countries verify each other's supercomputers to ensure superintelligent AI is not being developed, whilst simultaneously monitoring the global flow of powerful chips.

Superintelligent AI is an equal threat to national and global security wherever it is developed. If China or any other country seeks to develop superintelligent AI, we must stop them at all costs. This trust-but-verify regime is an achievable and sustainable way to achieve this.

Thank you.

● (1705)

The Vice-Chair (Raquel Dancho): Thank you.

We will go to our last witness, Ms. Luccioni, for five minutes, please.

Sasha Luccioni (Co-founder and Chief Scientific Officer, Sustainable AI Group): Thank you very much.

Honourable members of the committee, thank you for convening this crucial study.

As an AI researcher based in Montreal, my career has been dedicated to measuring the environmental impacts of artificial intelligence, first in academia, working at the Mila institute with Dr. Yoshua Bengio, but now in industry, where I recently co-founded the Sustainable AI Group, a research and advisory company dedicated to helping organizations measure and reduce the environmental impacts of the AI that they use.

In the last decade, my research has increasingly exposed a critical, often-ignored reality. AI is a very physical technology. It does not exist in an ethereal cloud. It relies on massive physical infrastructure. It consumes large amounts of energy and water, and it leaves behind a significant carbon footprint.

As Canada reshapes its digital policy agenda following the legislative reset of Bill C-27, we must understand that digital sovereignty and environmental sustainability are two sides of the same coin. Canada is uniquely positioned to lead the global shift towards responsible, sustainable AI. We should not attempt to outspend foreign monopolies on bloated general-purpose models and gigawatt data centres. Instead, our competitive advantage lies in building transparent, green and clean AI.

The integration of AI into sectors like construction and manufacturing does offer immense productivity gains, but the current industry trend of relying on massive, generic, cloud-hosted models is both ecologically and operationally unsustainable. The large language models that many of us use today are trained at great cost to be general purpose, which definitely makes sense from the point of view of the tech companies that want to respond to any kind of query thrown at them, be it coming up with a chocolate chip cookie recipe or an itinerary for a family vacation in Italy. These companies can and do spend hundreds of millions of dollars on compute in order to develop these models, often using our own data to improve them and then selling it back to us.

Most of what businesses in Canada need and want to use AI for isn't general purpose at all. It is specific tasks that require robust, trustworthy technology without all the bells and whistles. In fact, querying generic, multi-billion-parameter generative AI models to optimize a manufacturing assembly line or analyze a construction blueprint is like taking a helicopter to do your groceries. It is an absurd waste of energy. My research has found that generating a high-quality image with AI can use as much energy as half of a cellphone charge and that generating videos requires thousands of times more. The gap between the most and least efficient models is growing with the rise of reasoning models and agentic AI.

However, Canada has an opportunity to incentivize on-device AI and small, task-specific models that run locally within Canadian facilities. This creates a direct, powerful synergy between operational security and environmental sustainability.

Also, we can and should mandate transparency to audit the environmental and operational costs of training and deploying AI models. When we know where models are running, along with details regarding hardware and energy, we can accurately measure sustainability. The difference between training a multi-billion-parameter model on a low-carbon grid, like those in Quebec and Ontario, versus a grid powered by behind-the-meter natural gas can be orders of magnitude fewer emissions. Therefore, future federal AI legislation should mandate that companies deploying AI models disclose their full life-cycle environmental footprint, including the energy grid mix and water usage of the hosting data centres.

Canada can foster a booming local ecosystem by supporting companies that use open-source tools like CodeCarbon, which I helped develop, to publicly document their models' energy efficiency. This establishes a green AI stamp of approval, appealing to a global market increasingly desperate for ESG-compliant technology, differentiating Canada's AI offerings and giving our companies a competitive advantage. The federal government can lead the way by requiring AI developers to provide this information when applying for tender offers for government contracts, setting a baseline for the entire field.

Also, just as we rely on Energy Star ratings for appliances, Canada can implement energy certifications for commercial AI models, disincentivizing the use of loaded models for simple tasks. This approach is practical and highly achievable. It has already been proposed by the AI energy score project, which I have co-led for the last two years. In our work, we've tested hundreds of open-source AI models across dozens of tasks, finding efficiency differences in the tens of thousands between models of different sizes and architectures.

Finally, we must align the government's current industry plan with these ecological limits. The federal government's allocation towards the sovereign compute infrastructure program, SCIP, is a vital step toward reclaiming our data sovereignty, but compute power cannot be decoupled from environmental boundaries. The government must ensure that any public supercomputing infrastructure built under the SCIP is powered, at least in the majority, by renewable energy and utilizes cooling systems that sustainably use a local power supply and that are developed in consultation with local residents, including indigenous communities.

Instead of copying the hyperscale, football field-sized data centres that are becoming the norm in the United States, Canada has the opportunity to fund more creative approaches to compute. For instance, we can build smaller data centres that are better integrated with existing infrastructure, allowing us to reduce resource consumption while reusing the generated heat for offices, residences and university campuses.

● (1710)

Furthermore, SCIP resources should explicitly prioritize Canadian researchers and open-source initiatives developing climate tech solutions and sustainable industrial applications. Each project that plans to use SCIP compute should be required to measure and report their energy and emissions, improving the transparency of the field as a whole.

True digital sovereignty is completely impossible without environmental sustainability. Canada must reject the current trajectory of AI, which is unsustainable from all perspectives, and define a better trajectory for Canadian AI.

By legally mandating—

The Vice-Chair (Raquel Dancho): Thank you very much.

Colleagues, we are running over time, of course, because of our delayed start. I'm going to conclude the meeting after the second round of the Bloc Québécois. We'll go around, and that will give us just over 30 minutes of questioning time for our excellent witnesses today.

We'll go to Ms. Borrelli for six minutes, please.

Kathy Borrelli: Thank you, Madam Chair.

Thank you to all of our witnesses today.

My first question is for Madame Desrochers.

AI systems have begun deciding what content is recommended, summarized, translated or generated for users. How should Canadian policy respond if AI systems become gatekeepers for what Canadians see and hear?

[*Translation*]

Marie-Julie Desrochers: I want to make sure I understand your question.

[*English*]

Is it about discoverability, if we speak about gatekeeping and the way the content is recommended? Is that the sense of your question?

Kathy Borrelli: Yes.

[*Translation*]

Marie-Julie Desrochers: When it comes to discoverability, legislation to modernize the Broadcasting Act was passed in 2023. The government of Canada took action to support the discoverability of content.

Indeed, artificial intelligence is a tool that can be used to improve the discoverability of content. When it is used for that purpose—to promote more content from Quebec, with proper metadata and without violating copyright or using protected works without the authors' consent and failing to compensate creators—it can be a positive form of use.

[*English*]

Kathy Borrelli: Is there a concern that generative AI could produce enormous volumes of low-cost music, scripts, images and text that will crowd out human-created Canadian works? How can we ensure that Canadian creators are not pushed out of their industries?

[*Translation*]

Marie-Julie Desrochers: Thank you very much for the excellent question.

There is a lot of concern on that front. It's actually happening already. I spoke with one of our members in the music industry, and he told me that over 75,000 artificial intelligence-generated tracks are uploaded on Deezer every day. That represents 44% of all new uploaded music daily. After they shared this data, the figure rose from 60,000 to 75,000 in just one month, and it keeps going up.

We are seeing this with music and with books. For example, you can find fake books on sale on Amazon that appear alongside recently published genuine works. We are also seeing this in the audiovisual sector. This is a genuine concern.

We have seen that some platforms, such as Deezer, are trying to clean up and are taking down and demonetizing this type of content. However, we are calling for mandatory transparency for artificial intelligence-generated content published on platforms to ensure consumers know what they are consuming and have the option to choose human-created works.

● (1715)

Kathy Borrelli: Thank you.

[*English*]

My next question is for Mr. Buteau.

Mr. Buteau, ControlAI has called for prohibiting the development of superintelligent AI and other dangerous AI, such as automated AI research or hacking capabilities. How should lawmakers define those prohibited capabilities in a way that's enforceable but not vague?

Samuel Buteau: Absolutely. It's a great question.

As AI development continues, AI is becoming more autonomous—able to independently take action and handle open work without human involvement. These are sometimes called AI agents. As I think everybody can appreciate, if we build systems that are much more competent than any group of humans in every domain, including hacking, persuasion, building new technologies, etc., and we don't control them, that's a bad thing.

How do you define and how do you create laws? First, obviously, human judgment would be involved. Just as with most laws, if a representative panel from signatory countries believes a system quite likely would be able to autonomously compromise national security, escape human oversight and upend international stability, we would call this superintelligent AI. If something could be trivially, covertly or quickly converted into superintelligent AI, that would count as well.

Third, there are two ways of developing superintelligent AI—on purpose and recklessly. I think here we should use the principle that we don't let people try to build a bomb, even if they don't know what they're doing. We also don't let people plot to overthrow the Canadian or U.S. government. That would be intent, but in the name of short-term competitiveness, one might still recklessly develop superintelligent AI by, for example, automating AI R and D.

The real thing that matters is this: What is the point of intervention? That's what you must define. We call those precursors. Two examples are large AI data centres and AI that can significantly automate AI research and development. There are others. We need to be flexible and be able to add precursors as they get discovered and as the landscape changes and so on. I think precursors are allowed, but they must be monitored within the regime and denied outside the regime.

The Vice-Chair (Raquel Dancho): Thank you very much.

We'll go now to Mr. Bardeesy for six minutes.

Karim Bardeesy: Thank you, Madam Chair.

[*Translation*]

I have a few questions for you, Ms. Desrochers and for you too, Ms. Luccioni.

Ms. Desrochers, the Coalition for the Diversity of Cultural Expressions has taken a strong stand on cultural exceptions in our free trade agreements and the government has said that we are strongly committed to that.

In your opinion, how important is this commitment on cultural exception when it comes to artificial intelligence and some of the challenges we are discussing today?

Marie-Julie Desrochers: Thank you very much for that question.

Indeed, we are paying very close attention to everything that is going on now during the review of the Canada—United States—Mexico agreement, or CUSMA. We need to protect our cultural exception because without it, we will lose some of our freedom to implement cultural policies of our own choosing domestically.

However, besides the exception, we need to safeguard the laws we have in Canada. For instance, the Broadcasting Act, which was modernized in 2023, must be non-negotiable. The same goes with the act respecting the discoverability of French-language cultural content in the digital environment, which was enacted in Quebec.

We need to be very vigilant when it comes to artificial intelligence and anything that will involve digital trade, which can be used to circumvent our exception because it may not directly touch on what is already covered within the scope of the exception and its definition. These issues should be looked at closely.

As it is, we have seen some companies in the United States publicly say that the CUSMA review provides an opportunity to secure exceptions for text and data mining, for example. We need to be very vigilant on that front to ensure that this does not happen.

● (1720)

Karim Bardeesy: Do you have any examples of artists' collectives or cultural industries that are using artificial intelligence to ensure that money flows back to artists and creators in Quebec and other places?

Marie-Julie Desrochers: For now, there is no remuneration from developers' use of artificial intelligence. However, our position on authorization and transparency is aimed at a new licencing market.

I'm not sure whether you're referring to technologies like blockchain or to attribution technologies, but things like that are in development. However, for now, because there are no prerequisites, companies do not negotiate with management companies and as a result, there is no remuneration coming down to the artists, unfortunately. Perhaps Mr. Laforce can expand on my answer.

Karim Bardeesy: Okay, thank you.

I have a few questions for you now, Ms. Luccioni.

[*English*]

I want to start with the demand side and then maybe the supply side of the technologies we're talking about.

On the demand side, you referred to both electricity and water usage. I'm wondering if you can talk to us about some of the innovations you're starting to see on the kinds of water usage that can now be either reduced or recycled for some of the AI data centre applications that we're seeing.

Sasha Luccioni: Essentially, the innovations are often a trade-off between energy and water. For example, if you have an open-loop cooling system, the water evaporates, and it uses more water overall but less energy. If you have closed-loop cooling systems, which are more innovative, you need to use energy for cooling that water so it doesn't evaporate.

Honestly, there's no free lunch, because you're using either one or the other. For sure you can have places where there's more water like a lot of places in Canada. Maybe it's not an issue, but 70% to 80% of it does evaporate.

Karim Bardeesy: Are there any innovations around capturing waste heat from maybe smaller centres or certain kinds of ways to build AI data centres to capture more waste heat?

Sasha Luccioni: Definitely there are a few. For example, it can be used for heating university campuses and even heating pools. I've heard of salmon farms up in, I think, Norway.

The thing is that these data centres have to be close to the infrastructure. If you're building a hyperscale data centre that's in a rural area far from everything, you can't easily reuse that heat, which is why I definitely think that we should be putting the priority into data centres that are smaller, maybe in basements or integrated into existing infrastructure, because that way you can reuse the heat more meaningfully.

Karim Bardeesy: Are there innovations in Canada with Canadian cities? We often hear about AI data centre siting as something that's creating real concern. How could some of your ideas help translate into more acceptability in certain locations for AI data centres, if they're scaled appropriately and perhaps more integrated into city planning?

Sasha Luccioni: I think that the data centre that was recently announced in Vancouver is pretty well integrated into the city and into the existing infrastructure. Sadly, the ones that we've heard announced in Alberta and Saskatchewan are definitely bigger and more scaled outside-of-cities approach.

I think we should be really thinking about, instead of building one big data centre, how we build three or five medium-sized ones that are integrated. That way it's easier to leverage renewable energy, because typically it's a lot harder to have enough renewable energy to power a huge gigawatt-sized data centre, where natural gas is easier to burn.

Karim Bardeesy: As a final question, you've created a company that's helping others reduce their planetary footprint through this technology. Can you talk to us just briefly about the emerging sector of climate AI and other companies that are working in this space?

Sasha Luccioni: The goal is to, first of all, help companies understand the climate footprint of the AI that they use, measuring to help them make more informed choices, for example, and shifting to regions with more renewable energy and greener compute and putting consumer pressure on AI developer companies for transparency. If enough people or organizations that are using AI ask for these numbers, the AI developing companies will have little choice but to provide some form of transparency, which we're currently missing.

The excuse is that people aren't asking for it, so they don't provide it. I think the time has come for the AI industry to be more mature and to push for this transparency, as we have done for other things like transportation, food and things like that.

● (1725)

Karim Bardeesy: Thank you.

[*Translation*]

The Vice-Chair (Raquel Dancho): You have the floor for six minutes, Mr. Ste-Marie.

Gabriel Ste-Marie: Thank you, Madam Chair.

I'd like to start by welcoming our four witnesses. I want to thank them for being here and for their commitment to their respective endeavours.

In particular, I would like to congratulate Ms. Luccioni on her award from the Quebec National Assembly in mid-March.

I'm going to run out of time to ask all my questions, and so I'll get going. I'll start by firing out three questions to Mr. Buteau.

First, can you briefly explain the difference between generative artificial intelligence and artificial superintelligence again? You spoke about Anthropic and what the Mythos model is able to do now compared to other versions of Claude.

Second, in your recommendations, you say that some countries should form a coalition to prevent the development of artificial superintelligence. To your knowledge, have other countries done that and have they made this public?

I'll ask you my third question later, because it has slipped out of my mind.

Samuel Buteau: Thank you very much.

I'm going to answer in English to make sure I use the correct technical terminology.

[*English*]

To distinguish between superintelligence and generative AI, it's important to understand that there's not a sharp boundary above which we have the risk, where the Nobel Prize winners and CEOs have warned of extinction, and then below which everything is fine. It's more of a continuum.

One of the biggest differences in kind is if the AI is able to autonomously perform tasks on its own for long periods of time, sometimes called an AI agent. The difference between AI agents and generative AI, like chatbots, is often that the AI is smarter being an agent. Then, because it's given more leeway, it has more dangers associated with it. The difference between AI agents and superintelligence is just a difference of degree, and that's why we don't call for unilateral disarmament. It's more a question of having an international trust-but-verify regime where whatever the level of risk is that we deem acceptable, we can go to that front and operate those systems, but there's a way to not go to the point where we actually lose control.

Can you very quickly begin your second question so I can answer?

[*Translation*]

Gabriel Ste-Marie: Yes. I was talking about a coalition of countries—

Samuel Buteau: Okay. I can answer that question in French.

This year, I have personally spoken with more than 120 legislators in Canada. We started in the United Kingdom, where our campaign has now received support from over 110 individuals. We are now working in the United States and Germany. This is one example of what can be accomplished by means other than a country's budgets or diplomacy. I'm just a technical expert that has tried to explain that to their government for less than a year and has made similar efforts in the United Kingdom.

At a deeper level, we find that many people understand the situation once it has been explained. The main problem is that the vast majority of people have not been told about the risks and solutions associated with artificial superintelligence.

Gabriel Ste-Marie: Thank you very much.

My next question is for the four witnesses. I'm going to ask them to be very brief, if possible, because time is running out.

What do would you like to see in the artificial intelligence strategy that will be unveiled this week?

I know Mr. Laforce touched on that briefly earlier, but I'd like to ask Mr. Buteau, Ms. Desrochers, Mr. Laforce and Ms. Luccioni, in that order, to answer the question as briefly as possible.

[*English*]

Samuel Buteau: AI is a bit like technology; it's a word that refers to many systems.

There are many concerns that people rightfully have. For example, there is AI adoption, which is very important, and AI sovereignty, which is also very important. This, as we see with Mythos, is also a national security concern.

Does the national security part fit best with the adoption and sovereignty part, or is it better, for example, handled by the Department of National Defence? That's procedural, but I think someone, somewhere, should have their eyes on the national security threat.

● (1730)

[*Translation*]

Gabriel Ste-Marie: Thank you very much.

It's your turn now, Ms. Desrochers.

Marie-Julie Desrochers: We'd like to see our government follow Australia's lead and issue a statement saying that Canada does not have, and will not have, any exception for text and data mining. This statement must be accompanied by measures requiring transparency around the data used to train these systems.

Gabriel Ste-Marie: That was short and to the point. Thank you very much.

Mr. Laforce, you're up next.

Christian Laforce: I would echo Ms. Desrochers's remarks, but I also think it is important that each time the government invests in artificial intelligence companies, the investments must have a clause on compliance with the Copyright Act, because the two go together. It's time to ensure that authors and creators receive appropriate remuneration to ensure they continue to create, as Minister Solomon has said he would like to see.

Gabriel Ste-Marie: Thank you very much.

It's your turn now, Ms. Luccioni.

Sasha Luccioni: Like the other witnesses, I support transparency and the integration of sustainable development criteria in site selection. We are now positioned to make responsible, sustainable use of artificial intelligence in Canada, but we don't seem to be deploying it in the choices that are being made now. I would like to see it used more.

Gabriel Ste-Marie: Thank you to the four of you.

[*English*]

The Vice-Chair (Raquel Dancho): Mr. Falk, you have five minutes, please.

Ted Falk: Thank you, Madam Chair. I think you're doing an excellent job, by the way, for the record. I think Mr. Carr's job is on the line.

Mr. Buteau, I'd like to begin with you. You've talked about a very important part of AI, and that's the whole aspect of safety and controllability. Where do we go with all of this?

You talked about the arms race a little, and I liken it a bit to having a nuclear bomb. We don't have one, but we know that our best friends just south of us do, and that gives us a degree of comfort when all these other countries around the world also claim to have nuclear capabilities—and some of them do.

Is it not a good idea to have the capability that some of our potential adversaries around the globe may also have?

Samuel Buteau: I think this is a question that's better answered with a concrete example to illustrate the two different threats we have to contend with.

As you said, perhaps there are some great powers we might want to acquire. Also, in the report that Anthropic put out, on page 55 it describes an incident where Mythos was confined to a secure computer inside of a secure network. They asked Mythos to escape the secure computer and send a message. Mythos succeeded, so you see the first half—the great power that we want—but this is only the beginning of the story. Mythos also developed an exploit to gain broad Internet access on its own. Then, without being asked to, Mythos bragged about the exploit on multiple public-facing websites, once again, on its own.

Yes, we have to think about not only people tasking AI to do dangerous stuff but also AI doing dangerous stuff on its own. It's not really like a nuclear weapon. It's like a nuclear weapon that sometimes goes up on its own, makes a bigger nuclear weapon and tries to take over your government.

That being said, I will repeat what I said. We don't call for unilateral disarmament. Right now, the United States is in the lead, so we don't call for the west to unilaterally disarm and cede the race to China. Wherever it is developed first, it threatens all of our lives, so we have to enter a stable regime where costs are imposed on people who are pushing forward, and they also get the reassurance that the other side is not pushing. That's the only stable equilibrium to limit the race toward superintelligence.

Ted Falk: I'm not sure how familiar you were with Bill C-27, when the Liberals attempted to pass that during the last Parliament. If you're at all familiar with it, though, what aspects of that bill should we keep, and what needs improvement?

Samuel Buteau: Unfortunately, at the time, I was still in the lab, trying to find ways to make powerful AI controllable. Unfortunately, I don't have familiarity with that bill.

● (1735)

Ted Falk: Okay.

I know you've mentioned several times here that we get collaboration amongst stakeholders so that we have guardrails, fences or parameters that we do not exceed. How would you propose to enforce that?

Samuel Buteau: Let me be absolutely clear. If China or any other country tries to develop superintelligence, we have to stop them at all costs. Superintelligence is a technology that, if developed anywhere, threatens our lives and threatens our global security, and we should treat it accordingly.

What does that mean? If we see a country threatening to develop it, Canada's reasonable reaction would be to use our full suite of deterrents to stop them. In this case, we need collaboration with as many countries as possible to give some teeth to our deterrence. The escalation ladder might begin with diplomatic pressure, followed by economic sanctions in the case of continued non-compliance.

It's also important to realize that if we don't have a trust-but-verify regime, and if the U.S. is about to develop superintelligence and China understands the situation, then we might see kinetic action from China to try to stop the U.S. Therefore, to avoid this, the only stable way is to look at the precursors to superintelligence and either have them inside the trust-but-verify regime where they're limited, or if people try to develop them outside the regime, then we have to prevent them from maintaining or acquiring them.

Ted Falk: Okay. Thank you.

The Vice-Chair (Raquel Dancho): We'll go to Mr. Ma for five minutes, please. Thanks.

Michael Ma (Markham—Unionville, Lib.): Thank you, Madam Chair.

My questions are for Ms. Luccioni.

The objective of the Sustainable AI Group is to help businesses square their increased AI use with sustainable goals. To support this framework, the group claims that it is already working with "North European and European clients across tech, finance, and media".

Pillar six of Canada's national AI strategy focuses on "Building trusted partnerships and global alliances", with an emphasis on aligning standards.

How will you work with international clients to help accelerate the establishment of international reporting standards for large AI companies to ensure maximum transparency in the sustainability domain when conducting business operations?

Sasha Luccioni: Thank you for your question. It's a great one.

What I've been seeing so far is a real intention to regulate AI, especially in the European Union. I've gone to Brussels a couple of times and spoken to the representatives there. The issue is that AI is not a single thing. It's not a single piece of technology. For example, we've been working with them to take the AI energy score project I mentioned and make it implementable via standards. I participated in a workshop a couple of months ago with representatives from the ISO, for example, that aimed to develop metrics and functional units—all that stuff.

The tricky thing with AI is that we need to figure out specific use cases, so we're starting with, for example, text generation and image generation. What's interesting is that a lot of businesses, especially in Europe and Canada, have ESG commitments, and they're trying to understand how AI is impacting these commitments. They have their reporting guidelines. They have the things they measure. They're trying to integrate AI, but they don't have the numbers themselves. Their shareholders and even employees, in a lot of cases, are saying, "We don't want to use this technology unless you give us some numbers because we have convictions." We're trying to help them get these numbers.

Honestly, we're seeing a lot of interest.

Michael Ma: Thank you.

You also mentioned, in an interview for BetaKit, that there is a lack of transparency around how much energy AI models consume and that the information disclosed through sustainability reports released by big tech companies is lacking and inconsistent. Pillar one of our national AI strategy is centred on building trust in AI if this technology is to deliver on its promises.

Taking into consideration these concerns, what role will the group play in de-risking AI not only to minimize business risk for stakeholders but also to foster more transparent and trustworthy relationships with skeptical Canadian citizens?

● (1740)

Sasha Luccioni: We definitely see ourselves as the middlemen or "middlepeople" between users of the technology—both individuals and organizations—and developers. I've been doing my research for a while now, and we have good relationships with AI developers. Often, they want to report something. They have things they want to share, but it's about finding that sweet spot between corporate secrets, to some extent, and reputational risk. It's also about the numbers they can share that are useful.

This is where SAIG, the Sustainable AI Group, plays a role. We find the metrics that can be communicated without impacting, for example, the reputations of these companies, and we help bridge the gap between sustainability reporting and IT. Often, it's two different groups of people. On one hand, it's those who don't necessarily understand AI. On the other hand, it's those who don't necessarily understand ESG and sustainability. It's really about bridging that gap.

Michael Ma: Thank you for that.

How can we shift the national perception of AI at present in a more positive direction?

Sasha Luccioni: The government has a unique role to play because a lot of AI companies want to work with governments. We're seeing a lot of announcements. That could be an incentive for them to be more transparent. For example, you might have a tender offer, as a city, a province or the federal government. You say, "Okay, if you want to work with us or for us, you have to be communicating these metrics. You have to be saying how much energy you're using." Once those numbers are out, other corporate clients can follow suit.

Michael Ma: Thank you.

I'll shift this a bit. In your paper published in April of last year—

The Vice-Chair (Raquel Dancho): I'm so sorry, but you're out of time.

Michael Ma: Okay. Thank you.

The Vice-Chair (Raquel Dancho): Thank you so much.

Mr. Ste-Marie, you have two and a half minutes.

[*Translation*]

Gabriel Ste-Marie: Thank you, Madam Chair.

Ms. Desrochers and Mr. Laforce, I'd like to know whether, in your opinion, you were adequately consulted about the artificial intelligence strategy that will be unveiled this week.

Ms. Desrochers, you said that you were consulted as part of negotiations on CUSMA, or the Canada—United States—Mexico Agreement, and on an addition on artificial intelligence in a UNESCO convention.

Do you think the government gives sufficient consideration to your two organizations or the cultural sector in general in its consultations?

Marie-Julie Desrochers: We have been consulted on CUSMA, but we would like to continue to be consulted as the negotiations move forward. I just wanted to clarify that.

On the national artificial intelligence strategy, first, I can say that we submitted a brief as part of the national sprint. However, the "What We Heard" report had some grey areas on the position of the cultural sector. As a matter of fact, I think part of the report was prepared using artificial intelligence. Some subtle details and minor nuances are not fully captured.

That said, we scheduled a meeting with Minister Solomon, along with 12 members of the Coalition for the Diversity of Cultural Expressions, when we found out that the cultural industry was not represented on the working group. That was in October.

I would also like to say that at the time, we were happy to hear Minister Solomon recognize the principles of authorization, remuneration and transparency, or ART, which I spoke about earlier, and the fundamental role of culture in Canada's sovereignty.

However, since then, we have experienced challenges maintaining contact with his team, and we have not heard Minister Solomon reaffirm his commitment on that front. We are still reaching out and would very much like to continue with this conversation.

Gabriel Ste-Marie: Thank you, Ms. Desrochers.

I have 30 seconds left.

Mr. Laforce, were you consulted?

Christian Laforce: I would echo what Ms. Desrochers has said, that we are still reaching out and we hope the strategy will include the measures we recommended. If it is unveiled this week, I'm sure we will meet with Minister Solomon to discuss everything that lies ahead.

Gabriel Ste-Marie: Again, thank you to the four of you.

[*English*]

The Vice-Chair (Raquel Dancho): I sincerely thank the witnesses for their testimony today.

We appreciate your presence here. You are now free to go. Thank you very much.

Colleagues, just before we conclude, the clerk wanted me to remind you that we'll be receiving a revised version of the mouldmaker report this Wednesday. We will set aside the second hour on Thursday to, hopefully, complete it then.

Thank you very much.

If it's the will of committee, we will adjourn.

[*Translation*]

The meeting is adjourned.