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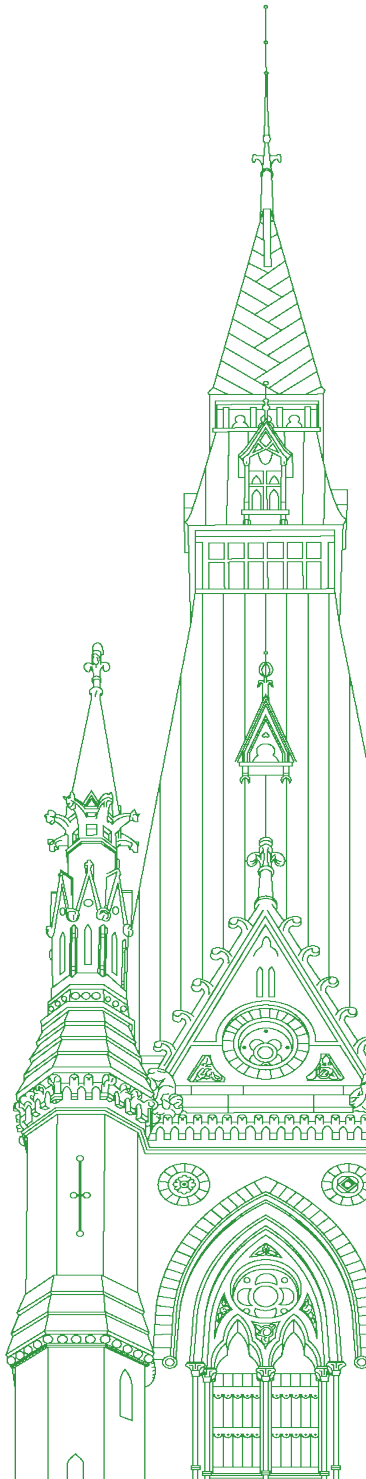

Chair: Salma Zahid

Standing Committee on Science and Research

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● (1545)

[*English*]

The Chair (Salma Zahid (Scarborough Centre—Don Valley East, Lib.)): I call this meeting to order.

Welcome to meeting number 37 of the Standing Committee on Science and Research. We are meeting today to have a briefing session with the president of the Canadian Space Agency.

Please wait until I recognize you by name before speaking. For those on Zoom, at the bottom of your screen you can select the appropriate channel for interpretation—floor, English or French.

I would like to remind witnesses that committee members may ask questions in either French or English. If you will need interpretation, please take a moment to prepare your earpiece and select, in advance, the listening channel you need to take full advantage of the time allotted for the questions and answers.

I would remind you that all comments should be addressed through the chair.

With that, I would like to welcome our witnesses for today from the Canadian Space Agency. We are joined by Ms. Campbell, the president. We also have Dr. Piedboeuf, senior vice-president, space programs. We are also joined by Stéphanie Durand, vice-president, policy, communications and strategic planning, and Josée Saint-Marseille, acting vice-president, corporate strategy and innovation, and chief financial officer.

Ms. Campbell, welcome. You will have five minutes for your opening remarks. We will then get into the rounds of questions.

Thank you for coming before the committee today. Please go ahead.

Lisa Campbell (President, Canadian Space Agency): Good afternoon, Madam Chair and honourable members of the committee.

The Canadian Space Agency, or CSA, was established in 1990 under the Canadian Space Agency Act to promote the peaceful use and development of space, advance the knowledge of space through science, and ensure that space science and technology provide social and economic benefits for Canadians.

The CSA is responsible for coordinating Canada's civil space program. When the CSA began, Canada was one of about a dozen spacefaring nations. Now, over 90 countries have a public space agency or program.

The CSA supports a wide range of government priorities, including economic development through innovation, emergency management, Arctic and maritime awareness, environmental monitoring and scientific discovery. Working closely with Canadian industry, academia, other Government of Canada organizations and international partners in space science and technology development, the CSA advances space research and innovation.

[*Translation*]

The CSA delivers on its mandate through three main programs.

Space exploration includes human spaceflight initiatives such as the recent successful Artemis II mission to deep space and flights to the International Space Station, as well as scientific missions to explore our solar system.

These missions create valuable opportunities for Canadian companies and researchers. Canada's contributions to missions such as the James Webb Space Telescope ensure Canadian researchers have access to the world's most powerful telescope, a time machine looking back 13.5 billion years to the beginning of the universe. Canada's robotics on the International Space Station are integral to the daily operations of our microgravity laboratory, helping maintain the station, supporting astronauts and logistics.

The CSA's astronaut, Colonel Jeremy Hansen, had a seat aboard the recent Artemis II mission as a result of Canada's advanced space robotics.

[*English*]

Space utilization, which is our second main area of work, develops and operates space assets that support over 40 services to Canadians. Earth observation satellites support climate research, natural resource management, maritime surveillance, disaster response, defence and Arctic sovereignty.

The CSA's RADARSAT Constellation Mission, launched in 2019, is Canada's sovereign earth observation space system. It enables other government departments, like the Department of National Defence or Environment and Climate Change Canada, to deliver their mandates and provide critical services more effectively.

Following recent investments, the CSA is actively engaged in adding a fourth satellite for the resilience of this critical system, and we're working with the Canadian space sector on the next generation of earth observation capabilities.

[*Translation*]

Space science and technology, the third main program, provides targeted funding to help grow and diversify Canada's dynamic space sector. It is very popular, and the CSA regularly receives three qualified proposals for everyone that we can fund from our current envelope.

[*English*]

The Chair: There is some interpretation problem. I'll suspend the meeting for a minute to figure it out.

● (1545)

_____(Pause)_____

● (1550)

The Chair: I call the meeting to order.

I'm sorry. Please go ahead.

[*Translation*]

Lisa Campbell: Thank you, Madam Chair.

Our funding programs generate strong returns on investment: for every dollar the CSA invests through its R and D support programs, Canadian companies generate more than three dollars in additional follow-on revenue.

[*English*]

With more than 200 organizations, the Canadian space sector is an economic engine, contributing $3.8 billion to Canada's GDP, pulling in $5 billion in revenue and supporting over 28,000 jobs in 2024.

Like most countries, space procurements in Canada are exempt from global trade agreements, which allows the application of policies—such as Canadian content and, now, buy Canadian—to mature those technologies. This is important because about half of the revenues for Canadian companies come from global markets, and because it has enabled Canada to develop expertise in space robotics, synthetic aperture radar satellite systems and much more.

[*Translation*]

Space is increasingly competitive, congested and contested. There are over 40,000 pieces of space debris in low Earth orbit, and the CSA and other organizations around the world closely monitor debris in order to avoid collisions with spacecraft. We work with others around the world on the rules and norms of engagement in space, as irresponsible conduct by one poses risks for all in this precious environment.

The CSA's systems are highly secure, and increasingly targeted, requiring continuous investments in cybersecurity and resilience. As space solutions and services increasingly power our daily lives, CSA works in close collaboration with the Department of National Defence, Environment and Climate Change Canada, Natural Resources Canada and many organizations, in supporting the development of space technologies and sovereign capabilities.

[*English*]

To conclude, space is inherently international, with the harsh and lethal environment leading to high costs, thus forcing collaboration. The CSA has a long-standing relationship with counterparts in the United States, Japan and many other countries. Since 1979, we've been a co-operating state member of the 27-country European Space Agency, gaining access to important missions for Canadian companies.

The CSA ensures that space activities serve the public interest by advancing science, supporting government operations, strengthening the economy, delivering benefits to Canadians and inspiring the next generation.

Thank you.

The Chair: Thank you.

With that, we will start our first round of questioning with six minutes each. We will begin with MP Baldinelli.

Please go ahead. You will have six minutes.

Tony Baldinelli (Niagara Falls—Niagara-on-the-Lake, CPC): Thank you, Madam Chair.

Again, thank you to the witnesses for being with us this afternoon.

I want to begin by saying thank you to all of you and, in fact, to the entire Canadian Space Agency team, for the success of the Artemis II mission and the involvement of Jeremy Hansen, the first Canadian to go in orbit around the moon. However, with saying that, as members of His Majesty's loyal opposition, we do have some questions that we'd like to ask in order to safeguard those dollars that are being spent by the CSA.

First of all, I'd like to go to you, Ms. Campbell. Canada's defence industrial strategy identified space as a key sector in which Canada should build sovereign capacity. In your role as president of the Canadian Space Agency, what can you tell us about the spaceport project in Nova Scotia?

● (1555)

Lisa Campbell: Thank you for the comments on the Artemis II mission, which was the result of not only our extraordinarily capable astronaut but also decades of investment in Canadian space robotics. The reason we had a seat on that flight was the investments in Canada's leading-edge technology and know-how. We're the best in the world in space robotics. It's not only the technology; we also have 25 years of experience in operating robotics in space. We're very sought-after. That's what gets us invited to international space missions.

For most of recent space history, the world has been dependent on a few industrial players to get to space. I think last year, 85% of the mass launch to space went to one company, a United States company called SpaceX. Most of the planet is trying to diversify so that there's choice and competition. In fact, the space launch in the United States right now is quite crowded. They have mostly coastal spaceports. It's very crowded. Canada has a lot more land. We have access to polar orbits. We have coasts over which it's safe to launch from. The Canadian Space Agency has been investing for some years now in launch technologies, reusable rockets and hybrid rockets.

The government has recently said that there will be investments in space launch from Canadian territory. We welcome it for the reason that it gives us resilience and some options.

Tony Baldinelli: You led me to this next question with regard to the specific identified project of the spaceport in Nova Scotia. Was the Canadian Space Agency ever consulted with regard to the selection of this particular site?

Lisa Campbell: We were not on the selection of that particular site, but we do have some history with them. In 2021 we were present and signed an MOU with the then State Space Agency of Ukraine. The head of it was a gentleman by the name of Volodymyr Taftai. At the time, the goal was to use Ukraine's proven mid-sized rockets in collaboration with the spaceport in Nova Scotia.

At the Canadian Space Agency, we are agnostic. We will help fund technologies that support access to space and we welcome choice with space, but we weren't involved in the selection.

Tony Baldinelli: Is the $200-million fund, which is allocated over, I believe, a five-year period, from the Canadian Space Agency? Is it through DND? Did you have any role in providing advice on the proper selection of a site to be identified?

Lisa Campbell: It's not Canadian Space Agency funding. The Canadian Space Agency was not involved—this is to my knowledge, so I'm checking with colleagues here—in the selection of a site. However, we do welcome increased choice and options in Canada for space launch.

Tony Baldinelli: Would you not agree that it would have wise for the government, if they were going to commit $200 million towards this project, to have sought the opinion and input of the Canadian Space Agency before allocating those dollars towards this project?

Lisa Campbell: I'm just going to make sure that.... The defence industrial strategy, as was mentioned, identified commercial space launch as a critical capability for our sovereignty. If there's an issue with our satellites, we will need to get there rapidly. As far as the CSA is aware, a number of companies are interested in commercial space launch in Canada, but it's a challenging, long-term investment. It requires some support from government.

Tony Baldinelli: Just to clarify, the CSA had no involvement or advice to provide to DND on the selection of this particular site. That was the sole decision of the Minister of National Defence and cabinet with regard to the selection of that site. CSA never made an approval or a recommendation on that Canso, Nova Scotia, spaceport site.

Lisa Campbell: The CSA has provided $7 million in funding between 2017 and 2025 for launch technologies through our space technology—

Tony Baldinelli: But no advice—that's what I'm asking. Did they seek your input directly on the selection of this specific site that they chose to provide $200 million for and actually backdate the contract for? I believe it's $20 million over 10 years, for example. You would think that, surely to goodness, the government would seek the input of the Canadian Space Agency on the selection of a spaceport for launch capabilities before allocating those types of dollars.

Lisa Campbell: If I may, the Canadian Space Agency was involved with Maritime Launch Services in 2021, signing an MOU with the State Space Agency of Ukraine to collaborate and ensure access to space from Canada. The CSA has also engaged with Defence Research and Development Canada to support the $105-million “launch the north” challenge. As part of this challenge, three Canadian companies—NordSpace, Canada Rocket Company and Reaction Dynamics—are advancing launch prototypes, with initial launches targeted for 2028.

● (1600)

The Chair: I'm sorry for interrupting, but the time is up.

Tony Baldinelli: It's 2028...? Okay. Thank you.

The Chair: Thank you.

We will now go to MP Nathan for six minutes.

Juanita Nathan (Pickering—Brooklin, Lib.): Thank you, Madam Chair.

Through the chair, congratulations on the successful Artemis II mission. It's a wonderful moment for all Canadians to rally behind our very own Jeremy Hansen and Jenni Gibbons.

I think it may be helpful to break down what space research really is. Can you speak to how research in space makes a difference here on earth?

Lisa Campbell: Yes, and we're very lucky that we have here beside me the vice-president of space programs, who has decades more experience in this than I do. I will ask him to please jump in.

There are many areas where our research in space helps us here on earth. There is earth observation, for example. At its beginning, when Canada first launched earth observation satellites, we had a program to give funding at the same time as earth observation data, because no one knew how to use it. We would give data, plus funding, and say, “Please figure out how to use this.”

Now, we have an industry, a commercial earth observation industry, and they are generating a return on investment themselves. Some of them don't even have spacecraft. They just manipulate the data to give value-added products, and that has applications in a range of domains: critical mineral extraction, supervision of mining operations, weather applications definitely, environment, biodiversity, keeping ports clean...you name it.

Space exploration—the harsh environment of space—teaches us a lot about human health. Many of our applications in science on the International Space Station have returned benefits here on earth. The body ages in space. It's not particularly good for you to go to space. The first thing that happens is that all the fluids in your body go up to your face. You might have seen it in our astronauts. It's bad for your eyes and bad for bones and increases the risk of cancer, diabetes and a number of other things that we face here on earth. By supporting human health and doing experiments in human health, we can learn a lot about how to prolong human life and quality of life here on earth.

Technologies are also better. If they can survive in the lethal environment of space, they will be much more robust here on earth. An example of that is our space robotics. Those spinoff benefits have been in neurosurgery and also cancer detection.

Juanita Nathan: Does anybody want to add anything more?

Jean-Claude Piedboeuf (Senior Vice-President, Space Programs, Canadian Space Agency): Yes. I will say that the first satellite that Canada sent into space was to study the ionosphere, and it was to understand how we can better communicate in Canada. Really, it was the science that helped communications in Canada, and then we launched the first satellite in satellite communication.

We have another example with SCISAT, which was launched to study the ozone layer. It is still in operation after more than 20 years of operation and is still making new discoveries in how the high atmosphere is behaving.

There are many examples like that.

Juanita Nathan: Thank you for that.

For my next question, our government, with the defence industrial strategy and the committee's own study on defence and dual-use research, is working on a push for how research can build up domestic sectors.

Can you speak to what the space sector looks like in Canada right now, what opportunities are present and how can we support better them to enhance research and create more jobs?

Lisa Campbell: Canada's space sector is extraordinary. More than 200 organizations are generating $3.8 billion to the GDP. We've done a space sector report. This is our 28th, I believe, this year. They're vibrant and growing. We've seen the business expenditures and research and development increase by 17%, and we've seen a growth rate of 15%. They generated $5 billion in revenues. They're extraordinary. About half of their revenues, almost 50%, comes from global markets.

Our main market at the moment is the United States, but as I mentioned, Europe is another important market. One of the things they tell us is that the Canadian Space Agency's procurements and our technology development programs are an important driver for them. Having anchor contracts helps them when they go to international markets.

Increasingly, the Canadian Space Agency is not the buyer of space services and solutions. Increasingly, it's Environment Canada, Natural Resources Canada, National Defence.... At the beginning, it was us, but more and more it's the other departments and agencies that can achieve their goals through space services and solutions. Our portion is truly the pure space segment.

● (1605)

Juanita Nathan: Thank you for those answers. It's great to understand it a bit more.

Can you speak to the importance of funding these space missions? You've given a lot of examples of why this is important. How does it connect to nation building and sovereignty-enhancing missions?

Lisa Campbell: Space is infinite and there are an infinite number of expensive missions that, from a science perspective, might be interesting to pursue. We work very closely with international counterparts to make long-term plans on what science should be pursued within our solar system and what the next mission is. Most space missions that the Canadian Space Agency is a part of are international. We do it with international partners. Most space missions involve some kind of industrial contribution. In return, you get science benefits and, sometimes, human space flight.

That's the way the International Space Station works, which we've been part of for over 25 years. We pay common operating fees, but we also contribute technology. In return for that, we have access to science and our astronauts can fly there. It's the same thing with Artemis II, and we hope to progress that. It's also the same thing with the James Webb space telescope. Canada contributed two instruments. For that, we have researchers accessing data looking back 13.5 billion years.

The Chair: Thank you. The time is up.

We will now proceed to MP Blanchette-Joncas for six minutes.

Please go ahead.

[*Translation*]

Maxime Blanchette-Joncas (Rimouski—La Matapédia, BQ): Thank you, Madam Chair.

I'd like to welcome the witnesses from the Canadian Space Agency who have joined us today.

Ms. Campbell, Canada is the only G7 country unable to send its own satellites into orbit. Can we really talk about space sovereignty under these conditions?

Lisa Campbell: At the Canadian Space Agency, we've always felt it was important to support the launch sector, but that's not under our watch. Our mandate is really about space, meaning what happens once you're there. Of course, we've always thought we should use a large country like Canada, with a lot of room, for launches.

I'll give you the example of our stratospheric balloon campaign, if I may. France came to us because it wants to go to the near-space. Space starts at 100 km from the surface of the earth. We can send stratospheric balloons just before that mark, so France approached us. We created a base in Timmins, where we do a lot of science work to eliminate risk and prepare a lot of science components for the International Space Station.

Of course, we look forward to Canada having launch capability. That's why, as I said, we've invested $7 million in launch technologies.

Maxime Blanchette-Joncas: That's not a lot of money. We agree on that, don't we?

Lisa Campbell: We do what we can.

Maxime Blanchette-Joncas: Okay.

What can Canada do in space today without depending on the U.S.?

Lisa Campbell: I talked about our partnership with the European Space Agency. Like Canada, Europe also has launch capability. Actually, the James Webb telescope was launched on a French rocket, Ariane 5, out of Kourou, in French Guyana. They're currently working on Ariane 6. That's an example of another rocket. As I said, there were also the rockets from Ukraine, but unfortunately, we all know what happened.

Our wish is really to have choice and variety so we can have resilience.

Maxime Blanchette-Joncas: You talk about choice and variety, but I don't hear you talk about sovereignty. It's a very popular buzzword in Canada, even in Alberta and Quebec. It's an ongoing interest. You know that very well.

Can you tell us what ratio of Canadian space programs depend on the U.S.? Do you have a percentage? If not, can you table with the committee the breakdown of that ratio across space programs?

Lisa Campbell: Regarding dependence, it's important to know that we operate all our satellites ourselves from our control centre. The same goes for the Canadarm. There is no dependence; rather, there are partnerships.

At the International Space Station, for example, the five main partners all have a role to play. Canada plays its role independently through the Canadian Space Agency and its mission control centre. It's the same thing for the others. We're contributing to other missions, but we're fully responsible for our portion. It's up to us.

● (1610)

Maxime Blanchette-Joncas: I just want to make sure I understand what you're saying. In your opinion, there are no Canadian space programs that depend on American interests or American decisions. Is that correct?

Lisa Campbell: Of course, international partnerships are important to us. The U.S. has one of the largest public space agencies. The other would be the European Space Agency, but there are others. We try to have diversity.

If we have a partnership with the U.S. and that partnership changes—actually, a change was made recently—that can certainly have a major impact on our programs.

Maxime Blanchette-Joncas: Let's talk about uncertainty. NASA's reorientation on the Gateway project in particular has created uncertainty around Canadarm3.

What's Canada's plan B, in this case the Canadian Space Agency's plan B, when Washington changes its priorities?

Lisa Campbell: You raise an excellent point. Thank you very much for the question.

As I said earlier, Canada's advanced space robotics is the best in the world, not only because of the technology itself, but also because of the manufacturing method.

Our contribution to the lunar gateway was the Canadarm3 system. However, just before the Artemis II mission, NASA announced its intention to stop or pause the lunar bridge project, because instead of building a small space station in orbit around the moon, they were now looking to go directly to its surface. That decision has had an impact on Canada, Europe and Japan.

That said, the Artemis II mission went ahead. Thanks to Canadarm3, we contributed to two flights and participated in scientific work on the gateway. There was a flight. We're one of the only countries to have benefited, and now we're actively talking with the company that makes the arm. We're actually in the design and construction phases of the contract, phases C and D, to figure out how to reorient the project and be ready for the surface of the moon.

I can assure everyone on this committee that there is a huge demand for space robotics to use on the surface of the moon or in orbit. I'm thinking in particular of small arms for future low earth orbit stations after the International Space Station. Not a day goes by where we don't need the Canadarm. Everybody is looking for that capacity.

Maxime Blanchette-Joncas: Thank you, Ms. Campbell. I'd like to use one of your comments as inspiration: Not a day goes by without people talking to us about sovereignty. We talk about that, but we don't see it in the actions that are taken.

I'd like to hear you on how Canada can be sovereign in the Arctic without real space autonomy.

Lisa Campbell: To start with, our satellites are currently observing the Arctic and providing valuable data precisely to ensure the local populations' safety and monitor ice conditions. We also have proposals for dedicated missions in the Arctic. There's less commercial interest in the Arctic, because the local population is small, but there are two missions with public interest: one that would monitor the entire Arctic and the other that would monitor the amount of water in the snow. It's very important, for example for Hydro-Québec, to monitor that. We have space solutions for problems here on earth.

Maxime Blanchette-Joncas: Do you think we're fully sovereign in the Arctic, given our limited space autonomy?

[*English*]

The Chair: I'm sorry for interrupting, but your time is up. Maybe you can come back in the second round.

[*Translation*]

Maxime Blanchette-Joncas: I would ask you to submit a written answer, madam.

Thank you.

[*English*]

The Chair: We'll be getting into the second round, so you'll also have an opportunity to ask again.

With that, we will start our second round. We'll begin with MP Ho for five minutes.

Please go ahead.

Vincent Ho (Richmond Hill South, CPC): Thanks, Madam Chair.

When Canadians think about space, they think about excellence. They think about engineers, scientists, specialists and astronauts who earned their place through discipline, training and competence.

When it comes to hiring and promotions within the CSA, for any role related to flight, flight safety, launch safety, astronaut safety—your mission-critical operations—is it your position that experience, qualification and technical competence must come first?

Lisa Campbell: We are going to need everyone in the space sector. It is the top issue preoccupying all space agencies around the world.

Vincent Ho: Experience and qualification and technical competence should be the primary consideration when you hire and promote. Is that correct?

Lisa Campbell: They are definitely foremost, but there are many other factors that play into it.

Vincent Ho: Canadians expect the CSA to bolster Canada's space capacity. They don't expect the agency responsible for Canada's role in space exploration to be distracted by ideological hiring frameworks or bureaucratic identity targets.

To clarify, there should be no political, ideological or demographic quota that overrides technical merit in these safety-sensitive roles in the CSA. Is that right?

Lisa Campbell: We're fortunate to have far more applicants for positions than we can hire. They're all super qualified. Then once we recruit them, we train them intensively. We succession plan, because most of the roles of the agency are mission-critical. We're very fortunate to have very qualified people in the CSA team.

● (1615)

Vincent Ho: Your agency published the 2025-28 “Employment Equity, Diversity, and Inclusion Action Plan”. That document says that the CSA will focus on “identifying and dismantling systemic barriers” and supporting career progression towards executive positions exclusively for designated groups.

Can you point out to this committee the section that says mission safety and technical competence come before identity representation targets?

Lisa Campbell: The Canadian Space Agency is glad to have a diverse team because we need a diversity of ideas to face the challenges and opportunities ahead, and—

Vincent Ho: You're not really answering the question.

I'll ask another question to continue on.

Is there any circumstance in which a candidate's identity markers would be used as deciding factors over a more technically qualified candidate, when it comes to the selection of astronauts or any technical or safety staff?

Lisa Campbell: Research has shown that having diverse teams leads to better outcomes, so that's what we strive for in all aspects of our work.

Vincent Ho: Is that a yes—a candidate's identity markers could be an overriding factor—or a no?

Lisa Campbell: I'm not sure it's that absolute. We take into account a mix of factors when looking at the composition of teams. Obviously, their technical competence, teamwork and collaborative capabilities all matter.

Vincent Ho: Identity markers like a person's sexual orientation, gender or race are going to be factors, because you talked about diversity. Is that right?

Lisa Campbell: We try to make sure we have teams that represent humanity in all of its forms.

Vincent Ho: It just looks like the CSA is publishing plans that read less like space safety and exploration, and more like an ideological document.

Here is my next question: How many taxpayer dollars does the CSA spend on DEI-related grants, programs, staff, consultants, training, committees and internal initiatives each fiscal year?

Lisa Campbell: If you look at our last departmental plan, the total spend was $634 million, 86% of which was for the core responsibilities of Canada in space. The remainder was for internal services, which include cybersecurity, human resources and installations. The core responsibilities are going to increase next year, because much of the internal services are in support of space.

Vincent Ho: You don't have the numbers, so could you table for the committee the information on money spent on DEI training, DEI workshops and DEI grants within the CSA?

Lisa Campbell: Just give me one second. I might have it here.

Colleagues, do I have it here in the materials? I want to make sure I answer the question.

If I may, I'll answer that, at the moment, the space sector doesn't represent humanity. It's 29% female.

Vincent Ho: I'm going to continue.

I'm reading from the CSA DEI action plan. It says:

> The CSA aligns with the Government of Canada's [gender-based analysis or] GBA Plus approach, requiring all activities (policies, grants, projects, etc.) to undergo a GBA Plus assessment to ensure equitable access to opportunities in the Canadian space sector.

Did you undertake a gender-based analysis when selecting Jeremy Hansen for Artemis II? Please answer yes or no.

Lisa Campbell: Again, we make sure teams are diverse and—

Vincent Ho: You're required to undergo a GBA+ assessment.

Did you go through a GBA+ assessment with Jeremy Hansen when you hired him?

Lisa Campbell: Do you mean in our astronaut selection processes?

Vincent Ho: That's right.

The Chair: I'm sorry for interrupting. Your time is up.

Vincent Ho: Please answer yes or no.

The Chair: Your time is up. We can come back.

With that, we will go to MP Rana for five minutes.

Aslam Rana (Hamilton Centre, Lib.): Thank you, Madam Chair.

Thank you to all witnesses for their valuable time.

Ms. Campbell, the Artemis II mission was a remarkable moment for Canada. Beyond the achievement itself, what did it mean for nation building and Canadian sovereignty in space?

Lisa Campbell: Thank you for the question.

To those of you who watched the uncrewed flight Artemis I, it was a very complex rocket. It cost $4.2 billion and supported 24,000 jobs in the United States. However, that rocket will probably be modified over time to be simpler and faster because the United States and the rest of the world are interested in a more rapid cadence of missions. The most important piece was flying a crewed mission to show that, with all these investments, we are able to return humans to deep space after more than 50 years.

I mentioned earlier that Canada's industrial contributions in space robotics are why we were there. We signed a treaty and said that for our contribution of advanced space robotics, we would have two flights and some science on Gateway. There you have it. We received one of the most important benefits—not only astronaut flight but also all the science that was done and the CubeSats that were launched.

It's about being part of an international partnership with companies...and there are hundreds of them that have been part of the work here on the ground in support of advancing our space robotics. There's a prime, but hundreds of smaller companies are part of that as well. It also positions Canada very well for the next step, which is a permanent crewed presence on the moon.

● (1620)

Aslam Rana: Thank you.

As you mentioned earlier, Canada's space sector is now contributing $3.4 billion to GDP, and it employs nearly 14,000 people.

Lisa Campbell: Yes. Those are direct jobs, and it's 28,000 if you count indirect jobs.

Aslam Rana: Thank you.

Where are the strongest opportunities right now, and what would help the sector grow further?

Lisa Campbell: That's a wonderful question.

We look at that very carefully because, as I mentioned earlier, space is increasingly competitive. More than 90 countries have investments of some form, both for their own services but also to contribute to international missions. We want to make sure that what we bring is unique and sought after.

We've been very successful with space robotics. We are the best in the world, especially because we have 25 years of operations in space robotics. No one else has that history and legacy, but we want to keep it up because it is sought after—we know that—for in-orbit servicing, for satellite servicing, for debris management, for logistics on the surface of the moon and then also for space stations that are planned in low-earth orbit and beyond.

We are also very good at synthetic aperture radar. Our RADARSAT Constellation Mission, which I mentioned, allows us to see through clouds and at night, and we share this data with the world. In return, we get valuable satellite data that helps us.

There's a wonderful international charter of space and major disasters, of which we're a founding member. It's the world's eyes in the sky that come together to help in emergency management. It's very valuable. However, we wouldn't be able to participate in that if we weren't good contributors, so we also want to keep up that earth observation. We also need it for our country, the second-largest country on the planet. We will definitely need it.

We've seen the demand growing for earth observation data, but there are other areas that will be in high demand: power generation, logistics on the moon, food production and health. There are areas where we could achieve investments that both help us here on earth, for example, providing health services to people in remote communities and providing them with autonomy—and we've done a bit of work in that area and it's been sought after here on earth—but that also have applications for astronauts. It's why we focused a lot on life sciences.

Aslam Rana: Thank you for your comprehensive answer.

Do you have something to add?

Jean-Claude Piedboeuf: I will add to that satellite communication. Canada was one of the first countries, and we depend on satellite communication. As we can see, we have one of the very best companies in the world doing that now.

Lisa Campbell: Can I just mention LEO PNT? More and more there is a demand as well for low-earth-orbit position, navigation and timing. Current position navigation and timing can be subjected to hacking, and it is vulnerable, so there's a huge demand for low-earth-orbit position, navigation and timing. Then there's also a demand for capacity in the north, which we're very good at and could do more of.

Aslam Rana: Thank you very much.

The space environment is changing fast, commercially, geopolitically and technologically, so where do you see the CSA's priorities heading over the next decade?

Lisa Campbell: We hope the space environment will remain safe for all of us to use and do even more in. I mentioned earlier the 40,000 pieces of space debris bigger than 10 centimetres that are in low-earth orbit at the moment. Those are dangerous. Irresponsible conduct by one actor, whether it's in any satellite missile test or other, creates thousands of pieces of debris that affect us all. We've had to manoeuvre the International Space Station to avoid pieces of debris.

With planned mega-constellations those risks increase, so responsible conduct in space and investments in technologies like reusable rockets, as we've done, and doing that more, are important.

The Chair: The time is up for MP Rana. You can come back in the next round.

We will go to MP Blanchette-Joncas for two and a half minutes. Please go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Ms. Campbell, does the CSA acknowledge that the U.S. “America first” policies now pose a direct risk to Canadian scientific sovereignty regarding space?

Lisa Campbell: There have been big changes recently, not just for the Canadian space program but for others as well. We're holding ongoing discussions with the Canadian companies we deal with to find out how we can support them.

However, this situation reminds us of the importance of having other partnerships. I made reference earlier to the European Space Agency. It was my predecessors, in 1979, who thought it was a good idea to have many friends and struck this partnership.

In November, we invested 400% more, a historic amount, because it's a way for our small and medium-sized businesses to access the European market, and they greatly appreciate that. It allows them to compete and win contracts. For every dollar we invest, they get three dollars in revenue.

We've also increased our partnerships with Japan, India, the Arctic countries, as you also pointed out, and many others. We're looking for more partners.

● (1625)

Maxime Blanchette-Joncas: I hear what you're saying, Ms. Campbell. However, I was talking about the Americans.

On a scale of one to 10, how would you characterize Canadian leadership in space?

Lisa Campbell: As I said earlier, we used to be one of 12 countries in space. Now there are about 90.

When it comes to money, statistics show we're comparable to other countries. We're high on the list. Canada is still one of the few countries with the capacity to implement and manage systems. Every day, we depend on space.

Maxime Blanchette-Joncas: Again, on a scale of one to 10, where do you see the leadership?

Lisa Campbell: It depends on the fields.

Maxime Blanchette-Joncas: What's the overall picture?

Lisa Campbell: I apologize for the non-specific answer. It's not that I don't want to answer your question, but, in reality, countries are very good at different things. Canada is known for space robotics and operating satellites. There are other areas, however, in which we could also invest.

Maxime Blanchette-Joncas: Has Canada ever led a major international space mission?

Lisa Campbell: [*Technical difficulty—Editor*] lead a major mission. Europe has selected a Canadian company to lead a mission to create an Internet connection in space, to compete with SpaceX.

Maxime Blanchette-Joncas: Has Canada ever led a major international mission? If so, which one?

Lisa Campbell: Yes, the one I just described.

Maxime Blanchette-Joncas: When was that?

Lisa Campbell: It's called HydRON-DS.

Maxime Blanchette-Joncas: When was that?

Lisa Campbell: It's planned. It's coming.

Maxime Blanchette-Joncas: Oh, okay. It's never happened.

Lisa Campbell: Mr. Piedboeuf, can you give us some details?

Maxime Blanchette-Joncas: What's the planned date, Mr. Piedboeuf?

Lisa Campbell: I want to make sure I answer you correctly.

Maxime Blanchette-Joncas: I know my time is up, Madam Chair, but my questions aren't being answered.

Lisa Campbell: Canada participates in the largest space missions: the James Webb telescope, the International Space Station—

Maxime Blanchette-Joncas: I am asking to rank Canada's leadership on a scale of one to 10, but I'm not getting an answer. I'm asking which mission we're leading, and I'm not getting any names.

[*English*]

The Chair: Time is up. We will come back in the next round.

With that, we will proceed to MP Mahal for five minutes.

Jagsharan Singh Mahal (Edmonton Southeast, CPC): Thank you, Madam Chair.

Thank you to all the witnesses for being here.

Madam Campbell, I will start with you.

Canada has world-class expertise in space science, yet this government has recently cancelled what would have been Canada's first rover mission to the surface of the moon, a mission that would have, if launched, been completely run by Canada.

At a time when our allies are racing to establish a presence on the moon, why would Canadians believe that the Canadian Space Agency has a serious long-term strategy for space leadership when a groundbreaking project has just been cancelled?

Lisa Campbell: As a result of the comprehensive expenditure review, the CSA is expected to save $41 million by 2029-30 and then, after that, $8.3 million ongoing. Savings were achieved by terminating and scaling down some projects as well as optimizing our workforce. It reflects the challenging budget decisions that had to be made.

I can say that we learned a lot through the work that was done on the project. In other words, technology was advanced that could feed into other projects, including the lunar utility vehicle, a $1.2-billion vehicle that is planned for the lunar surface, and the science continues. The science projects that were funded—

Jagsharan Singh Mahal: Would you agree with me that making such a budget cut decision at this vital point of a project would have a devastating effect on...? You just mentioned in your previous statement that we have over 200 companies that are involved in this industry, with billions of dollars of revenue being generated by them.

Would it be fair for those companies that are invested in those projects, which have been cut all of sudden by these kinds of announcements by the government?

Lisa Campbell: This was a discrete project, which would have involved primarily one company. It was a competitive contract that was awarded. The company was paid for the work that they had done. The technology was advanced, and the science continues.

Yes, it was a difficult decision. It does, however, happen sometimes. There are other projects that the Canadian Space Agency has had to stop. In the current context, as I mentioned, it was in the context of an expenditure review as well.

● (1630)

Jagsharan Singh Mahal: What I'm saying is that every Canadian has seen Canada's space expertise in action with Artemis II.

Shouldn't Canada be taking an active role in pioneering space exploration, rather than simply relying on participation in other countries' missions?

Lisa Campbell: We are actually advancing our space robotics and our surface mobility on the moon. These are important billion-dollar contributions that Canada will bring on its own.

Jagsharan Singh Mahal: I would like to take you back to the budget cut on the lunar rover mission that has just been announced in the last budget. This sounds like another case where the Liberal government announces an ambitious project, spends millions of taxpayer dollars, celebrates the early progress and then walks away from the project without Canadians seeing any results.

The lunar rover mission has already passed important milestones. While most of its initial budget has been spent, who's responsible for this failure? Is it the Canadian Space Agency, the minister or the government that has failed to follow through?

Lisa Campbell: I wouldn't call it a failure, because some of the technology and science was advanced. As I mentioned, the science continues. The agency has a robust governance framework. Space projects are very hard, and not all of them progress to launch and testing in space. Some of them have to be stopped earlier, and it's the responsible thing to do if either they're not achieving their project goals in time or it looks like they may exceed the budget. There are a number of factors—

Jagsharan Singh Mahal: If the majority of the money had already been spent and the majority of the steps had already been taken in the project, wouldn't it make more sense to complete the project to make your presence known in the aerospace of the country?

Lisa Campbell: As I mentioned, the CSA was asked to save $41.3 million by 2029-30, so difficult decisions had to be made.

Jagsharan Singh Mahal: Let's move on.

Canada is putting more money into the European Space Agency partnership. At the same time, we are trying to build our own domestic space industry, as per your statements.

How do we ensure that this does not become another case where Canadian taxpayers fund innovation but commercialization and manufacturing end up outside of Canada?

Lisa Campbell: What's helpful about this—

The Chair: The time is up. Maybe we can come back in the next round.

With that, we will go to MP McKelvie for five minutes.

Please go ahead.

Jennifer McKelvie (Ajax, Lib.): Thank you, Madam Chair.

Thank you all so very much for being here, and congratulations again on your successful mission. It was a lot of fun watching the launch at home and being glued to the television to see all those momentous occasions with Artemis II.

My question recognizes that we're on the science committee and we're having a lot of conversations around partnerships. One of the things that I think is so great about the Canadian Space Agency is that they are really important to everything you do, whether it be international partnerships, partnerships with the academic community here in Canada, partnerships with industry or partnerships with other departments within the Canadian government.

I'm wondering if you could speak to some of those partnerships and collaborations that you have with Canadian universities, and also colleges and polytechnics, because they're the ones that we're particularly placing a lot of focus on this session.

Lisa Campbell: Thank you very much.

We work with universities, colleges and schools across the country, many of which now have dedicated space programs. For all of the missions that I mentioned, there is usually a principal investigator at the heart of it: a scientist who has dedicated his or her life to exploring that star, advancing that mission and advancing that technology. Sometimes they work in industry as well, but often they're attached to universities.

In fact, there's also interesting growth that we see out of the University of Toronto with Space Flight Laboratory and Robert Zee. There's a gentleman there who believed in smaller missions, and that's one of the things that we've seen over time. Spacecraft have become smaller. We're miniaturizing the technology, which enables us to do much more and launch more at a relatively lower cost.

The science community is hugely important to us, and they're very passionate. There are experts in astronomy, experts in physics and experts in space science—you name it. Canada has extraordinary researchers. That's often why we're sought after. It's often why we're invited to be a part of missions. Often these are the questions: How do you find a budget for it? Who's going to be financing it? Is it feasible? Is it at a technology readiness level so that we can actually advance it? How long will that take? Those are the kinds of discussions we have.

We also collaborate very much with other government departments, as I mentioned. My colleague Madame Durand co-chairs a governance table of over 20 government departments to look at the demands for space services and solutions in Canada and make sure that we're planning for the long term together. Sometimes budget requests may come from the environment department but have a small space aspect because of the Canadian Space Agency's involvement.

● (1635)

Jennifer McKelvie: I don't want to leave out geologists and geochemists, because I know they're very excited about the samples you bring back. There's lots of great Canadian research in that regard, especially with small organic molecules and what was happening with them.

My other question is about those partnerships as we roll out the defence industrial strategy and satellite technology. As we are increasing our surveillance, we know that things are changing, particularly through the Arctic. There are lots of different options around remote sensing and data collection.

I'm wondering what sorts of partnerships or discussions you might have under way not only with defence but also with the Canadian Geological Survey, which I think has great capacity with expanded satellites and data collection.

Lisa Campbell: Most space technologies are dual-use in the sense that they can do both things. If you put a platform in space to observe for environmental and natural disaster purposes, it could probably detect heat. Infrared technology in space can also see what's happening on the ground. If you look at the utilization of our current satellite, the RADARSAT Constellation Mission, 50% of the data goes to the Department of National Defence, and that's always been the case. It makes sense as a country that if we have that capacity, we use it for all of our needs and for security purposes as well.

We remain a civil space agency. On the other hand, we are also happy to help grow a Canadian space sector that can then meet the moment. If there is a need to invest in security in the north and in the Arctic, there are also a number of space applications that can help with what we want to do in that regard.

I also mentioned how space has become increasingly populated. Land, sea and air used to be the war-fighting domains; now, space is one of those domains as well. It means that we've had to increase the cybersecurity posture of our spacecraft constantly and invest in resilience. We operate them civilly, but we are under no illusion that they are under constant threat so we watch that very carefully.

With the rest of the world, we are trying to make sure that there are rules and norms of conduct in space that everyone follows so that we don't make it even more dangerous. Space is hard enough. It's lethal for humans, and debris poses a serious problem. We're trying to keep it safe for everyone.

Jennifer McKelvie: I think what I heard there is that it's the final frontier.

The Chair: The time is up.

We will start our third round with MP Holman for five minutes.

Please go ahead.

Kurt Holman (London—Fanshawe, CPC): Thank you, Madam Chair.

Thank you to the witnesses for coming to this committee.

First of all, I want to echo what my colleagues on the committee have said: Congratulations with regard to Artemis II, and especially on the success of Mr. Jeremy Hansen orbiting the Earth. I know he is an inspiration to Canadians from coast to coast to coast.

My first question is with regard to the International Space Station. Yes, billions of Canadian tax dollars have been put into the International Space Station. I still remember being a young lad when the pieces were being launched up in the late 1990s, and mankind started to orbit in the International Space Station in the year 2000, as it continued to be built.

The reason I bring it up is my concern for the planned de-orbit of the International Space Station as of 2031. I was wondering what the CSA's position is on that. Has there been any discussion to extend the usage of the International Space Station beyond 2031?

Thank you.

Lisa Campbell: Thank you for the question. It's a live one for all of us in the space community. It is humanity's precious microgravity laboratory, but it's getting older. There's a leak in the Russian module, and our Canadarm is constantly doing repairs. We've put out solar arrays to keep fuel and power going, but with the stress and orbital mechanics on it, at some point, it will have to de-orbit.

The United States had plans for commercial space stations. Those have evolved a lot, partly as companies realized how difficult and how expensive it would be. There are a few companies that will launch much smaller modules, but for the moment, the only alternative is China's small space station in low-earth orbit. It's about a third of the size of the ISS. Other countries, like India, and Europe are talking about having a low-earth-orbit space station.

We're very worried about the loss of all of that expertise if that stopped. We are very hopeful for some form of continuity to keep the ISS going as long as possible, because it's so precious. It teaches us so much. We're in active discussions with partners around the world. What can we do to make sure that there's some form of public platform for space science and for astronauts to go to? We learn so much from it and from keeping a continuous human presence going, as you mentioned, for 25 years.

We want to keep that going, but right now it's not obvious what the successors will be. It would be a big leap, if that stopped, to go from there to deep space. You'd want to keep that know-how and muscle memory going as long as possible.

It's also very beneficial to our companies. We launch science experiments from there so that they have access to space science.

● (1640)

Kurt Holman: To follow up on that concern with regard to the International Space Station, what is CSA's official position? Is it to prolong it or to de-orbit it in 2031?

Lisa Campbell: The Canadian Space Agency received additional funding to participate up until 2030, and we're very grateful for it.

At some point, with spacecraft.... As you heard my colleague mention, we've kept some of our satellites for 23 years. We have a mission life of five years, but we keep them for much longer, which we're very proud of. That might sound responsible in terms of a return on investment. The only issue is, increasingly, we need to plan for de-orbit and save enough fuel so that we can do a controlled re-entry, just as we saw with Artemis II. Their re-entry was controlled. They reached 3,000°C as plasma burned up around them, and there were parachutes.

It's the same thing with the International Space Station. We have to make sure that there's enough control over the International Space Station to be able to de-orbit it responsibly. You may have seen some of the issues with space debris lately, so a controlled re-entry is the most important thing.

Will the structure last that long? I mentioned the persistent leak in the Russian module. That's a problem. We're doing what we can to maintain it. Will other issues arise as the structure ages? We hope not. We're doing preventative maintenance, but it is already reaching beyond what we anticipated when we first launched it.

Kurt Holman: Are you aware of any third alternative solution, not just an international space station and not de-orbiting it in 2031? Has private enterprise inquired with the CSA, NASA or any other international space agency to keep the ISS up there in space?

Lisa Campbell: I remember, since 2020, commercial organizations have been active in either using a portion of the International Space Station to create something else or launching their own space stations. There have been a number of proposals. None of them have gotten very far. We may see some changes this year with much smaller modules launched, but not a full station.

We haven't seen the idea of creating something like the International Space Station at that size yet. It's been on a much smaller scale. Often, where they have difficulty is with the business plan. Who will the market be? Is it government? Is there a private market for this? At the moment, it's still very expensive, so they seem to be wrestling with that. India has spoken about launching its own space station and welcoming international partners. Europe has spoken of that as well, but it is a complex endeavour.

The Chair: Thank you. The time is up.

We will proceed to MP Eyolfson for five minutes.

Please go ahead.

Doug Eyolfson (Winnipeg West, Lib.): Thank you, Madam Chair.

Like many, at the age of six, I watched the first human moon landing, and I was very excited to see a Canadian on a mission towards the moon. NASA has said that they are planning crewed missions to the moon again. I don't necessarily mean committing astronauts, but is the CSA participating in the development of these missions to land crews on the moon?

Lisa Campbell: We are part of something called the Artemis Accords, which is a political agreement among 66 countries for deep space. Canada is one of the first countries. We also hosted the second workshop on the Artemis Accords, and now 66 countries are planning for a permanent presence on the moon.

The moon is a challenging environment. There's a dust called regolith that gets in absolutely everything. It can be -200°C or 100°C. There's planning for the batteries and trying to survive a lunar night, which can be 14 days at -200°C. Canadians are pretty good at that, but the moon is a whole different story.

It's an unforgiving environment. There's also really rough terrain. We're constructing vehicles that can go down into canyons and not tip over. Then there is actually achieving a lunar landing. There have been some commercial entities that have tried, and some of them have crashed into the moon. Slowing down enough so that you can do a soft landing on the moon is very challenging.

Yes, Canada is very much part of that. We're sought after for our robotics. We've been investing for years in surface mobility, so we're ready for this now. We've engaged with three companies for the mission concept and five companies for the science we would do on the moon. NASA is very much looking for international partners, not only because they want it to be an international endeavour but also, quite frankly, for financial reasons. They need the contributions of other countries.

● (1645)

Doug Eyolfson: Thank you.

Further to that, once we're actually there, is there a plan for what kind of research is going to be done on the moon? What are the possible scientific and industrial potentials of such research?

Lisa Campbell: We're all very interested in the south pole of the moon because we think there's water ice there, which we could use to live and also convert to hydrogen to go further into the solar system—to Mars and beyond.

Geology was mentioned earlier. The moon used to be part of earth. We can learn a lot about earth from studying the moon. You might have heard, if you listened to the Artemis II crew, that they saw parts of the moon that human eyes have never seen. They saw micrometeorites hitting it. There is a tremendous amount of science.

There are also resources. There are companies and countries that are very interested in the resources on the moon. We're doing our very best to make sure that it's a collaborative endeavour with interoperability. That will be important.

[*Translation*]

I don't know if my colleagues have anything to add regarding the science aspect.

[*English*]

Jean-Claude Piedboeuf: You covered it.

[*Translation*]

Lisa Campbell: That's fine.

[*English*]

Doug Eyolfson: I will cede the rest of my time to Madame Brière.

Hon. Élisabeth Brière (Sherbrooke, Lib.): Thank you, MP Eyolfson.

[*Translation*]

Thank you very much for all those answers. You've opened the door to what I wanted to talk about.

The Université de Sherbrooke is working on a major project: a small, astromobile vehicle. However, the mission was cancelled. It was to be part of the first of three planned launches, the second with Canadarm3 and the third with the lunar utility vehicle.

Isn't it unfortunate that after all of Canada's efforts and investments at this stage, funding was withdrawn? You said we should go and explore the lunar south pole region. Will Canada lose some of its leadership at the international level?

Lisa Campbell: It's always sad when you have to make difficult decisions such as stopping or not continuing a project.

However, we're very aware this is taxpayers' money and that it must be used responsibly. As I said earlier, we were asked to find $41.3 million in savings. We did that by stopping this project, since there were signs it would be difficult to complete on schedule and within the budget. Given that and the request to reduce the budget, we did what had to be done.

That said, scientific development will go on. As I said earlier, there are some great companies in Sherbrooke doing extraordinary scientific development. I'm thinking in particular of SBQuantum, which uses the earth's magnetosphere to create very specific maps. It's extraordinary. I had the opportunity to visit the company earlier, and what they do there is magnificent.

[*English*]

The Chair: The time is up. Thank you.

With that, we will proceed to MP Blanchette-Joncas for two and a half minutes.

Please go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Thank you. You said I had two and a half minutes, Madam Chair. Isn't it six minutes now?

[*English*]

The Chair: No. We are into the third round, so you will have two and a half minutes.

[*Translation*]

Maxime Blanchette-Joncas: Okay, thank you.

Ms. Campbell, the Canadian space project CASTOR, the advanced cosmological survey telescope working in the visible and ultraviolet ranges, is touted as a historic opportunity for Canada to lead a major international space mission.

Does the Canadian Space Agency support this project and formally recommend the government invest the necessary $20 million to launch the project's A+ phase?

Lisa Campbell: We're faced with a dilemma. We support this project. It's a great project. Obviously, if funds were unlimited, we'd go ahead. However, we're also interested in two other projects. One is called LiteBIRD, which would be done with Japan—

● (1650)

Maxime Blanchette-Joncas: That answers my question. Thank you very much.

Would the CASTOR project contribute to strengthening Canada's scientific and strategic sovereignty, including in relation to earth observation, Arctic surveillance, optical communication and massive data processing?

Lisa Campbell: The project would have its benefits, of course.

Maxime Blanchette-Joncas: Okay.

If the decision is postponed and CASTOR is not funded, do you think Canada risks losing international partners and also missing a strategic opportunity to play a leadership role in an international space mission?

Lisa Campbell: At the moment, we don't have funding for that project.

Maxime Blanchette-Joncas: I appreciate that. You say that you support it, but that the agency is split on the matter. Basically, you're asking the government to provide more funding to fund this type of project sooner rather than later. Is that correct?

Lisa Campbell: I would say that the agency has a lot of big plans for its projects, but it cannot fund them all.

Maxime Blanchette-Joncas: I am trying to help you. The government has allocated $82 billion over five years for defence, but it cannot find $20 million to fund a small project like this one. When I say “small”, I am referring to the amount of money needed, not how important the project is.

You also mentioned earlier another $40 million reduction in investments for science.

Does the Canadian government recognize that space is also critical to defence and strategic sovereignty?

Lisa Campbell: I think we made a good choice by investing in the James Webb Space Telescope, which was a massive project and a major mission for us, NASA and the European Space Agency.

There will be investment opportunities in the near future. The CASTOR project is one of them, but there are two others as well. Each project has its benefits. As you mentioned, the CASTOR project is entirely Canadian. The community supports it. The other project has an international component. It's a matter of making choices.

Maxime Blanchette-Joncas: What does the government say when you present these projects to it?

Lisa Campbell: To date, we have not presented any to it. We are listening to the science sector.

Maxime Blanchette-Joncas: Yet you say there is a lack of funding and you are being told no.

Lisa Campbell: No. We are carrying out our activities. We only move forward once we receive the funding. There's a tremendous amount of prep work. As far as I know, this project is still in the planning stage.

Maxime Blanchette-Joncas: You say it's still the case, as far as you know. I am talking to the players, and they tell me that everything is ready. The only thing missing is the money.

Lisa Campbell: That's perfect, then. In that case, they should come see us.

Maxime Blanchette-Joncas: That's what they are saying. That's why I am asking you these questions. They need an answer too.

[*English*]

The Chair: The time is up for MP Blanchette-Joncas.

Now we will proceed to MP Ho for five minutes.

Please go ahead.

Vincent Ho: Thank you, Madam Chair.

I want to go back to my previous round about the gender-based analysis done on the selection of Jeremy Hansen. Could the CSA table that? Do you have that information? Do you know if a gender-based analysis was conducted before the selection?

Lisa Campbell: We can provide additional information, if you're interested, on the specific amount spent, but I would add that it's probably part of our overall recruitment strategy.

Vincent Ho: I'd like to know if you could table that within 30 days, regarding whether there was a gender-based analysis conducted before the selection of Jeremy Hansen for Artemis II, as well the previous question.

Lisa Campbell: We'll get back to the committee members.

Vincent Ho: Moving on, we learned that the Liberal government spent $200 million to sign a 10-year lease for a spaceport in Nova Scotia. You talked about this briefly, earlier.

Could you elaborate a little bit more to this committee on the partnerships involved in this deal, specifically the role played by the Ukrainian space agency and the Maritime Launch Services?

Lisa Campbell: Our role is to support the broader space ecosystem. I mentioned the meeting that I was at in 2021 with the State Space Agency of Ukraine, but since then, with Spaceport Nova Scotia, we have not been involved. We're not responsible for funding Spaceport Nova Scotia—that investment was announced by the Department of National Defence. However, we have funded rocket technology. Our role is truly in the technology part of it, and also the in-space activities.

Vincent Ho: The pictures of the space pad look more like an undeveloped gravel pit. Many people have been there, and it just looks like a parking lot. Do you think it's a good value for taxpayers to lease this for $200 million for 10 years?

Lisa Campbell: I can't comment on that, not having seen the photo or been there recently.

Vincent Ho: You've never been there.

Lisa Campbell: I was there in 2021 but not at the spaceport. I was in Halifax to meet with representatives of the State Space Agency of Ukraine, who came to talk about bringing their rockets to Canada.

Vincent Ho: You have a great deal of experience in procurement in your career as a civil servant. Looking at pictures of the gravel pit, does that pass your gut check as to whether it's worth $200 million?

Lisa Campbell: I'm not sure what pictures are being referred to.

Vincent Ho: When do you expect the next successful orbital launch would be from the space pad?

Lisa Campbell: We were just at an event with Reaction Dynamics, one of the companies whose hybrid rocket technology we're helping fund. I know there's hope to have a rocket launch from Canada by 2028. That's the goal. I think I mentioned that earlier.

● (1655)

Vincent Ho: I just want to clarify the role of the Ukrainian space agency in this, because you mentioned it a couple of times. I want to understand what we were relying on the Ukrainian space agency for.

Lisa Campbell: It probably won't be possible now because of the war, but they were going to bring in mid-sized Ukrainian rockets, proven rocket technology, in partnership with the spaceport, Maritime Launch Services. That has stopped, but I think the company—

Vincent Ho: It was before the war, I understand, in 2021 or so.

Lisa Campbell: Exactly.

Vincent Ho: I understand that part, but the Ukrainian space agency doesn't have the best record. It suffered from a series of losses, scandals, mismanagement, malfeasance and corruption. It had a 10-year project that failed in Brazil, allegations of deals with North Korea, a breach of contract case with Boeing that would cost the company $200 million, and theft of over $10 million from Export Development Canada.

From your perspective, how confident were you that they were going to deliver the technology Canada depends on?

Lisa Campbell: We were simply there to support, space agency to space agency. At the time, what was of interest was proven rocket technologies, in other words, rockets that had flown and had executed on the mission. At the time, there weren't many in the world who could do this, and having that partnership would have helped the company. That was the purpose of it.

Vincent Ho: By that time, all of those things I just mentioned had already been uncovered—before 2021—so it doesn't look like it would have had a good record of delivering.

Looking back on this decision, do you think you were confident at the time that they were going to deliver on this, given the series of scandals and mismanagement?

Lisa Campbell: I'm not familiar with what you're referring to, sir. I just know that at the time, the intent was to use a proven rocket.

Vincent Ho: Okay. It doesn't look like you're familiar with a lot.

Thank you.

The Chair: Thank you.

With that, we'll go to MP Dandurand for five minutes. Go ahead.

[*Translation*]

Marianne Dandurand (Compton—Stanstead, Lib.): Thank you very much, Madam Chair.

Thank you for being here and for speaking to us about this fascinating field, in which Canada is a leader. It is truly inspiring to have you here and to have the opportunity to ask you questions.

I would like to start by talking about the currently relatively unstable geopolitical context, as well as the importance, in your view, of having sovereign capabilities in space.

Furthermore, how are we positioning ourselves in light of the emergence of privately owned satellite constellations on an international scale?

Lisa Campbell: The space sector is more competitive now. What's wonderful is that, initially, there were only public space agencies—there were about a dozen of us—and Canada was able to make a name for itself by being one of those early agencies. Now there are viable commercial companies, which is wonderful because there is growth. However, that means it's more congested. There are more operators and more space debris. So, the need to operate responsibly is becoming increasingly important for everyone in order to preserve this precious environment.

The other thing is that we are dependent. Our modern societies depend on space infrastructure. Not a single day could go by without access to space for banking, for maps, for all our systems here on Earth. Earlier, I mentioned the Canadian company trying to create Internet resilience in space, because the current system in the ocean is becoming increasingly fragile. So this will strengthen it. However, we see that we are increasingly dependent on the invisible infrastructure in space. It is invaluable to us.

There is also space exploration. To go further, we must ensure that the environment in low Earth orbit remains peaceful and predictable. The agency has a system that constantly monitors space debris and what is happening on Earth. We share data with our partners as well as our flight plans to ensure that everything is well coordinated.

Marianne Dandurand: Thank you. I still have a few more questions on that topic, but you are steering me toward another subject.

I'm from the Eastern Townships, a region that is quite hilly, to put it mildly, and we have trouble getting cell service.

Is satellite capacity the solution of the future? If so, how long do you think it will take to roll out service in rural or mountainous areas? How would that work?

● (1700)

Lisa Campbell: This is undoubtedly a solution for the future. I would even go a step further and say that it's also a matter of security. I mentioned our quantum mission earlier. Current encryption methods will not last. Soon, we will need quantum computing to secure our communications. Our goal is to advance this technology and test it in space. I also mentioned the HydRON-DS project, which will effectively enable optical communications from space using lasers that are much faster and much more reliable.

Mr. Piedboeuf, do you have anything else to add?

Jean-Claude Piedboeuf: Yes. We are designing satellites that will enable what is known as direct-to-device technology, or D2D. This will allow for mobile phone communication directly from a satellite. This will improve telephone connectivity.

As for the Internet, technologies already exist that can be purchased from the U.S. There is also Telesat, which is building sovereign capacity with government support and technologies that the Canadian Space Agency helped develop. This will provide access to high-speed Internet everywhere, not only in the Eastern Townships, but everywhere else in Canada, including the Arctic.

Marianne Dandurand: On a related note, since we are talking about rural areas, could this satellite capability help us, for example, with precision agriculture? Could it help make food cheaper to produce in the long run, and thereby make food on grocery store shelves more affordable? Furthermore, could this technology help us predict disasters, such as wildfires? Are these the kinds of very practical, everyday applications that your research can provide?

Lisa Campbell: Yes, absolutely. We are already doing this using our satellites. They are very useful for precision agriculture and biodiversity. There are numerous applications on the ground. What's more, we know there's huge demand for these products. So this is now integrated into agricultural practices. It allows for more precise use of resources—especially water—and helps farmers determine the best time to plant.

Marianne Dandurand: I will take the opportunity to ask one last question, to which you may respond in writing.

[*English*]

The Chair: I'm sorry. You're out of time.

[*Translation*]

Marianne Dandurand: Okay.

Thank you.

[*English*]

The Chair: With that, we'll start our fourth round with MP DeRidder for five minutes.

Please go ahead.

Kelly DeRidder (Kitchener Centre, CPC): Thank you.

Hi, Ms. Campbell. How are you?

Lisa Campbell: I'm fine. How are you?

Kelly DeRidder: I'm good. Thank you.

Did the government do any sort of review with you before they put forward the business case and before committing to the spaceport project?

Lisa Campbell: We weren't involved in that.

Kelly DeRidder: You weren't involved whatsoever...?

Lisa Campbell: We were not involved in that, no.

Kelly DeRidder: Basically Canadians are being asked to trust the government's calculations, with no real consultation as to what's supposed to be happening there.

Lisa Campbell: I can't comment on that. I can just go back to the work we did in 2021, as I mentioned, and the work we've done investing in rocket technologies.

Kelly DeRidder: Dr. Piedboeuf, is it fair to say that this facility still cannot operate without significant development and infrastructure work?

Jean-Claude Piedboeuf: The spaceport still needs development, but that is the case for any spaceport being developed. The spaceport is to prepare to launch a rocket. You need to develop that, and that's what they are doing now.

Kelly DeRidder: Do you know if that has been completed?

Jean-Claude Piedboeuf: This is the development they are doing right now.

Kelly DeRidder: How much of that technology and infrastructure is going to be dependent on foreign expertise or technology?

Jean-Claude Piedboeuf: It's not so much about foreign expertise. Basically, it's the building. The expertise is known. The knowledge is known. We have that in Canada. It's really about building the spaceport now to be able to launch that, and we have the expertise in Canada to do so.

Kelly DeRidder: Do you know if it's going to be the case that they're going to use Canadian expertise, technology, infrastructure and brains to put it all together?

Jean-Claude Piedboeuf: That's my expectation. As President Campbell mentioned, we have not been involved directly in the discussion, but yes, my expectation is that it will be Canadian expertise that will be used to develop that.

Kelly DeRidder: Do you know if there's been any sort of commitment or contract signed today? No, okay.

I'm going to go back to you, Ms. Campbell. Do you know if there are any sort of success indicators for the $200-million investment into the launch pad, the spaceport project?

● (1705)

Lisa Campbell: For us, the indicators of success with all space projects are that you can get to space and that you can operate once you're there. For these rocket technologies that we've been investing in, what we're trying to do is de-risk them, to bring them up from a low technology readiness level—sometimes we test them in a near-space environment, and I mentioned our stratospheric balloon campaigns—and then get them to space and back.

We're also increasingly seeing reusable rockets, which is a great thing. Rather than flying them once, they are reusable and repeatable. We can create supply chains and have that resilience in space. That's the goal, and it would be great if we had it in Canada.

Kelly DeRidder: Again though, you haven't been consulted, and you have no oversight or view into the actual development of the spaceport project and the $200 million.

Lisa Campbell: No.

Kelly DeRidder: Your indicator isn't really tied to the $200 million that the government has invested for a concrete pad. Is that fair to say?

Lisa Campbell: I don't know if it is. I'm just sharing what the Canadian Space Agency looks for when we try to advance technologies.

Kelly DeRidder: Right now, as it stands, it looks like taxpayers committed to funding a project before any sort of commercial demand was proven or had gone through your department.

Can I accurately say that there's been no real analysis through any sort of consultation on this $200 million and this spaceport project today?

Lisa Campbell: If I could, I'll just add a bit of a nuance to when you say “no consultation”. We've actually been investing in rocket technology for some years in anticipation of the U.S. becoming crowded. There are coastal spaceports. There are literal traffic jams. They're actually looking at inland spaceports, which are a terrible idea because they are close to populations. Canada is a natural place to have spaceports, so we were ready and trying to invest in the technologies so that when there is a sovereign space launch, our companies are ready to have a launch from Canadian soil.

Kelly DeRidder: You keep going back to the rockets themselves, and I keep referencing the project and the $200-million—

Lisa Campbell: Which we weren't involved in—

Kelly DeRidder: —taxpayer investment.

My goal here is to get on record that you're not engaged with the actual infrastructure.

Lisa Campbell: We're not.

Kelly DeRidder: Okay. Thank you.

The $200 million that taxpayers have been asked to spend to build it and the fact that is has not been built have nothing to do with your agency.

Lisa Campbell: No.

The Chair: Thank you.

With that, we will go to MP Noormohamed for five minutes.

Please go ahead, MP Noormohamed.

Taleeb Noormohamed (Vancouver Granville, Lib.): Thank you very much.

Maybe I can begin with Ms. Campbell.

The conversations that have been going on today range from how you select astronauts, all the way through to some of the more relevant questions that people might want answered. I'm curious. When you see a group of parliamentarians like this, what are some of the things that we should be focusing on, in terms of the conversation that we should be having in respect of where the Canadian Space Agency—

Vincent Ho: [*Inaudible—Editor*]

Taleeb Noormohamed: I'm sorry, Madam Chair. Mr. Ho appears to think that interrupting is the best way to conduct himself.

The Chair: There is one speaker at a time. The floor is with MP Noormohamed. It is his time.

MP Noormohamed, please go ahead.

Vincent Ho: I have a point of order.

I think the member should take his own advice on that.

The Chair: Go ahead, Mr. Noormohamed.

Taleeb Noormohamed: Thank you.

Instead of waging DEI battles, let's actually have a conversation about what matters.

One of the things that I think Canadians would be interested in knowing, when you think about the future of the space program for this country—

The Chair: I'm sorry for interrupting. I'll stop your clock.

To all members, when a person has the floor, please allow them to ask their questions and get answers. You can speak when you have the floor. Thank you.

Go ahead, MP Noormohamed.

Taleeb Noormohamed: I'm going to get my time back, though. Is that right, Madam Chair?

The Chair: Yes, you have four minutes.

Taleeb Noormohamed: Thank you.

Again, the opposition would like to wage DEI battles.

I'd be curious to talk to you about the future of the space program in this country, and I think Canadians would like to know. Obviously, the Prime Minister has laid out a fairly ambitious agenda for where he would like Canada to be going. There's a defence industrial strategy now in place. The reality is that there are a variety of different factors that now come into play.

What is the one thing that you would like parliamentarians to be focusing on as we think about the future of the Canadian Space Agency?

In particular, what should we be thinking about with respect to space and Canada's role in space programming and true engagement in terms of how we think about growth and how we think about exploration?

● (1710)

Lisa Campbell: Thank you, and thank you all for the time today. We are grateful to be here and to be able to share with you a little bit about what we do.

Canada's space program is extraordinary. We are one of the original spacefaring nations, and now we're one of more than 90 that are involved in space. It's much more competitive, but we remain one of the original spacefaring nations that can provide capabilities that are operated in space.

It also provides tremendous potential for our country. Space saves lives, and it saves money. With the perspective of space, you can do things here on earth that would take you much more time and resources to do, like manage agriculture, biodiversity, disaster management and Arctic infrastructure. Space has solutions for those. It also has a return on investment that's extraordinary. I mentioned some of the statistics earlier. For each dollar we invest in Canadian companies, it creates high-quality jobs—28,000 at the moment. I think it's probably even broader than that. The space sector has been incredibly resilient through the pandemic, growing at a rate of 15%, as I mentioned.

I hope that after our discussion today, you'll see the potential of Canada's space program. It's very strong. It really does help us in what we're trying to do as a nation. We're also sought after as a partner on the world stage. We're very reliable. We will stay with our international partners, help them work through problems and, ultimately, achieve success together. That's why we keep getting asked to do these incredible space missions.

We also have a rich science ecosystem. Mention was made of astronomy missions. There is so much more that we could do together, and it could accomplish multiple goals. Space technology is dual-use. There is a way to invest in this, and also to bring back benefits here on Earth.

Taleeb Noormohamed: Thank you.

Madam Chair, how much time do I have left?

The Chair: You have one minute and 40 seconds.

Taleeb Noormohamed: I did have a number of other questions I wanted to ask you, but regrettably I actually have to move a motion, so I'm now going to do that. I want to thank you for the insightful response to that question.

I want to move a motion that was put on notice earlier, and the motion reads:

> That, notwithstanding the motion adopted on February 12, 2026 on the disclosure of documents related to the AI Strategy, and given that the estimate provided by ISED Officials for the cost of production of these materials ranges from $1,192,493.59 to $1,327,208.59, and given that all AI Strategy Task Force reports and more than 11,000 submissions from the public have been proactively disclosed, the committee rescind the order for the production of documents adopted on February 12, 2026.

I need to move that motion now, obviously, and recognize that all the materials that were requested in that study are now available, and they're available online to anybody who wants them. It renders the direction of the committee moot, so I would put that on the floor now.

The Chair: Thank you.

We have a motion by MP Noormohamed on the floor.

MP Baldinelli is next.

Tony Baldinelli: Madam Chair, before we vote on this, I want to express my disappointment that the minister's office, and particularly the department, continually indicated that they would not provide a cost breakdown of the estimate they provided this committee.

How can we as parliamentarians vote to rescind the motion when we have no idea what the true costs are? I repeatedly asked for the cost breakdown and they—the minister's office and departmental officials—have repeatedly refused to provide that.

Sadly, I believe this is an affront to every parliamentarian who sits here. I asked that this information be shared with all members by way of you, Chair. Again, they refused. It leads to the question, what are they trying to hide? I was just asking for a cost breakdown of the dollar figure that my colleague provided.

Ultimately, we're going to vote on this, and the Liberals have the numbers and we'll vote to rescind.

Again, I think it's an insult to every parliamentarian here. I simply had a question on what the cost breakdown was for that money being spent. I don't want to spend an exorbitant amount of dollars on materials if we don't have to, but again, I think what's more insulting is the simple fact that they would not even provide a breakdown of what those costs entailed. Unfortunately, we will be voting against this.

The Chair: Thank you, MP Baldinelli.

MP Noormohamed is next.

Taleeb Noormohamed: Thank you, Madam Chair.

I do want to set the record straight on a couple of things, because my friend opposite.... I call him “my friend” because I do think of him in that way. I've had this conversation on several occasions. He also has met with individuals in the minister's office, who explained to him the frustration that we have also had in getting information from the department in respect of the breakdown.

Notwithstanding the above, we know exactly what the cost range is. More importantly, Madam Chair, what we also know is that the information the committee sought to find is now available publicly: 11,000 different submissions. I'm not entirely certain why there would be feigned outrage for information that is now available in the public domain. If folks are having a difficult time finding it, I will be glad to ensure that anybody who wants it has access to it.

The reality here is that there was over a million dollars in costs to find, for this committee, stuff that is actually available in the form that it was previously submitted. To repackage it so that it addresses whatever it is that the opposition wants at a cost of $1.2 million or $1.3 million seems to be a bit of a waste of taxpayer dollars.

Given that they speak about being the so-called party of fiscal prudence, I think they would be the ones who would be aghast that the government would be asked to spend money to package something in the way they want it packaged. The information is available. It's available to them. I would be glad to share it again with my colleagues if they would like it, but the idea that we would somehow be wasting money—and now time—to discuss this seems absolutely bananas.

● (1715)

The Chair: Thank you.

MP Ho is next.

Vincent Ho: First of all, I want to look at this estimate that we were given. It's not a range like, “Oh, it's going to cost roughly $1 million to $1.3 million.” It's a very specific number: $1,192,493.59 to $1,327,208.59. I mean, it gets to the cent, so clearly there is a precise breakdown that we were not provided. All we wanted was a precise breakdown of these numbers. It wasn't a ballpark figure of $1 million to $1.3 million, or something like that. It's a very specific number. It's a very precise number all the way to the penny.

Again, we just want to know what's being hidden here in terms of the cost: the cost breakdown. A Liberal member said, “Well, all the information is already public.” If it's already public, then why does it cost this much? There has to be a little more there than what's already public, because why would it cost that much?

I will cede the floor.

The Chair: I have a speaking list, so we'll come to you, MP Blanchette-Joncas.

[*Translation*]

Maxime Blanchette-Joncas: Thank you very much, Madam Chair.

Please note of this date, May 25, 2026, because it marks yet another attempt by the Liberal government to shirk its responsibilities.

I speak from experience, because I myself tabled the motion to obtain the information and the list of people who had submitted briefs as part of the consultation for the development of the pan-Canadian artificial intelligence strategy. We even had the minister among us when I moved this motion in February. As if it had been staged, on the very day of his testimony before the committee, his website posted the list I had requested, because he knew we were waiting for that list. Let's remember that, at the time, the government was in a minority, so that's why, of course, the minister had no choice but to comply with the request.

For those listening, the answer is that the government itself had rejected the motion that would have allowed the public to know who had participated in the consultation on what is supposedly the most important strategy in Canadian history: the pan-Canadian artificial intelligence strategy.

In short, we see that the government has said it is important for the public to participate in public consultations when it comes to strategic matters, such as artificial intelligence, but it is not important for the public to know who will be participating. That is what our colleague is telling us today. He is trying to make us believe that everything is available online. However, if it had been accessible online, we wouldn't have asked for it; it's as simple as that.

First, there is no list online of the 11,000 people participating. That is false. I invite our colleague to prove otherwise, and I will be happy to retract my statement if I'm wrong. However, that is not the case at all.

Second, what is most important is not just knowing who participated, but also knowing what was said; we do not know that either. I challenge our colleague to tell us what was said. Is this information truly accessible to taxpayers, Canadians and Quebeckers? The answer is no.

So today, we have a government that wants to develop an artificial intelligence strategy, but that won't tell us who participated in the consultation to influence its decisions and actions, nor what the people who participated actually said. My mother always told me that if something is good, there is no need to hide it, and there is no problem. Yet the government says that Canadians do not need to know that.

Personally, I am concerned, and that is why I am taking the time to clearly explain to those listening closely that there are potential conflicts between the government and international stakeholders, which means there are potential attempts at foreign interference through such strategies, particularly the pan-Canadian artificial intelligence strategy. This is not something I just woke up one morning and thought of. It has been reported repeatedly in the media, which tells us there is indeed a risk of people infiltrating our systems. Here, we have an opaque process and a government that refuses to make public the content of the consultations or the list of participants.

I am increasingly concerned about this kind of process. It took a member of a parliamentary committee—myself, in this case—to ask the government, through a motion, to tell us who participated in this consultation and what the participants said.

Today, the government is telling us to trust it, but it won't tell us what was said, and it won't let us know who said those things. I still find it quite unbelievable that a government that claims to be accountable would not share this crucial information—namely, who participated in the consultation, what the participants said and, subsequently, what the government took away from it.

In my view, it is about transparency, especially in a democratic system. Democracy does not really mean much anymore to the current Liberal government. It was this government that, for the first time in history, created a majority in the middle of a parliament. I would like to take a moment to explain to our listeners that, following the general election on April 28, 2025, it was a minority Parliament, but the government managed to convince members of other parties to join its team. That allowed the government to secure a majority Parliament.

● (1720)

In reality, this is undemocratic, because it does not respect the will of the people. The government says it respects traditions. From what I understand, in Canada, there is a tradition: elections. The election determines whether the government forms a minority or a majority Parliament, and which party will be in power. Here, the government is ignoring that. It tells us that the rules and practices of the House allow for a majority Parliament. However, this is still not insignificant. It has never happened in over 150 years. Never has a government secured a majority through defections. It is truly incredible. So, I think people need to remember this, because it is no ordinary anti-democratic act.

I will give you several examples. Today, there is another anti-democratic move here in the committee: We are being denied access to data. I find the ploy quite clever: The government is telling us it will cost us too much. In Canada, it costs too much to know the truth.

I like numbers, so I did some calculations for my colleagues. In the latest budget from the Prime Minister, who is a financial expert, the deficit stands at $78 billion. That's not insignificant either. It's the largest deficit in history. We are breaking records, but they are not good ones. So, we have a record deficit of $78 billion. Our colleague gives us his main, rock-solid argument to convince people: It costs too much to know the truth. So, I calculated the amount our colleague is talking about. Projected spending in the Canadian federal budget for fiscal year 2025–26 totals $586 billion. Out of that, we would take $1 million; that's the hypothetical amount our colleague heard behind the scenes, while having coffee and chatting with people from cabinet and the translation bureau. So, how much is that, $1 million out of $586 billion? It's 0.00017%. I'll repeat that for those listening: it's 0.00017%. That would be too much, according to our colleague and his government team, who tell us that people will not pay $1 million. That $1 million sounds like a lot, but we have to consider the proportion it represents, as I just did.

This amount will allow us to find out the truth. Are there people trying to advance their own interests? We don't know. We cannot even do our jobs because we do not have access to the data. Imagine that: Parliamentarians, members of Parliament elected by the people, cannot know who participated in a public consultation requested by the government. You cannot call it a public consultation if the data is not public. I would rather call it a public relations stunt to manipulate public opinion and the public. Once again, I cannot believe our colleague is telling us it will cost us too much.

Here in Quebec, our motto is *Je me souviens*—I remember. So, I remember that, recently, our colleague pulled the same stunt here, at the Standing Committee on Science and Research, during another of my attempts to gain access to data—specifically, data from funding agencies regarding accepted and rejected funding applications. Always with good intentions, I wanted to analyze potential imbalances in research funding in Canada. Our colleague told us that accessing the data would be too expensive. He told us that it would be too expensive to find out whether we could analyze data related to public funds allocated for scientific projects. It's the same ploy and the same mechanism.

● (1725)

For the government, the truth comes at too high a cost. I wish people would understand what is happening right now; in my opinion, it's something catastrophic, unhealthy, toxic and completely unacceptable in today's democratic system. As I said, I'm disappointed, but I'm not surprised. If a government is capable of rigging a majority, what would it be willing to do next?

It reminds me of the importance of science, which is supposedly on the lips of my colleagues in government. I'll give another example: When the chief science adviser testified here last November, she expressed deep concern about projects of national importance to the government, that is to say projects of national interest. We can draw a parallel. The government tells us that it's important to address what could be the worst tariff crisis in Canadian history and that it must take the lead in prioritizing certain projects. Who decides which projects these are? How will that be decided? For the government, these are not important questions. What matters to them is that there are projects. If the projects are good, they should be able to demonstrate that.

Let me repeat what the chief science adviser said: She was not consulted on these projects. It's rather ironic that someone is hired to develop expertise, but when it comes time to make decisions, they don't consult her. Personally, I think it's a shame for her, but I think it's especially a shame for taxpayers. What's the point of paying people if, in the end, we don't listen to them? I obviously believe in science as such, not just in public relations and press conferences connected to it.

I think this has shown us that the government is talking out of both sides of its mouth. It has shown us this on several occasions. I'm going to give many examples, since my approach is very fact-based.

Another thing the chief scientist told us back in November—

● (1730)

[*English*]

Taleeb Noormohamed: I have a point of order, Madam Chair.

Given that this is clearly now getting into a lively debate, perhaps we might release our witnesses.

The Chair: I can check with the witnesses.

It's 5.30 p.m. I know we started the meeting a bit late. We started at 3:43 p.m.

Are you okay with taking the time to stay here, or would you like to leave because of other commitments?

Lisa Campbell: Thank you so much.

We are always happy to stay and talk about space if that's helpful to the committee.

Thank you.

The Chair: Thank you.

MP Blanchette-Joncas has the floor.

Taleeb Noormohamed: Awesome. I love it. Let's talk about space.

The Chair: MP Blanchette-Joncas, go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, I have great respect for the people at the Canadian Space Agency and I find it unfortunate to have to speak out, but my colleague has introduced this motion regarding a request dating back to February. Today, May 25, he is making a request that has no connection to the current study. I find it unfortunate, but I will nevertheless speak about science and research, and the importance of government investment. To my knowledge—

[*English*]

The Chair: I am sorry for interrupting.

We have the motion on the floor. First, we have to dispose of that motion before we get into the discussion.

MP Blanchette-Joncas, you have the floor if you would like to continue speaking to the motion.

[*Translation*]

Maxime Blanchette-Joncas: All right. Of course, Madam Chair.

The government tells us it costs too much, and yet, in the latest budget, we see budget cuts of over $30 million for the Canadian Space Agency over the next few years. That means that fathers and mothers will lose their jobs; that means projects will be scrapped, too.

The Prime Minister, who is still a financial expert, recently told us that he and his government were proud that a Canadian astronaut had participated in a space mission. At the same time, however, they are cutting funding for the organization that made that astronaut's training possible. Do you see how inconsistent this is? They say the agency is important, but they're cutting its funding.

Personally, if I know that fruits and vegetables are good for my health, I eat them. I think it's as simple as that. It seems pretty simple, doesn't it? For example, when you want flowers to bloom in the garden, you water them. It's the same thing. Right now, the government isn't watering the Canadian Space Agency. What is it doing? It's making budget cuts. This doesn't just apply to the Canadian Space Agency, but to the entire government apparatus. However, when it comes time to tell us it has money for projects, it does.

Madam Chair, here's my response in conjunction with the motion: If it costs too much to access data to uncover the truth, I think it would be important, in the future, to develop solutions to ensure this doesn't happen again.

Here on the committee, we have two concrete examples.

First, there is the example of funding data from funding agencies, which was requested but denied due to a lack of funding. I know this because, once again, I was the one who moved this motion for access to the data. Look, accredited researchers couldn't access the data. We're not in North Korea; we're in Canada. Researchers can't access data on the funding granted to scientific projects by funding agencies. It's unbelievable that I have to tell you that. These researchers even came before the committee to tell us that, yes, they couldn't do their job as scientists because the government refused to give access to this data.

So I took up the cause and asked the government if it could provide the data. It refused, saying the data was too sensitive and privacy had to be protected. So I asked if, in this case, it could create a mechanism or a channel to provide access to the data. It said no, because after all, it didn't have the necessary software and systems. You see, it's always a never-ending cycle designed to wear us down and ensure we never manage to do our job, which is to hold the government to account.

Just imagine that the people who manage scientific research projects in Canada conduct self-evaluations of their projects, right within their own organizations. There's no external analysis. To put it simply, just so people understand, in Canada, it's as if a hockey team were appointing the referees. That's what's happening in research funding. The government, through its funding agencies, conducts its own internal analyses. It tells us to trust it, that it's public money and that we don't need access to the data. Personally, I'm concerned, because there's a lot of anxiety in the scientific community when it can't access this data.

Today, we have another example: artificial intelligence, which is supposedly a key priority for the government. It tells us this is a priority and that it will invest record amounts in it. However, it won't tell us who participated in its public consultation or how it was conducted.

First, were these people influenced to participate? Did people have direct ties to the government representatives to try to include certain things in this public consultation?

● (1735)

Also, I clearly remember what the minister in charge said when he came to testify before the committee. He told us that he was very proud of the public consultation because, in his opinion, it was the largest public consultation in Canadian history. When he mentioned that in committee, I was surprised. If he's telling us that this is his largest consultation, how is it that Canada wasn't better prepared?

First, we need to know who is participating.

Second, we need to know whether we're going to inform the public.

I understand that 11,000 participants is a lot of people. I understand that it can take time to collect the data and compile it all. I wonder: If the government is unable to provide us with this data so that we, as parliamentarians, can verify what was said, I wonder how we can do our jobs.

I would still like to mention the people who were very concerned about artificial intelligence and the strategy. As a member of Parliament, I can tell you that people wrote to us during our study on AI to express their concerns about how the federal government's new strategy would be unveiled and presented.

I recall that it happened rather quickly. Six months have passed since the consultations, which, it should be noted, were conducted on an accelerated timeline. That's another thing Minister Solomon had promised. It was, after all, a promise made by the government when the minister appeared before the committee. The minister also stated last fall that Canada could not afford to wait and that it had to act quickly. Let me tell you this: The minister himself apologized for this delay. It's pretty incredible, really. The government tells us it's in such a hurry to establish the strategy that it doesn't have time to inform the public and parliamentarians so that they know what will be included in this strategy.

The minister had also explained that, in his view, the impact of AI had supposedly evolved and that it would be necessary to continue meeting with groups and conducting consultations. He had also mentioned recent meetings with union leaders, environmentalists and young people. What also surprised me was that, even as the consultations were taking place, the minister was telling us that the strategy was about to become obsolete. He said that the sector had changed considerably, that the impact of artificial intelligence had also evolved.

The minister mentioned that the strategy was supposed to address the changing needs of the workforce. Personally, I'd like to know what was included in this strategy and who is seeking to influence the government's decisions right now.

A public consultation was therefore conducted, gathering over 11,000 comments, to which we have no access. This is the subject of the motion we are debating today.

The government also stated that it had analyzed those comments using artificial intelligence. The minister also mentioned that Canada would avoid over-indexing on warnings and regulation to ensure that the economy benefits from AI. He noted that the situation had evolved somewhat since the government announced its rushed consultation. So, by his own admission, things moved quickly. However, what isn't moving quickly are the government's actions. Let me remind you that, in the last Parliament, the government didn't even manage to pass its own bill to regulate AI.

Let's recap. We have a government that conducts a rushed consultation and isn't transparent about its actions or the data it collects. It says it wants to implement a strategy, but its strategy is lagging behind. Now it's telling us that, yes, ultimately, it developed its strategy with consultants, and perhaps by the time it launches its strategy, things will have evolved so much that the strategy will already be outdated.

● (1740)

The other inconsistency we see here on the part of the government is that it has not established a legislative framework for certain forms of AI. I even recall that, during the study we conducted here, we asked questions of the minister and the deputy minister. We asked them if we could shut down software that threatened people's safety tomorrow morning. They weren't able to answer that. That is concerning. We're told that artificial intelligence is a powerful tool that can stimulate economic development, but we're unable to stop it if it becomes harmful. I find that worrisome. Meanwhile, we're being asked not to worry and told that a strategy will be unveiled.

That's the way I look at it. I think it would be important for us, as parliamentarians, to understand this, and it's important for the general public to understand too. I think people have a right to know what happened. People paid for individuals to coordinate a public consultation, but they aren't allowed to know what happened during that public consultation.

I still remember the discussions we had in February, even before I introduced this motion. My colleagues in the government tried to convince me that everything was available online. I went online to check. An Excel spreadsheet—

[*English*]

The Chair: I'm sorry for interrupting.

It's already 5:43. We will have to continue with this until the debate collapses and we can have a vote. If the witnesses would like to leave, you can.

Before you leave, I really want to thank you for appearing before the committee and providing your important input. I'm sorry for not allowing you to have the full time to answer the questions, but thanks for coming.

Lisa Campbell: Thank you very much, everyone.

The Chair: On behalf of all the members, thank you.

We'll go back to MP Blanchette-Joncas.

[*Translation*]

Maxime Blanchette-Joncas: Thank you very much, Madam Chair.

I was going to say that, yes, there's been a lot of criticism about this rushed public consultation. Even the government has admitted that it was conducted very quickly.

I'd like to take this opportunity to highlight the concerns of the Canadian Union of Public Employees, which expressed concern that “federal consultations to update Canada’s strategy on artificial intelligence were rushed” and that—listen to this—they favoured “corporate interests at the expense of other voices”. In a letter to the Minister of Artificial Intelligence and Digital Innovation, the union stated that it wished to warn the minister that “the updated strategy likely won’t address workers’ needs and protect the public interest”. According to the union, not only were there “short timelines”, as the government noted, but the consultation was also “corporate-heavy”. That's what's concerning.

Furthermore, the union pointed out the “lack of taskforce representation”. That's another issue. The government is so skilled at public relations that it said it was also going to create a panel of experts in parallel to—

● (1745)

[*English*]

The Chair: I'm sorry for interrupting.

I will ask members to take their seats and allow the witnesses to leave, because we have too much noise within the room. Thank you.

The floor is with MP Blanchette-Joncas.

Go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Now, I was talking about the fact that the organization raised the issue of poor representation within the expert group. Last October, the federal government held a speedy consultation and even set up a task force charged with updating the strategy. I can tell you that we never got any details or explanations about how the task force members were appointed. Once again, this shows that the government was operating in an opaque and secretive manner. It didn't even want to explain to lawmakers how it had done things.

The Canadian Union of Public Employees, or CUPE, noted that, “although the government appointed a CUPE representative to the AI Strategy Taskforce, they excluded many other groups and experts including unions, civil society organizations, and researchers on AI and work, AI governance, privacy, and human rights.”

That's why CUPE called for “the consultation to be extended and broadened to ensure a more representative and fair process.” Unfortunately, the government refused. That is pretty important.

In short, in its letter to Minister Solomon, CUPE stated that it wished to draw the minister's attention to its “concern regarding the consultation process for an updated Canadian AI Strategy.” CUPE welcomed “the inclusion of a CUPE staff member on the AI Strategy Taskforce” but noted that it remains “deeply concerned about several elements of the process that appear to compromise its integrity and inclusiveness.”

I'd like to offer my take on this. It's as if everything had already been arranged. The government made sure everyone was caught off guard, except for the people it wanted to see on the task force. Indeed, CUPE noted in its letter that “tight timelines for consultation significantly limits meaningful engagement” and that “many stakeholders, particularly those from under represented or marginalized communities, require more time to review materials, consult with their networks, and formulate thoughtful responses.” According to CUPE, rushing the process “excludes valuable perspectives and undermines the legitimacy of the consultation outcomes.”

Furthermore, CUPE stated in its letter that it was concerned about “the lack of representation on the taskforce.” According to CUPE, the group's composition appeared to “favour commercial or institutional interests, which do not reflect the broader public interest.” To clarify, this is about the general public interest, that is, the interest of the people who paid for this consultation. That makes the fact that taxpayers can't find out who participated in a public consultation conducted by the government hard to fathom. It's troubling.

In short, CUPE said that the makeup of the task force would favour certain people. It suggested that “an array of unions should be involved as workers in different sectors will be affected in disparate ways.” Thus, according to CUPE, “a much wider range of civil society voices should be present, bringing unique knowledge on privacy, data rights, civil liberties, and human rights.” CUPE then stated that “the task force should also include researchers who focus on the impact of AI on work, AI governance, bias and discrimination in AI systems, and data protection and privacy.” This last point is, of course, another very important issue that I'm concerned about.

● (1750)

It added that “consultation processes that fail to include broader representation lack legitimacy and throw into question the authenticity of federal government endeavours on AI.” That's serious. CUPE, which represents public servants, questioned whether the government truly wanted a representative group that served the public interest.

This is important. Some people believe that the government exists to benefit certain individuals. That's what we're digging into today, and that's why we want access to this data. However, as members of Parliament, we're unable to get it because the government is denying us access to the data. Once again, it's hiding.

[*English*]

The Chair: I'm sorry for interrupting. We are beyond two hours of committee time. The clerk has checked in regard to the resources available. We have the resources available until 7 p.m. That means we have one hour and 10 minutes more.

What is the will of the committee members? Would you like to continue or...?

Actually, MP Blanchette-Joncas has the floor, so the committee cannot really decide what to do until someone brings in a motion.

MP Blanchette-Joncas, go ahead.

[*Translation*]

Maxime Blanchette-Joncas: Thank you very much, Madam Chair, for reminding my colleagues that it's important to respect the Standing Orders of the House of Commons. Sometimes they're not in the habit of doing so.

I felt it was important to read this letter because it shows that parliamentarians aren't the only ones who were concerned about the way the government conducted this public consultation and created separate committees in an attempt to positively influence public opinion. Here again, the government is very skilled at using public communications to manipulate public opinion in its favour. This strategy, which the government says is of critical importance, is yet another example of that.

There were also several questions about commercialization raised during the consultation. According to CUPE, the task force membership “appears to prioritize the interests of AI corporations over the public interest.” Indeed, in its letter to the minister, CUPE noted that, “while economic considerations are important, they should not overshadow social, labour, human rights and community-based concerns.” Therefore, it went on, “a balanced approach is essential to ensure that the updated Canadian AI strategy adequately addresses risks inherent in AI technology.”

In short, CUPE asked the government to extend the consultation period and to ensure a representative consultation process by “increasing representation on AI consultative bodies, including the taskforce and the Advisory Council on Artificial Intelligence”. CUPE also asked the government to “[develop] a more comprehensive set of consultation questions that address the varied risks of AI.”

I'll let you guess how the government responded to these requests: zip, zilch, zero. The government didn't extend the consultation period or reconsider the task force membership. It may well have appointed those members itself.

Furthermore, in its submission for the consultation, CUPE made recommendations concerning five key areas in which artificial intelligence clearly plays a significant role. This is no small matter. CUPE, which represents 800,000 members, made these recommendations public.

For CUPE, “before responding to questions in the federal AI strategy survey, it is worth noting what questions are missing from the survey.” Go figure: The government consulted the public, but there were also questions prepared in advance. That's another thing that orients the strategies, and it suggests that the government had preconceived ideas and wanted the findings to line up. It did everything in its power to make that happen.

Anyway, in its brief, CUPE provided answers to several additional questions that, in its view, should have been integrated into the consultation on the artificial intelligence strategy.

The first recommendation in the brief is: “The Federal Government should introduce comprehensive laws and regulations that provide worker protection, ensure data privacy, enact climate change protections, ensure the sustainability of our energy systems and regulate private corporations.”

The second recommendation—

● (1755)

[*English*]

The Chair: I'm sorry for interrupting, MP Blanchette-Joncas.

Please keep your remarks related to the motion.

There is a new update. We have resources available until 8 p.m.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, I'm talking about AI, so this is on topic.

Here's the second recommendation:

> The Federal Government should build a public AI stack which includes cloud infrastructure, data management and AI models and applications. This public physical and digital infrastructure would promote accountability and transparency, advance the public interest and develop Canada's digital sovereignty.

The other thing, which is in the third recommendation, is this:

> The Federal Government should operate under an accountability framework that centers consultations with and input from unions, academic researchers, civil society, among others, and ensure all decisions are based on unbiased research and data mined from sectoral tables and CUPE's proposed Innovation Hub and Canadian Observatory on AI.

There's a fourth recommendation:

> The Federal Government should invest in foundational digital literacy education for Canadians, in training and re-training public sector workers who are or will interact with AI and in social safety net supports such as Employment Insurance for workers who will be displaced because of AI.

Among the additional questions that CUPE would have liked the government to incorporate into its strategy is one about research needed to understand the impact of AI on work:

> In Canada, we do not yet have a complete picture of AI's impact on working conditions, job loss, and skills and training needs of workers. We do know that AI can affect different job classifications in disparate and distinct ways – even when they are in the same workplace. CUPE's own research and consultations with members have found that AI's disparate impacts are best captured through a combination of qualitative and quantitative methods.
>
> Internationally, we have varying assessments of how AI will affect jobs. Most economists say the impact is hard to predict because we don't know exactly how AI will develop and how quickly.
>
> Statistics Canada has found that 31% of workers are in jobs likely to dramatically change or disappear because of AI and 29% of workers are in jobs where they will likely do their jobs alongside AI systems. Some research has indicated that the impact of AI implementation will be gendered with twice as many women-dominated jobs at risk compared to men-dominated jobs.
>
> Research is also showing how increasing AI-amplified monitoring, surveillance and algorithmic management in the workforce is affecting the well-being of workers, the human rights of workers and power dynamics between workers and employers.

The brief includes a footnote here. It's important to mention the research consulted. This information is from a scientific article by Antonio Aloisi and Valerio De Stefano, accessed in 2025, entitled “AI at Work, Algorithmic Bosses, and the Ambivalence of Automation”, which was published in *Artificial Intelligence and Labour Law*. It's also from an article by Armin Granulo et al. entitled “The Social Cost of Algorithmic Management”, which was published in the illustrious *Harvard Business Review*. The brief also cites an article by Benta Mbare et al. entitled “Algorithmic Management, Wellbeing and Platform Work: Understanding the Psychosocial Risks and Experiences of Food Couriers in Finland,” as well as an article entitled “Algorithmic Discrimination: Examining Its Types and Regulatory Measures with Emphasis on US Legal Practices”, both published in *Frontiers in Artificial Intelligence*.

● (1800)

As you can see, I'm practising my English. Some Quebec Liberal MPs are in the habit of speaking English often, and although they really inspire me, I am acutely aware that Quebec's only official language is French. Nonetheless, that doesn't stop us from knowing how to speak another language. Indeed, we know that people in Quebec are the most bilingual even though Quebec has only one official language: French.

I would like to continue my presentation about CUPE's submission. I was talking about the tools that, for example—

[*English*]

The Chair: I'm hearing from members that many members have commitments, and they have to leave.

I can suspend the meeting at 6:30, and we can come back to it if this is not resolved before that. We can come back to it on Thursday when we're scheduled for a briefing session with the chief statistician of Statistics Canada.

If we continue with this, I can suspend and cancel that meeting and continue with this meeting.

Vincent Ho: We would rather not have to suspend. It took a lot of time to get the chief statistician on Thursday, and we'd like to speak to him.

We can continue this debate of this motion near the end of the Thursday meeting so we get some time with the chief statistician.

The Chair: Either we vote it down or we continue with it. As long as I have two more speakers on the list, we cannot dispose of it until we vote on it and until the speaker's list is exhausted.

We have MP Baldinelli and MP Noormohamed on the list after MP Blanchette-Joncas.

● (1805)

Tony Baldinelli: I will cede my turn.

The Chair: Okay. We have MP Noormohamed on the list after MP Blanchette-Joncas, but all the members will not be able to stay beyond that. I just wanted to let everyone know so that everyone is aware of the situation.

Go ahead, MP Blanchette-Joncas.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, thank you for being so considerate of committee members and ensuring that they're in attendance when they ask to speak. I have noticed that that isn't the case for all members of this committee.

The brief I'm sharing goes on to say:

> For example, AI hiring tools have been found to discriminate against women, Black and racialized people, older people and people with disabilities while AI surveillance and monitoring and automated decision-making tools in the workplace can intensify work, harm the health and safety of workers and erode the privacy rights of workers. These tools can discourage and penalize workers from taking breaks to which they are entitled, increase the speed of work and result in psychological harm and mental health problems for workers in cases of high demands and little control over the work process.
>
> Employment law used to […] for a reason.
>
> The balance of power shifts even further toward control and coercion when employers implement invasive AI algorithmic management and surveillance technology.

CUPE's brief also states:

> We need to develop the data and research—both quantitative and qualitative—to understand these shifts in individual workplaces, sectors and the Canadian economy as a whole in order to understand the impact of AI on work. This data would support active government planning to address and mitigate negative impacts of AI on workers. Statistics Canada should collect data about the impact of AI on work and workers. This data should be supported by ongoing qualitative research funded by the federal government assessing the privacy, human rights, skills and training and physical and psychological health and safety impacts of AI on workers.

CUPE addresses another question: "How can Canada support workers affected by AI?". Here's its answer:

> A key question that workers will be looking for in the AI Strategy is whether their jobs are at risk of being eliminated and how they will be supported to learn new skills. They will be looking for the federal government to create and deepen social policy that ensures pathways and ladders to train and re-train in new jobs and to provide income support during transition periods. Workers should not pay the costs of technological changes. Governments must ensure our social safety net is strengthened to support this transformation through improved employment insurance benefits, targeted training and re-training programs and active labour market strategies.
>
> Workers also need governments to put in place laws and regulations to ensure AI does not result in the loss or deterioration of good jobs. The federal government should work with provincial governments to mandate transparency when AI systems are introduced in the workplace.

Transparency isn't something this government does.

● (1810)

> Right now, workers are often not being informed about data collection or AI implementation in their workplace. Employers should be required to provide information to workers, unions and the public about the purpose of the system or data collection and the parameters, rules and instructions underlying the system. Federal and provincial laws should put in place restrictions and safeguards when algorithmic management systems are used, as these systems can lack transparency, explainability and fairness, be biased or discriminatory, and put the health and safety of workers at risk. Algorithmic management systems process employee data through opaque algorithms to hire, assign tasks, set schedules, assess performance, and recommend discipline or dismissal. Workers also need strong data protection and privacy laws that protect their dignity and autonomy in the workplace in an era of invasive bossware technology that can track their movement, emotions, tone of voice and output.

I will continue by citing another question raised in the same brief: "*Who needs to be consulted in the AI Strategy who isn't already?*" We cannot even know this, as members of Parliament. The government won't tell us who participated in the consultation or what was said. So we're left to rely on assumptions.

I'll read you the union's response:

> The best way to build trust in AI is to ensure the breadth of voices that are affected by AI are involved in consultations on how Canada addresses AI. Though CUPE is pleased to have a staff member involved in the federal AI strategy task force, the overall representation skews toward industry and pro-industry researchers.

There is already a problem: a lack of representation within a group that the government itself created.

The union stated the following:

> The federal government should ensure an array of unions are involved in consultations as workers in different sectors will be affected in disparate ways. For example, workers in the creative sectors are already being affected in distinct ways and require targeted measures to protect their rights and their jobs.
>
> A much wider array of civil society voices needs to be present, bringing unique knowledge on privacy, data rights, civil liberties, and human rights. Furthermore, researchers should be integrated who focus on the impact of AI on work, AI governance, bias and discrimination in AI systems, data protection and privacy. Consultation processes that lack broader representation will lack legitimacy and throw into question the authenticity federal government endeavours on AI.

Another angle is addressed in the questions: The issue of research and talent. The question is as follows:

> How does Canada retain and grow its AI research edge? What are the promising areas that Canada should lean into, where it can lead the world?
>
> *(i.e., promising domains for breakthroughs and first-mover advantage; strategic decisions on where to compete, collaborate or defer; balance between fundamental and applied research)*
>
> Canada should focus on building AI for the common good that puts the needs of workers, communities, and the environment front and centre. The federal government should create a public sector AI innovation hub with researchers, universities, trade unions and government to conduct collaborative research for AI that meets public needs. This research and development should target problems that are identified at the workplace and community level.
>
> Canada should invest in research that augments workers, rather than replaces them, centring workers' voices in technology research, development and implementation. Involving workers in defining the problem or opportunity, designing the technical and work process features, educating and training the workforce tends to have better outcomes than more top-down approaches. It increases the likelihood that generative AI tools will be used effectively and improve the quality of workers' jobs. Furthermore, a survey in the United States found that workers who report having an influence on technology in the workplace are twice as likely to report job satisfaction.

● (1815)

You must admit this is interesting. We see that, on the one hand, technological tools can be useful to people, but, on the other hand, they can harm them. I'll continue along these lines:

> Canada has an opportunity to lead research on addressing bias and discrimination in AI systems and building targeted AI systems that do not put strain on our energy system and do not drive up greenhouse gas emissions. Canada should invest in AI built on a privacy by design methodology which creates a proactive approach where privacy is embedded as a default setting.
>
> The Canadian government should also fund an ecosystem of research into the harms of AI on workers and the public. This research should cover job loss, working conditions, algorithmic management, bias and discrimination, surveillance and monitoring in the workplace and society, privacy and data rights and environmental harms. The research can feed back into a loop to ensure AI development and implementation helps humans, rather than harms them.
>
> This moment in time calls for true leadership that puts workers, communities and the environment at the centre of AI research rather than the profit interests of technology corporations.

● (1820)

Another important question is raised:

> How can Canada strengthen coordination across academia, industry, government and defence to accelerate impactful AI research?
>
> (*i.e., mechanisms for cross-sector collaboration; integration of public and private research efforts; industry-sponsored research while preserving academic independence)*
>
> The Canadian government should establish roundtables where unions, researchers, post-secondary institutions and the federal, provincial and municipal governments meet to discuss AI research. CUPE has called for the federal government to create a Canadian Observatory on AI and Work to develop data and disseminate research on the impact of AI on work. This observatory should include academics, trade unions, civil society and government.
>
> As the union-led advisory table report made clear, outside Quebec there are few ongoing consultative bodies where workers, through unions, can systematically gather and share information, coordinate, and negotiate planning. Re-establishing sectoral partnership tables would help identify and address the needs of workers in different sectors and occupations in the context of technological change driven by AI. These tables can develop plans regarding recruitment, retention and succession planning and the employment, training, health and safety and human rights consequences of AI, automation and technological change in the workplace. Multidisciplinary tables should also be established to coordinate research on bias and discrimination and privacy and data rights.
>
> The Canadian government should be careful to limit the impact of profit and corporate interests on the research agenda for AI.

I will repeat that: “The Canadian government should be careful to limit the impact of profit and corporate interests on the research agenda for AI.” It is this influence that we are trying to learn more about today by requesting access to the public consultation documents. There may be people who have said things that the government will take into account, but which are not in the public interest. First, we want to know the identity of these people, to determine if they pose a threat to Canada. Second, we want to know if they are acting against the public interest.

In this same paragraph, it states: “Corporations can fund their own research without relying on public funding and resources.” That is the other very important point. As a parliamentarian, I am curious and would like to analyze the content of the comments from the organizations, individuals and companies that participated in the consultation, to determine who is attempting to influence the government to secure public funds for their own interests. However, today, the government is denying us that access. It tells us that the truth comes at too high a cost.

● (1825)

The other question addressed in the brief is: “What conditions are needed to ensure Canadian AI research remains globally competitive and ethically grounded?” Right from the start, we read the following:

> *(i.e., infrastructure, talent, and governance; ethical standards and risk mitigation; alignment of applied research with business and societal needs)*
>
> There are a number of enablers to ensure Canada can be at the forefront of research on AI systems for the public good. The federal government will need to commit stable funding and create collaborative spaces and processes for research dissemination. CUPE has proposed that a public sector AI innovation hub be formed with representation from researchers, universities, trade unions and—

[*English*]

The Chair: I'm sorry for interrupting, MP Blanchette-Joncas. We are at 6:25 right now. As previously said, we will suspend the meeting at 6:30, so please keep that in mind. We will resume on Thursday.

Go ahead, MP DeRidder.

Kelly DeRidder: Can we just go to a vote and not suspend? Is there agreement to do so?

The Chair: For the information of all members, we cannot go to the vote until we exhaust the speaking list. Only then can we go to the vote.

Kelly DeRidder: Can we see whether there's unanimous consent to exhaust the speaking list and go to a vote, so we don't suspend?

The Chair: No. MP Blanchette-Joncas has the floor. We cannot do that.

MP Blanchette-Joncas.

[*Translation*]

Maxime Blanchette-Joncas: Madam Chair, thank you for reminding our colleagues, who are listening attentively, of this committee's rules and procedures.

So, I was mentioning this:

> There are a number of enablers to ensure Canada can be at the forefront of research on AI systems for the public good. The federal government will need to commit stable funding and create collaborative spaces and processes for research dissemination. CUPE has proposed that a public sector AI innovation hub be formed with representation from researchers, universities, trade unions and government. A Canadian Observatory on AI and Work would coordinate and disseminate key research on the impact of AI on work. Sectoral tables would also be established to assess how AI is affecting at-risk workers and industries and put in place active labour market strategies to support workers.

I would like to address another issue raised in the brief:

What efforts are needed to attract, develop, and retain top AI talent across research, industry, and the public sector?

(i.e., differentiated enablers for research vs. applied talent; domestic vs. global talent strategies; targeted attraction programs and priority domains; international collaboration opportunities)

There is no doubt that a lot of AI talent would be drawn toward a public sector AI innovation hub that was leading in building AI for the public good. The federal government also has many IT specialists who could be supported to up-skill and develop AI development skills. These workers should be supported with targeted training and up-skilling education. By investing in its own workforce, the federal government would be building its internal capacity to develop worker-centred AI applications that can augment workers and result in better public services.

[*English*]

The Chair: There's too much noise. Please keep whispering on the side. We have MP Blanchette-Joncas speaking.

[*Translation*]

Maxime Blanchette-Joncas: Thank you very much, Madam Chair. You are calling out a lack of respect. First, I think this shows that my colleagues are not interested. Second, I think it's good that you're fulfilling your role. Thank you very much.

I was mentioning the importance of innovation hubs to stimulate artificial intelligence for the public good. I'll continue:

By investing in its own workforce, the federal government would be building its internal capacity to develop worker-centred AI applications that can augment workers and result in better public services. Researchers have identified that hollowed out public sector technology capacity—

● (1830)

[*English*]

The Chair: I'm sorry for interrupting, MP Blanchette-Joncas.

Can I have the attention of all members?

It is 6:30. As I mentioned earlier, members have to leave. They have other commitments. I will suspend the meeting. We can get back to this same meeting on Thursday, May 28. We will have to cancel the briefing session with the chief statistician at Statistics Canada.

The meeting is suspended.

[*The meeting was suspended at 6:41 p.m., Monday, May 25*]

[*The meeting resumed at 11 a.m., Thursday, May 28*]

● (8300)

The Chair: I call the meeting to order.

Good morning, everybody. Welcome back to meeting number 37 of the Standing Committee on Science and Research, which was suspended on Monday, May 25.

We are resuming debate on the motion moved by MP Noormohamed. MP Blanchette-Joncas had the floor. He is not here. The next on the list was MP Noormohamed. He is not here. After that, it was MP McKelvie.

MP McKelvie, do you want to say something? You had your hand raised that day on Monday.

Jennifer McKelvie: No.

Tony Baldinelli: Madam Chair, I just have a point of clarification.

Our Bloc member is not here with us. Procedurally, would the Bloc representative who is subbing in for Maxime take his place?

The Chair: No, that doesn't happen. It is for the individual; it is not for the party.

Tony Baldinelli: Was it for a Bloc representative?

The Chair: There are no clear rules that it has to go to.... If that person is not here, it does not go to the party. As of now, there is no one on the speaking list. If those people are not here....

● (8305)

Tony Baldinelli: That was the point of clarification that I was seeking.

The Chair: MP DeBellefeuille is raising her hand.

Please go ahead.

[*Translation*]

Claude DeBellefeuille (Beauharnois—Salaberry—Soulanges—Huntingdon, BQ): Thank you, Madam Chair.

I am pleased to participate in this meeting with the members of the committee. I will give the English-speaking members time to put on their headsets, because I speak only in French.

I am pleased to be here with you to discuss the important motion proposed by our Liberal colleague, who is currently absent. I believe this motion was intended to overturn a motion by the Bloc Québécois that was, at its core, aimed at ensuring transparency and, above all, addressing a need expressed by numerous organizations that had written to Minister Joly last October.

I would like to clarify something. It is not only the Bloc Québécois that is asking how the consultation took place and who was consulted. This is also being asked by several university researchers and many people representing universities, public agencies or non-profit organizations for whom artificial intelligence is a subject of interest or an integral part of their mission.

I have before me five pages of names of organizations, researchers and scientists who want to understand where the government held consultations and whom it consulted. Among them, I will name a few.

These include, among others, Amnesty International Canada Francophone as well as the Alliance of Professional and Technical Staff in Health and Social Services of Quebec. I am familiar with this union because I used to be a social worker. It was the union that represented me at the Ministry of Health and Social Services. There is also the Movement for a Just Peace, the Quebec Network for Autonomous Community Action, McGill University and Concordia University.

There are therefore several researchers who want to understand how the government, which will soon be tabling its artificial intelligence strategy, conducted its consultations and whom it consulted. That was the purpose of the motion by my Bloc Québécois colleague, who is absent today.

I understand that there have been debates on the issue. I also know that my Liberal colleagues have proposed a motion that would overturn the motion put forward by my colleague from the Bloc Québécois. We have given this some thought and have a compromise to propose to our colleagues across the way and to those to my right.

I therefore propose an amendment that reduces the amount of information we would like to have, but which gives the government a chance to demonstrate its commitment to transparency and to inform not only the members of the committee, but also members of civil society, about how it conducted the consultation.

I see that the text of the amendment, drafted in both official languages, is currently being distributed. If you'll allow me, I'll read it.

The amendment seeks to replace the text following the mention of the amount of $1,327,208.59 and the comma that follows, in Mr. Taleeb Noormohamed's motion, with the following:

> the committee limits the order for the production of documents adopted on February 12, 2026, to the transmission, within seven (7) days following the adoption of this motion, of the complete list of stakeholders who participated in the public consultation or targeted consultations related to the AI Strategy, including:
>
> (a) the respondent's first and last name;
>
> (b) the respondent's title or position, where applicable;
>
> (c) the name of the affiliated company, organization, or institution, where applicable;
>
> (d) the business number, where available;
>
> (e) the identification of any submissions received anonymously.

I believe that the amendment proposed to the motion under discussion today is reasonable and meets a basic need for transparency. I hope that my colleagues around the table—especially those on the other side—will agree, so that we can move forward and get off on the right foot during the committee's work next week.

● (8310)

I am prepared to debate the amendment, unless there is consensus on it.

[*English*]

The Chair: Thank you.

We have an amendment to the motion we were debating. Is everyone in agreement with the amendment?

(Amendment agreed to)

(Motion as amended agreed to)

The Chair: The budgets for some studies have been circulated to all the members. The committee must adopt draft study budgets. These draft study budgets were sent to the members on May 13.

The first one is a briefing session with the chief science adviser in the amount of $500. The second one is a briefing session with the president of the National Research Council in the amount of $500. We also have a briefing session with the president of the Canadian Space Agency in the amount of $500, and we have a briefing session with the chief statistician of Canada in the amount of $500.

There is a supplementary budget for the study on the implications of the Canada-China preliminary joint arrangement on Canada's electric vehicle sector. It's in the amount of $1,000, and the last one is the supplementary budget for the study on antimicrobial resistance in the amount of $500.

Is everyone in favour of these budgets?

Some hon. members: Agreed.

The Chair: Here are some updates. The report on antimicrobial resistance has been presented to the House as of this morning during the Routine Proceedings. We will resume the study on Canada's dual-use and defence research needs on Monday, June 1, with the fourth meeting on Thursday, June 11.

For Monday, June 1, we will have seven witnesses split into two panels of three and four witnesses each. The committee was granted an additional 30 minutes of meeting time. We would need to know how the committee wants to use this additional time on this coming Monday. Since there was an increase, we will have three witnesses in the first panel, and in the second panel, we will have four witnesses. Is everyone okay with extending the meeting for 30 minutes so that we can have time for questions? The first three witnesses are government department officials, and the next four are the other witnesses.

MP Baldinelli, go ahead.

Tony Baldinelli: Perhaps we could have just 15 minutes and 15 minutes added to each one-hour block.

The Chair: Is everyone okay with that suggestion?

Some hon. members: Agreed.

The Chair: We will have one hour plus 15 minutes for each panel. That is for Monday.

On Thursday, June 4, we will have a briefing session with the president of the National Research Council for two hours. Thursday, June 8, has been confirmed by the chief science adviser for a briefing session of two hours.

Is there any other business for today?

MP Baldinelli, go ahead.

Tony Baldinelli: In a scheduling sense, will we also have time before we break to discuss some of the other reports that need to be completed? For example, would we have an opportunity to examine the criteria for federal funding as we go to report stage?

The Chair: Yes. During the week of June 15, we will have that opportunity. That's what we are trying to schedule for the meeting on Monday, June 15.

● (8315)

Tony Baldinelli: That's fantastic.

Thank you.

The Chair: Is there any other business?

Is it the will of the committee to adjourn the meeting?

The meeting is adjourned.