

HOUSE OF COMMONS CHAMBRE DES COMMUNES CANADA

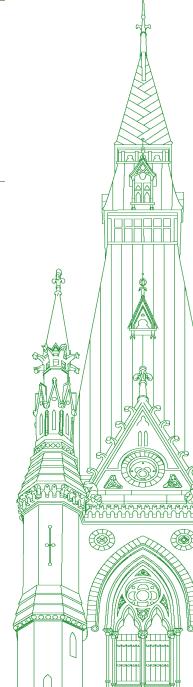
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# Standing Committee on Science and Research

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Chair: Ms. Valerie Bradford

## **Standing Committee on Science and Research**

Thursday, November 7, 2024

#### • (1610)

## [English]

The Chair (Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.)): I call this meeting to order.

I see a number of new faces around the table today and on the screen. That's great.

Welcome to meeting number 108 of the House of Commons Standing Committee on Science and Research. Today's meeting is taking place in a hybrid format. All witnesses have completed the required connection tests in advance of the meeting.

I'd like to remind all members of the following points.

Please wait until I recognize you by name before speaking. All comments should be addressed through the chair.

Members, please raise your hand if you wish to speak, whether participating in person or via Zoom. The clerk and I will manage the speaking order as best we can.

For those participating by video conference, click on the microphone icon to activate your mic, and please mute yourself when you are not speaking. For interpretation for those on Zoom, you have the choice at the bottom of your screen of floor, English or French.

Thank you all for your co-operation.

Pursuant to Standing Order 108(3)(i) and the motion adopted by the committee on Tuesday, September 17, the committee is resuming its study of the mission, mandate, role, structure and financing of the new capstone research funding organization announced in budget 2024.

It's now my pleasure to welcome, from Northwestern Polytechnic, Dr. Vanessa Sheane, president and chief executive officer; from Polytechnics Canada, Sarah Watts-Rynard, chief executive officer; and from the Université du Québec, Christian Agbobli, vice-president of research, creation and diffusion, by video conference.

Up to five minutes will be given for opening remarks, after which we will proceed with rounds of questions.

Dr. Sheane, I invite you to make an opening statement of up to five minutes.

Dr. Vanessa Sheane (President and Chief Executive Officer, Northwestern Polytechnic): Thank you, Madam Chair. Good afternoon. It's a privilege to be before you today as we gather to discuss the capstone organization.

As we navigate an era marked by rapid advancements and unprecedented challenges, the role of applied research in polytechnic institutions has never been more vital. As the largest post-secondary in northern Alberta, Northwestern Polytechnic recognizes the importance and value of applied research. Our institution works directly with small and medium-sized enterprises to address realworld challenges through applied research. When industries and communities collaborate with polytechnics, they create impactful and tangible results. The partnerships I'm speaking to today leverage both academic and industry expertise and resources, allowing for the development of practical solutions that can be swiftly implemented in the community, the marketplace and beyond.

Applied research plays a vital role in addressing the unique challenges faced by rural communities. By focusing on practical and local solutions for our industries, it helps improve quality of life, foster economic development and enhance access to essential services.

In northern Alberta, our main industry partners are from the energy, agriculture, forestry and health care sectors. In agriculture innovations, applied research helps to develop sustainable farming practices, improve crop yields and integrate technology to support local farmers. Applied research fosters economic development by exploring strategies for diversifying local economies, supporting small businesses and creating job opportunities tailored to the community's strengths.

Currently, without the capstone, the national research ecosystem is organized around academic disciplines of social sciences and humanities, natural sciences and engineering, and health sciences. The tri-agencies' roles and functions are to promote and assist post-secondary research in these areas.

The committee has already heard that only 2.9% of current research funding is awarded to colleges and polytechnics. Also, the majority of investments in applied research is in institutions situated in major urban centres. This oversight is problematic because it discounts the value and strength of the collaborations that are occurring beyond the borders of major cities and in the heart of some of our most lucrative industries. It also means that a vital perspective has been left out of the national research ecosystem.

To that end, the missing components are representation, transdisciplinarity and equality. This is where the capstone organization has a fit. **SRSR-108** 

The capstone mandate needs to support mission-driven research that helps to address the urgent societal challenges where the intellectual property belongs to Canadians, not to the individual researcher or the specific post-secondary institution. This is publicly funded research for the benefit of all Canadians.

The capstone's role should be twofold. First, it should be focused on transdisciplinary research of a complex challenge that brings together knowledge from academia, experiences from those working within the challenges and the prospective benefits to Canadians. Second, the capstone's role should be focused on the integration of the Canadian innovation ecosystem where all post-secondary institutions collaborate and contribute to the research enterprise.

Not only does the capstone's structure need to be representative of all post-secondary institutions, including polytechnics, colleges and CEGEPs, it also must intentionally include rural and northern researchers, industries and communities.

The capstone should be funded through a new funding envelope. A dedicated and stable investment will allow applied research to flourish.

In closing, I want to share information with the committee about technology access centres, or TACs, as an example of how the capstone's approach can support mission-driven research on a larger scale nationally. A TAC is an advanced applied research and innovation facility. It enables companies to access state-of-the-art technology, equipment and a multidisciplinary team of experts who will help transform innovative ideas into market-ready products through prototype development, process scaling and addressing specific business challenges.

Northwestern Polytechnic's TAC, the National Bee Diagnostic Centre, is a leader in providing comprehensive diagnostic services and cutting-edge testing for the beekeeping industry with aligned processes and practices with accredited laboratories in the EU and the U.S. It works to advance testing for fraudulent honey to protect the reputation of Canadian honey worldwide.

The other TACs across the country support and benefit SMEs and communities in similar ways through innovation, technology, commercialization and employability. I encourage the capstone to leverage its mandate and role in a way that will not only build on the success of these TACs, but also amplify the strengths of our collective learnings as a collaborative research community.

Thank you very much. I await your questions.

• (1615)

The Chair: Thank you very much, Dr. Sheane.

We'll now turn to Ms. Watts-Rynard.

The floor is yours for five minutes for an opening statement.

Ms. Sarah Watts-Rynard (Chief Executive Officer, Polytechnics Canada): Thank you, Madam Chair.

I'm delighted to return to the committee to participate in your study on the new capstone research organization.

It will come as no surprise that Canada struggles with innovation and productivity. Though we make considerable investments in research, the country often fails to translate those findings into economic and social impact. The nature of R and D spending does little to contribute solutions to the pragmatic challenges that we face as a country.

I believe that the capstone research funding organization has real potential to address this shortcoming. There is a opportunity to better map and exploit Canada's rich research ecosystem, better addressing topics of national interest from housing to elder care to climate change. For example, discovery research related to artificial intelligence requires implementation pathways for mainstream businesses and organizations in every corner of the country. I'm seeing this happen with little fanfare and modest investments at Canada's polytechnics in areas from mining operations to wildfire suppression.

This is why I was disappointed by the "What We Heard" report issued by the tri-council following a very brief consultation with the research community. In my view, the report focuses more on retaining the status quo than it does on establishing a framework for something new and impactful.

I know that there are many researchers who wait their entire careers to secure funding to explore their passions for science, engineering, health discoveries and social sciences, and that is commendable. Yet, if the new research organization has the ambition to be something different or something more than is currently funded by the tri-agencies, frankly, it will be a waste of time and money if it does not achieve that.

For this reason, I again tell the story of commercialization-focused research of the type under way at Canada's polytechnics. Over the years in our meetings with government stakeholders, we've often been asked to quantify the return on investment of applied research, including jobs created, export markets developed and new products launched. As you might expect, these are questions that are rarely asked of university researchers.

In response, Polytechnics Canada recently published a report on the economic impact of applied research. This was a year-long study that was funded entirely by my organization, which receives no government support. It shows that every dollar invested in polytechnic applied research generates a return on investment between \$8 and \$18.

The analysis found that polytechnics de-risk R and D for business, making innovation accessible. Adopting new technology or implementing new systems can be like betting the store for small and medium-sized business owners, and polytechnic applied research puts innovation within reach.

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Data from the past three years shows that what polytechnics have been able to do is attract matching dollars for every dollar invested by the federal government. Projects not only respond to the challenges defined by an industry partner, but the partner retains intellectual property from the collaboration, enabling it to commercialize products without being hostage to shared IP.

The report doesn't stop there. It includes more than 30 case studies of pragmatic, impactful research partnerships that resulted in business growth and created jobs. The projects illustrate the interdisciplinary nature of challenge-driven research, drawing expertise from various parts of the institution and beyond. In addition to partner insights, we hear from some of the 28,000 polytechnic students who participate in applied research collaborations each year.

I believe that is a really useful blueprint for the capstone research funding organization, challenge-driven collaborations operating at the speed of business with partners that are looking to solve real challenges and commercialize the results, a focus on impact and results in areas of importance to Canadians, and smart people who are making good choices for Canada's future prosperity.

• (1620)

Thank you very much.

The Chair: Thank you, Ms. Watts-Rynard.

Now we'll turn to Christian Agbobli.

You have the floor for your opening statement of five minutes.

[Translation]

Mr. Christian Agbobli (Vice-President, Research, Creation and Diffusion, Université du Québec): Thank you, Madam Chair.

Ladies and gentlemen, thank you for inviting me to take part in this consultation on behalf of the Université du Québec.

My name is Christian Agbobli, and I am the vice-president of research, creation and diffusion at the Université du Québec à Montréal, one of 10 institutions in the Université du Québec network. I am pleased to share our network's comments with you.

Today, I'm going to talk about four recommendations relating to the governance, funding and mission of the new capstone organization announced in the latest budget. We see these recommendations as crucial to making the changes a success.

For this capstone organization to work, it must improve the Canadian research support system in four ways.

First, it must simplify and harmonize the system.

Second, it must make the system more representative of the research ecosystem.

Third, it must provide strategic direction.

Fourth, it must support and promote support for francophone research.

First, the new capstone organization must help streamline the Canadian research funding system. It must recognize sector-specific considerations, harmonize funding programs and simplify administrative procedures. It should increase the coherence and agility of Canada's research funding system by helping to adopt consistent, integrated and user-friendly tools for research training management.

Second, governance bodies, consultation mechanisms and evaluation committees overseen by the capstone organization should reflect the diversity of Canadian academic institutions in order to support decision-making informed by diverse research contexts. To this end, the new capstone organization's mandate must explicitly support the development of research in all of Canada's university cities and regions.

The creation of this new organization is a unique opportunity to restore the equitable distribution of research funds. This will require regular and timely engagement with working groups that are representative of the research community across the country.

In governance, means matter. We wish to emphasize the importance of providing the new capstone organization with adequate resources to accomplish its mission. The government must not rob Peter to pay Paul. The operating budgets of the current granting agencies' programs absolutely must be maintained in their entirety for the investment announced in budget 2024 to materialize.

Third, the new capstone organization should make it possible to better plan research development. As a cornerstone of Canada's research funding system, the capstone organization should make it a priority to lead the development of national research and innovation strategies. The strategy must be developed without political influence, and it must take into account Canada's geography, the centre of excellence and the cardinal values of the Canadian research support system.

We consider five of these values to be crucial: accessible funding; an independent evaluation process; the importance of free and basic research; collaboration among researchers; and diverse research purposes, methods, approaches and contexts.

In addition, implementing and monitoring this strategy should involve implementing effective tools to facilitate the collection of evidence on Canada's research and innovation performance and that of institutions. Lastly, the creation of a new research support organization in Canada must help support research in French. This is a widespread concern in Quebec and elsewhere in the Canadian francophonie. The Université du Québec welcomes the recent creation of the external advisory group on the creation and dissemination of scientific information in French by the government. This initiative is a ray of hope for the vitality of science in French.

• (1625)

That said, the capstone organization need not wait for the group's findings to play a role in raising the profile of French in the research ecosystem.

Of course, as we've often said, it's important to ensure that funding applications submitted in French are treated fairly within the federal research support system. In addition to this equity measure, the capstone organization must set an example with respect to the Official Languages Act by ensuring that all the services it provides to Canadians are of equal quality in Canada's two official languages.

Thank you for your attention.

• (1630)

[English]

The Chair: Thank you, Mr. Agbobli.

I'm now going to open the floor to questions from members. Please be sure to indicate to whom your questions are directed.

Our first questioner will be MP Tochor for six minutes.

Mr. Corey Tochor (Saskatoon—University, CPC): Thank you, Chair.

Thank you to our witnesses.

In the testimony, we heard our Quebec friend talk about the importance of being very strategic in how we spend dollars. For our friends from Alberta and the college associations, it is important to look at applied research and look at some of the research that can be done to answer the common questions, concerns or problems normal Canadians face. That's very encouraging as we go on to study the capstone and how to direct research dollars into, hopefully, the most mission-critical areas or questions Canadians have.

Here's what's been going on. I have a few studies I'll read into the record, and then if anyone has any questions or wants to comment on them, they can jump in. If not, I'd like to hear at the end of the questions some examples of what research is being done that is going to be useful.

At Carleton, we, as taxpayers, paid \$50,000 for "Playing for Pleasure: The Affective Experience of Sexual and Erotic Video Games". That's at Carleton. It cost \$50,000. We spent money on that.

Would anyone like to touch on that one?

Another one is from the University of Guelph, called "Re-visioning yoga and yoga bodies: Expanding modes of embodiment with non-normative bodies". That's at the University of Guelph. The Canadian taxpayer spent \$90,000 to study the revisioning of yoga and yoga bodies. This is an area of the country—this is ripped from the GuelphToday newspaper—where residents are "alarmed' at possible encampments in Preservation Park". That was from October 17 this year.

We have housing hell out there. People are setting up tents in Guelph. Meanwhile, the Government of Canada is spending taxpayers' dollars to the tune of \$90,000 on revisioning yoga and yoga bodies.

Would any of our witnesses like to take a stab at defending that? If not, I'll understand.

I have two more studies that I'll read into the record and then we'll get to some other questions.

From the University of Alberta, for \$17,500, we have "An analysis of representations of women in bioware games and fan reactions through time". This is the best source of dollars to be spent on research at the University of Alberta, for \$17,500: "An analysis of representations of women in bioware games and fan reactions through time".

How does this relate to what's going on in Canada?

Earlier this month, on CTV News, the title of the story was "Bullet found in wall of Edmonton school after Halloween shooting: police". We've seen crime rates across Canada skyrocketing. Crime is out of control, and we're spending \$17,500 on that research.

It doesn't stop there. Maybe our new friend from Quebec would like to comment on this one. At Concordia University in Quebec, for \$46,227, we have "Class and Video Games". This is the research they're seized with in Montreal. Meanwhile, the Gazette, the largest paper in Montreal, ran an article on October 27, entitled "Montreal unhoused encampments emblematic of issue across Canada". This is true. It's across Canada.

This is a whole bunch of studies, which taxpayers paid for, that have very little—if we go back to the testimony from all three of you wanting it to be strategic—to do with the applied research that goes into the most critical questions that are asked by Canadians. This is what we're funding.

I have to hear, hopefully from our witnesses today, that this isn't the case and that there is, hopefully, some really good research going on at your respective institutions and members' institutions, because I think taxpayers are getting sick of this.

I have two questions for you all on this.

• (1635)

If your students were receiving this level of funding, what sorts of projects would you expect them to carry out? If you had a \$50,000 prize dropped into your lap, what would be a typical example of the research that might be done at a polytechnic right now? Hopefully that would answer some of those questions that Canadians have.

Dr. Vanessa Sheane: I can speak to that piece.

SRSR-108

At Northwestern Polytechnic, there are two that I'll speak about.

The first one is a COIL project or collaborative online international learning. This is for the health care sector and health care students. Particularly we're looking at it from a rural health care access perspective. It is collaborative, online and international, with global simulation development to enhance learning and to provide learning opportunities where these health care workers are working. It is simulation training, sonography and indigenous cultural awareness.

Health care workers in rural areas do not have to go somewhere to learn this. They can learn it right where they are practising. Our students are getting access, too. Right from their education program they can learn this while they're doing it and graduate with these skills already.

**Mr. Corey Tochor:** Thank you for your testimony. Thank you for renewing hope that there's some research being done out there that is going to hopefully help Canadians.

The Chair: We will now move to MP Kelloway for six minutes, please.

Mr. Mike Kelloway (Cape Breton—Canso, Lib.): Thank you so much for being here, witnesses. I really appreciate it.

I'm going to try to get around the horn, as they say, in terms of my questions.

I want to start with Ms. Watts-Rynard.

I particularly like your view that applied research can be the tool box of improving the country's economy. I think that's really important.

I come from a polytechnic background as well. I worked at the Nova Scotia Community College, NSCC, for 11 years. I worked at Cape Breton University, which has many aspects of applied research attached to it.

I see where you're going with that. In your opening remarks, you talked about some of the recommendations to get us to a better place. When I was in the post-secondary world, in particular in NSCC, there was often, I felt, a bit of stereotyping of applied research and the importance of it. When you talk about a capstone project, do you fear that stereotyping in terms of applied research? I totally agree with each of the panellists that applied research is a gem, but we need to invest in it and we need to have maybe slightly different criteria for it. I wonder if you could speak to that and unpack some of the recommendations.

Then I have another question or two for the other panellists.

Ms. Sarah Watts-Rynard: Thank you very much.

Less than 3% of the federal investment in research is currently going to applied research. I think that, to your point, the investment needs to be there in order for us to really be able to push this out.

When I look at the examples of the kinds of research happening on our campuses, I'm seeing interdisciplinary. I'm seeing business driven. I'm seeing looking at Canada's big challenges and how to make small steps towards the solution.

As an example, at Saskatchewan Polytechnic, they are helping Titan, a clean energy products company, manufacture urban waste wood into plastics. Creating those plastics from wood reduces GHG emissions by more than 90%. I don't see how this is not good for the company, and how this is not good for Canada.

That's the kind of research that is happening on the ground. It is not one thing. It doesn't require one researcher in one discipline. It brings in students. It's bringing in companies. It's bringing in instructors. That's what I see when I look across the college sector and something I'd like to see more of.

**Mr. Mike Kelloway:** Ms. Sheane, what particularly interested me in your opening remarks was when you were talking about rural communities. Polytechnics can be found in major cities, but a lot of what you call polytechnics, I would call back home the community college. In Nova Scotia, for example, there are 13 campuses, and they're spread outside Halifax. There are a couple of campuses there, but it's really innovations happening there.

From your perspective, when we're looking at this capstone, how do we ensure that polytechnics have the ability to access funding? I think there's a stereotype, once again, that in rural communities there are base kinds of industries—in my area, fishing and farming are so important—however, there's also so much within that and so much outside of that, which I think the rest of Canada doesn't know.

• (1640)

Could you speak to that?

**Dr. Vanessa Sheane:** The example I'll give is that we have a National Bee Diagnostic Centre. When people think of northwestern Alberta, they don't often think of bees. They may think of agriculture.

We've worked with industry and have found that bee health, bee diagnostics, is a need of the agricultural sector and farmers in the region. That's a real-life example of how we have worked with industry to find its problems. We have put in research and have helped come up with solutions that increase crop yields.

In terms of representation and with regard to your question on how we do that, the capstone needs to be very intentional so that all post-secondaries are represented, so that industry is represented, and so that communities are represented. It needs to be across rural, urban and provincial boundaries and the post-secondary institutions. It shouldn't be university-centric but should have polytechnic colleges and CEGEPs represented as well.

Mr. Mike Kelloway: Thank you.

Ms. Watts-Rynard and Dr. Sheane, what are three recommendations that you want to see? When you open the report, what would be the three that you both want to see?

**Dr. Vanessa Sheane:** I would say that I think that the person leading the capstone needs to truly understand applied research.

**Ms. Sarah Watts-Rynard:** I'd really like to see this as multidisciplinary and mission-driven. I think that really has to be the focus, and that means something different from what currently exists within the tri-council.

Mr. Mike Kelloway: We'll go to the witness on the screen, please.

[Translation]

**Mr. Christian Agbobli:** In my opinion, the most important thing is to focus on contributing to the advancement of knowledge.

Another important role the capstone organization must play is to emphasize the world-renowned quality and rigour of the Canadian evaluation process.

#### [English]

Mr. Mike Kelloway: Thank you.

The Chair: Now we'll turn to MP Blanchette-Joncas for six minutes.

#### [Translation]

Mr. Maxime Blanchette-Joncas (Rimouski-Neigette—Témiscouata—Les Basques, BQ): Thank you, Madam Chair.

I'd like to thank the witnesses who are with us for our first hour.

I'll start with some questions for Christian Agbobli, from the Université du Québec network.

#### Good afternoon, Mr. Agbobli.

Would you please elaborate on the four recommendations you mentioned, the four focal points, in particular the second recommendation, which is about representation?

Can you give us a clear idea of your expectations in terms of representation for the 10 institutions that are members of your network?

Mr. Christian Agbobli: Madam Chair, I thank the member for his question.

Representation has to be ensured in various respects. First, there must be a balance between the regions and the cities, as the idea is for the capstone organization to respond to the entire research community in the country.

In terms of representativeness, I also talked about the French language. We have to make sure that French has an important place within the capstone organization so that the balance of research would be recognized.

Still regarding balance, we have to talk about research funding. That's another major issue. We know that, in 2021, U15 member institutions received 79% of all research funding in Canada, despite having 52% of the faculty and 59% of the graduate student population. It's important to ensure that balance.

#### • (1645)

Mr. Maxime Blanchette-Joncas: Mr. Agbobli, let's go back to representativeness.

You know that the government gave a mandate to an advisory panel on the federal research support system. That panel included only universities that were members of the university network and were large. Universities like the ones in your network, which are small or medium-sized, were completely excluded, even ignored.

Do you think that setting aside universities with different research contexts is a good way to ensure that the scientific ecosystem is truly representative?

Mr. Christian Agbobli: Madam Chair, I thank the member for his question.

The Université du Québec network wants to play a major role, as do other Canadian francophone universities, in order to be better represented within the country's research ecosystem.

We certainly welcome this committee's contribution and the appointment of the advisory panel, but much remains to be done to improve compliance with the Official Languages Act.

As a network, we advocate for the quality of research conducted in French to be better recognized, valued and funded. The capstone organization must play this major role by enabling universities in the regions to be at the table.

You talked about the 10 universities in the Université du Québec network. The Université du Québec à Rimouski, the Université du Québec en Abitibi-Témiscamingue and the Université du Québec à Chicoutimi must ensure that they are at the table, just like the Université du Québec à Montréal.

**Mr. Maxime Blanchette-Joncas:** Mr. Agbobli, you mentioned that, on October 22, the federal government created an external advisory panel on the creation and dissemination of scientific information in French.

That said, the Quebec university network is not part of that panel. I repeat: Canada's largest francophone university network is excluded from that panel.

Do you think it makes sense to exclude that network, considering that it's the largest francophone university network in the entire country?

**Mr. Christian Agbobli:** The Université du Québec network is concerned about the decline of French in Canada. In the scientific field, that decline is indeed pronounced. We hope that the panel will be able to meet with us and talk to us, so that our ideas can be more present and so that we can better position ourselves and make ourselves known.

We welcomed the creation of this panel, and we hope that we will be able to make our voice heard through the representatives who are part of it right now. Research in French is important, and, I repeat, the Université du Québec network is, as you said, the largest university network in the country, from coast to coast to coast.

There are 100,000 students attending universities in our network, and the number of professors and researchers far exceeds that of all universities in the country. So we have an important role to play.

**Mr. Maxime Blanchette-Joncas:** Mr. Agbobli, concretely speaking, would you like to be part of the expert panel?

I personally can't believe that, within the 10 institutions that are part of the largest francophone university network in the country, no one has the knowledge required to sit on this new expert panel.

Do you want to send a message to the government that you would like to be part of the expert panel?

**Mr. Christian Agbobli:** We would like to be heard by the expert panel so that we can put forward our position and explain what the large Université du Québec network can do.

I hope I've answered your question very clearly.

Mr. Maxime Blanchette-Joncas: It's very clear, Mr. Agbobli.

You talked about promoting science in French.

In concrete terms, what are your expectations of the capstone organization in terms of promoting and disseminating research in French in Quebec and across Canada?

**Mr. Christian Agbobli:** We have a variety of expectations. First, support should be provided to scholarly journals in French. Knowledge in French goes through those journals in this field.

In the natural sciences and engineering and health fields, there are virtually no options for publishing research results in French. Consequently, 90% of publications in these fields of research are in English.

So we need the capstone organization to support-

• (1650)

[English]

The Chair: Excuse me. We're over our time. Perhaps you can continue that in your next round, MP Blanchette-Joncas, to let the witness finish. That would be great.

MP Blaney, you now have the floor for six minutes.

**Ms. Rachel Blaney (North Island—Powell River, NDP):** Thank you so much, Madam Chair.

I want to thank all the witnesses for their testimony here today.

Dr. Sheane and Ms. Watts-Rynard, I really appreciate your testimony earlier. I represent a rural and remote area as well. I know that pragmatic solutions are often key because when you have fewer resources, you have to be very smart about how you collaborate and work together.

My first question is about your response to the capstone research funding organization consultation. You hold up the European universities initiative as an example of challenge and/or expertise-driven collaboration in a network of research. What is particularly important about this, and what do you think Canada needs to learn from it?

**Ms. Sarah Watts-Rynard:** What we are trying to really point out is that interdisciplinary research is not necessarily investigatorled. It's something where there's a shared topic of national interest and then an ability to bring together researchers from various parts of the academic sector to address that.

One of the things we see in the European universities is these connections between research expertise that is connected—not necessarily the same—and is able to come at a problem from various angles and benefit from that. It's something I see when I look at the network of my members across the country.

There is a desire to work around artificial intelligence, for example. It's not a theoretical opportunity. The opportunity is to take something we know about and try to apply that to real problems. That would be done in different ways by different institutions. That's an opportunity to think about implementation. What does that look like for small businesses? What does that look like for the agricultural sector, the mining sector or elder care, for example?

I think it's that idea of trying to get networks of experts together to solve big challenges rather than stand-alone projects that are focused around one researcher's idea.

**Ms. Rachel Blaney:** I know, from a long history of living in rural communities, that often rural and remote communities have booms and busts. It's always up and down, and that's very stressful on the communities, and it's frustrating, because a lot of money during the boom is made in the communities and it leaves the communities to subsidize other parts of Canada, and then when it's bust time, often the resources aren't there to help us move through it.

In the work you're demonstrating in terms of economic development and working with different industries to find solutions that make sense within the area, what kind of investment or support would be more beneficial to actually see that expand so we can see a diversification of the economy?

To add another thought to that, one of the things I've heard a lot of researchers tell me is that in Canada we do a lot of great work at the beginning, but we don't take the next step. Often, other countries take our research, do the next steps and then become the specialists who can create opportunities to make money in their own country, and then we're buying what we started in the first place.

I'm wondering if any of that makes sense, and if you see opportunities where funding might actually result in that.

**Ms. Sarah Watts-Rynard:** Certainly, one of the things we see is the billions of dollars that get spent in the research community. I'm not suggesting that work is not important; what I'm suggesting is we have really not spent a lot of time and resources on how we take that knowledge and then provide the tools to businesses to use that information, to commercialize it and to turn it into products and services and support across the country.

I would certainly like to see us go from under 3% of funding to at least 10% of research funding. My recommendation around the capstone research funding organization is not to try to do what the tri-council members are already doing, but to try something new and different. That is going to require bringing different players to the table, taking apart the system as it works now, and thinking about how we can bring all of the strengths of investigator-led research to make it really pragmatic.

I think that's where polytechnics and colleges are extremely strong, and I think we have really just underplayed their role.

• (1655)

**Ms. Rachel Blaney:** Do you have anything you'd like to add, Dr. Sheane?

**Dr. Vanessa Sheane:** What I will add is that, as a publicly funded post-secondary institution, it's not our place to say what the directive research topic study is. We look to industry and have them come to us with the challenge. We provide our expertise in terms of equipment, technology, academic rigour and evaluation methods, and then translate the results into practice. That's really where polytechnics have that strength. We're not setting the research agenda, but we are using our skills to support industry and communities in what they need, and we can do that through a rigorous research approach.

Ms. Rachel Blaney: Thank you. I appreciate that.

I'll cede the last 10 seconds.

The Chair: Thank you.

Okay. We will now turn to our second round of questions.

We'll start with MP Kitchen for five minutes.

Mr. Robert Kitchen (Souris—Moose Mountain, CPC): Thank you, Madam Chair.

Thank you, all three of you, for your presentations here today.

We're talking about the capstone, an agency that's being created to deal with the tri-council, the three federal research funding councils. I think the challenge that we have is the perception, from the witnesses we've heard, that the capstone is going to have a whole bunch more money to give out to people, because researchers come for money. That's what they need. Having been one in the past, I can say that you need that to survive.

It's so great to hear from all of you, in particular when we talk about the polytechnics etc., all across the country that do tremendous work with businesses, and that trickle-down effect to communities gets the research that is dealing with things like boots on the ground.

At Southeast College in my hometown, Tania Andrist, educational director for innovation and applied research, is looking at things such as carbon capture, which are great research projects. However, as we heard from my colleague, our concern is that, while you have all these research projects, they're not touching things like that, which are so important.

The challenge is how to ensure that the colleges are getting that. You mentioned that only 2.9% of funding is going to colleges. I think the job should be done by the tri-council; the tri-council should be accountable for where that funding is going. Rather than creating a whole new bureaucracy, let's get the tri-council to actually do the part that the capstone is being proposed for.

Ms. Watts-Rynard, do you have any thoughts on that?

**Ms. Sarah Watts-Rynard:** I think the tri-council members are disciplinary in nature, so they fund researchers in those areas of discipline. There's nothing wrong with that, as long as something comes out of that research, that somebody, somewhere is thinking, "Okay, so how are we going to use this? How are we going to make that pragmatic?"

I would argue that's what polytechnics and colleges are already doing. If there is going to be the creation of this additional bureaucracy, as you say, I would like to see that bureaucracy tasked with how we can make the research that is falling out of the tri-council pragmatic and how we can apply that knowledge to real problems across the country. I would suggest that if it doesn't do that, then it really is a waste of time and money.

**Mr. Robert Kitchen:** I appreciate that. I see it as a waste of time because that's what's going to happen as a bureaucracy. What I'm hearing from you, however, is that perhaps we should be saying, "Okay, let's take that money and create a fourth body of the tricouncil that deals with institutions that are providing the research and that works on the ground with the local businesses and so on". Is that correct?

**Ms. Sarah Watts-Rynard:** No. Really, what I would like to see is an umbrella organization that is making more of a pointed direction to the tri-council, saying, "Here are the big challenges we have in the country, and we would like to see some of the work that is being done—funding that exists within the tri-council—being earmarked to interdisciplinary research that is related to Canada's big challenges".

I actually don't think it's a great idea to keep throwing more money at another agency to create yet another bureaucracy. I'd actually prefer to see a real effort to make that more effective.

• (1700)

**Mr. Robert Kitchen:** What I'm hearing from you is that the government needs to do its job to tell the tri-council members to do their job.

Ms. Sarah Watts-Rynard: That is what I am saying.

**Mr. Robert Kitchen:** Dr. Sheane, it is great to hear your comments on oil and agriculture. I mentioned Southeast College in my community in Saskatchewan. How do we expand upon that? How do we get that to the attention of the tri-council and say that we should be putting money towards this research funding? Why is this not part of equity diversity?

**Dr. Vanessa Sheane:** My simple, straight-up answer is that all funding opportunities need to be available to all post-secondary institutions. There are many that colleges and polytechnics are not eligible to apply for because we're colleges and polytechnics. To open it up and make those opportunities available for funding, they all need to be available to every post-secondary institution.

The Chair: Thank you.

We'll now turn to MP Chen.

You have the floor for five minutes.

**Mr. Shaun Chen (Scarborough North, Lib.):** Thank you very much, Madam Chair.

Ms. Watts-Rynard, you mentioned the report that your organization did on the economic impacts of applied research at Canada's polytechnics. You shared with us a number that I thought was quite interesting, and I'd like to highlight it again. You said that \$1 invested in applied research generates a return on investment of \$8 to \$18 and that, to me, is tremendous, and people need to know about that. I suspect that, when you measure return on investment, it's easier to measure and include economic impacts, because you need to quantify a dollar amount. Are there other impacts that perhaps are not measured, like social impacts, that would mean that there are other greater returns on investment to this research that cannot be quantified?

**Ms. Sarah Watts-Rynard:** There are definitely impacts that can't be quantified. Part of our methodology was to think about everything that could be quantified and all of the social impacts that maybe couldn't be. Obviously, there are all kinds of different research going on. Social impact research is when you think about things like noise reduction or GHG emissions being reduced. When you start thinking about those things, they have an impact not just on the business whose project is under way but also on society. Those are some things that are very difficult to quantify, which is the reason for the range.

The economists who did this work for us said that's what brings them to feeling as though that upper boundary makes a lot more sense—when you start thinking about all of the social impacts of research that are very difficult, to your point, to quantify in dollar terms.

#### Mr. Shaun Chen: Thank you.

You also spoke today about adopting new technologies for SMEs. My riding of Scarborough North is incredibly diverse. We have a population with over 70% of people born outside of the country. Canada, as we all know, is a country that is built on immigration. People come here with hopes and dreams of having a better life and creating economic opportunities for future generations.

Small businesses are the bedrock of Canada's economy, and in diverse communities there might be a language barrier or lack of understanding of how things are done in Canada. You talked about some of the great successes that can occur when there is collaboration in applied research where your partners are SMEs, and you are able to measure how the work that is being done in applied research can translate to innovation, technology and adoption by small and medium-sized businesses.

Is there a role to play in being able to reach out to more diverse communities? How can polytechnics be supported in doing that so that we can uplift all communities and make sure that the economy is inclusive and works for everybody?

• (1705)

Ms. Sarah Watts-Rynard: This is a good question.

The current funding allows for a fairly narrow focus. A company has to come and say this is their challenge, this is their problem, and they'd like to adopt this new technology. That's the work that's being done. I think, if we were valuing that to the extent that it should be valued in the Canadian economy, we would spend more time talking to the researchers, the students and the institutions. Dr. Sheane brought up the technology access centres. She said to please go out and diffuse the knowledge that you have found in these projects.

It's not a matter of sharing the IP. It's a matter of what we learned about the adoption of this technology in your business and who else in the community would benefit from that. Realistically, the funding is much more directed than that and in very small amounts, which means that the focus is on the business that knocks on the door. I'm worried about the businesses that don't come knocking at the door and don't realize that this support is available to them. I think that's a huge missed opportunity for Canada.

The Chair: Thank you.

MP Blanchette-Joncas, you have the floor for two and a half minutes.

## [Translation]

Mr. Maxime Blanchette-Joncas: Thank you, Madam Chair.

Mr. Agbobli, earlier you talked about an imbalance in the distribution of research funds. Specifically, you said that 80% of research funding is concentrated in Canada's 15 largest universities. They are mainly anglophone, and that affects the creation and dissemination of knowledge in French.

Since you represent the largest francophone university network in Canada, you are in a good position to talk about this subject.

I would like us to shine a light on the words of the federal government and the facts.

I refer you to the official press release the federal government issued about the formation of the new advisory panel on the creation and dissemination of scientific information in French.

The first sentence of the press release reads, "Canadians value French and scientific research".

The second sentence reads, "We also value our post-secondary education system and research in French in Canada".

Over the past 20 years, Quebec's university network has shown that Franco-Quebec universities are underfunded and that there has been a decline in funding for the educational institutions you represent in terms of the weight of their faculty.

Given these data and facts, do you think the federal government is really prioritizing the post-secondary education system and research in French in Canada?

Mr. Christian Agbobli: I thank the member for the question, Madam Chair.

The Université du Québec network is the largest university network in the country, in French or in another language—English, in this case. In that context, for this network to play a major role, it is important to restore a balance and provide more support for research funding in French.

Consequently, we believe that, to remedy this imbalance in research funding, we must ensure that our voice is heard. Restoring a balance must necessarily be done through permanent consultation mechanisms that take into account the entire Canadian university system, and particularly the Université du Québec network. Our network is a force in the regions and cities, and it conducts relevant research in specialized fields.

I'll give you some examples.

Wildfire prevention is the first example. Canada recently experienced wildfires, and they will be getting worse. Research in this area is conducted within the Université du Québec network, and it is funded by the granting councils.

There's also the issue of flooding. We have an interuniversity research network, the Réseau d'informations scientifiques du Québec, or RISQ, which contributes to a better understanding of flooding.

Research should be done in French, and it should be funded on a larger scale when it comes to these issues.

#### • (1710)

## [English]

The Chair: Thank you so much.

Our final questioner of this round and this panel will be MP Blaney, for two and a half minutes.

Ms. Rachel Blaney: Thank you, Chair.

I would like to ask Ms. Watts-Rynard a question.

You wrote, "Industry engagement in research collaborations should be an important goal of the new capstone research organization, driving input from those positioned to inform the problem statement and implement solutions."

I'm just wondering if you could share with us what role you see industry playing in the management of the capstone and other sectors of society—things like labour, youth and indigenous communities.

**Ms. Sarah Watts-Rynard:** In order to undertake any kind of interdisciplinary research and have a fulsome opportunity to address those things, you need to have the diversity of people at the table. It does concern me that, possibly, the capstone would be run by the people who are currently running the tri-council and would not have that breadth of input. That will require youth and labour and industry to be at the table.

I would almost recommend there be limited researchers at that table and instead focus on the big challenges we're faced with, define what those challenges are and then turn that over, whether it's to the management of a capstone research funding organization or the tri-council members, and ask, "What can we put together that will help address that?"

It's almost like we have to get researchers out of how to make this new thing give us more money to fund the work we're already doing. I'm not suggesting we get rid of the tri-council; I'm suggesting that a new organization needs to come to the table with some innovative approaches and a new way of thinking about what research is for in the country.

Ms. Rachel Blaney: Thank you for that.

I represent a region that's served by North Island College, and I know that they are extremely innovative and very responsive to community development, economic development, businesses and indigenous communities as they take steps forward. That innovation to work with them is really what makes them so useful. When we look at this format, what do you think they need to understand

to make decisions that are more connected to what's happening on the ground in communities?

**Ms. Sarah Watts-Rynard:** The ambition of the capstone has been about solving big challenges. It's been about interdisciplinary research, and it's mission driven. The difficulty is that, if we're going to take advice from the same people who would like to see more money for the disciplinary research of the type undertaken by the tri-council, this will not be new, and it will not be different. It will be the same thing under a different name. I think that's a missed opportunity.

## Ms. Rachel Blaney: Thank you.

**The Chair:** Thank you to our witnesses, Dr. Sheane, Sarah Watts-Rynard and Christian Agbobli, for your testimonies and participation in the committee study.

If you have any questions, you can direct them to the clerk. You may also submit additional information through the clerk.

We're going to suspend briefly now to allow the first panel to leave, and we'll resume with the second panel.

• (1710) (Pause)

• (1720)

The Chair: Welcome back.

It's now my pleasure to welcome from Acfas, the Association francophone pour le savoir, Martin Maltais, president, by video conference, and Sophie Montreuil, executive director, also by video conference.

Here in the room with us, we have the Canadian Brain Research Strategy and Dr. Jennie Young, executive director. From the Federation for the Humanities and Social Sciences, we have Karine Morin, president and chief executive officer.

Mr. Maltais and Ms. Montreuil, I invite you to make an opening statement of up to five minutes.

#### [Translation]

Mr. Martin Maltais (President, Acfas – Association francophone pour le savoir): Thank you, Madam Chair.

I am the president of the Association francophone pour le savoir, or Acfas, and a professor of education funding and policy at the Université du Québec à Rimouski. I am accompanied by the Acfas executive director, Sophie Montreuil.

For over 100 years, Acfas has made an exceptional contribution to scientific life in French. Acfas has six regional offices spread across Canada. We work every day to promote our country's prosperity and influence. As shown in the report we published in June 2021 called portraits and challenges of research in French in a minority context in Canada, research in French is in clear decline in the Canadian scientific community. That decline continues to this day. In a country based on the biculturalism of our two official languages, it is unacceptable that federal authorities are not paying very close attention to that decline, as it is largely based on unfair conditions for francophone researchers when it comes to access to research funding provided by the Government of Canada.

The report released on October 17 on the consultations conducted last summer certainly doesn't reassure us about the seriousness with which the creation of the new capstone organization will embrace the issue of science in French. Out of a total of 10,034 words, only 180 are devoted to scientific research in French, or 1.8% of all the findings made by the three granting councils. However, those 180 words do a good job of summarizing the challenges and harms facing the French-language research community in Canada.

The time has now come to put in place measures that will correct injustices and result in substantive equality, even if the merger of the three councils takes place in a context of astonishing and disconcerting speed. For Acfas, this speed cannot in any way be cited at a later date as an excuse to make up for the lack of measures to support scientific research in French, as the Government of Canada cannot claim that it does not know how to remedy the situation of the decline or that it is not responsible for it following the adoption of the new Official Languages Act. The bodies that will lead to the creation of the capstone organization have everything they need to usher in a new era of public research funding, which will make it possible to achieve substantive equality between the francophone and anglophone scientific communities.

Allow me to quote a news release issued by Canadian Heritage on October 22, 10 days after the publication of the report entitled "What We Heard": "... the Government of Canada is committed to improving conditions for the production and dissemination of scientific research in French in Canada."

The news release announced the creation of an external advisory panel on the creation and dissemination of scientific information in French. You can see where I'm going with this: It's imperative that there be strong alignment between the bodies that will create the capstone organization and the members of the advisory panel. However, the agendas don't coincide, as the advisory panel is just beginning its work. Here again, Acfas is in a position of extreme vigilance. There is no way the government will consider failing to acknowledge the need to include strong measures to support research in French in the creation of the capstone organization because the agendas don't coincide. That would be absolutely unacceptable.

In fact, the situation is much simpler than it seems, and that is the crux of our remarks today. The new Official Languages Act, which came into force last June, puts forward a fresh and informed look at bilingualism in our country, recognizing for the first time that French "is in a minority situation in Canada and North America due to the predominant use of English". The new act also requires, in part VII, all federal departments and agencies to put measures in place to "support the creation and dissemination of information in French that contributes to the advancement of scientific knowledge

in any discipline". Therefore, the context for creating the capstone organization is clear: It cannot be done without these measures.

There is some positive stuff. The consultations that need to be held, when it comes to positive measures, have already been held. For the past two years, the Government of Canada itself has done work to document the challenges of research in French and the needs of the community conducting that research. I repeat, it has everything it needs to fulfill its obligations under the new act.

Thank you for your attention.

• (1725)

[English]

The Chair: Thank you very much for your opening statement.

We will now turn to Dr. Young.

You have the floor for up to five minutes.

Dr. Jennie Young (Executive Director, Canadian Brain Research Strategy): Thank you, Madam Chair and members of the committee.

I'm genuinely grateful to address this committee today. I recognize the level of dedication that each of you brings to this work. The effort you're investing here to ensure that Canada's research dollars have the greatest possible impact mirrors what we in the research community strive for.

I'm here today as the executive director of the Canadian Brain Research Strategy, CBRS. CBRS is a pan-Canadian coalition representing 40 neuroscience and mental health research programs along with clinicians, patient partners, indigenous partners, health charities, research funders and industry partners. Together we're united by a common goal: advancing brain health for Canadians through collaborative and impactful research.

Investing in brain research is essential for Canada. One in five Canadians lives with a brain condition, whether it's dementia, mental illness, brain injury or addiction. Every one of us knows someone who's impacted by one of these conditions, and we all have brains that we want to keep functioning at their best.

We know that the impact of brain health goes far beyond the individual. Brain conditions affect our health care system, economy, workforce productivity and social structures, and this impact will only intensify as our population ages. Addressing these complex issues requires sustained research investment like that announced in budget 2024 and a coordinated national approach. It's truly an exciting time with the historic investments in science and research that were announced in budget 2024. Now, as we work to catch up with our G7 peers, it's essential that we think about how to invest more strategically and build together toward a more cohesive research ecosystem.

One of the capstone's foundational aims is to support multidisciplinary research, which is essential as the scientific landscape evolves and challenges grow more complex. This focus is especially crucial in a frontier field like brain and mental health research, where its intersection with artificial intelligence puts it somewhere between CIHR and NSERC. Add in the importance of psychology and other social sciences, and it means that brain research often falls outside the mandates of our existing funding agencies. This challenge illustrates why we need an overarching organization like the capstone to bridge gaps and ensure that no field, particularly complex ones like brain research, is left without sufficient support.

Our proposed national brain research strategy offers a model for how we might think about the benefits of the capstone. We've established a framework that enables collaboration among diverse academic disciplines and crucially connects basic research, clinical applications and pathways to commercialization. By leveraging the capstone's potential, we can ensure that research discoveries are effectively translated into practical solutions and improved health and economic outcomes for Canadians.

These types of frameworks thrive when they are mission driven yet still expert informed, a balance that is essential if we are to achieve the capstone's vision of a strategically unified and impactful research ecosystem.

Research priorities and funding decisions are most effective when grounded in the specialized knowledge that experts bring to their fields. Our own proposed national strategy at CBRS was developed with this principle in mind, representing neuroscience and mental health research programs big and small across the country but also recognizing the expertise that patients and patient organizations, indigenous knowledge holders, funding organizations, health charities and industry bring.

This expert-based foundation not only strengthens the quality and relevance of our work but also aligns our projects with the realworld needs of Canadians. As we move forward, it's vital that the capstone's decision-making is guided by experts, even as we work toward larger, mission-driven goals.

In closing, I want to emphasize the great potential that the capstone holds to reshape Canada's research environment into one that is more collaborative, inclusive and strategically aligned. By bridging existing gaps and supporting multidisciplinary research, the capstone can amplify the strengths we already have within Canada's scientific community. With expert-driven guidance, we can ensure that the national strategy is responsive to the most pressing challenges facing our society.

As we work to modernize research funding structures to keep pace with the evolving demands of research itself, ongoing opportunities for collaboration and conversation like those provided by this committee are essential. The capstone initiative is a step towards building the efficient, cohesive support structures our researchers need, and it will require everyone-all of us-working together for this vision to succeed.

Thank you again for this opportunity to contribute to this national conversation. I look forward to your questions.

• (1730)

The Chair: Thank you, Dr. Young.

Ms. Morin, the floor is now yours for an opening statement of up to five minutes.

## [Translation]

Ms. Karine Morin (President and Chief Executive Officer, Federation for the Humanities and Social Sciences): Good afternoon, members of the committee.

My name is Karine Morin and, since last June, I have been president and chief executive officer of the Federation for the Humanities and Social Sciences. We truly appreciate the study this committee has undertaken on the proposed new capstone research funding organization, and we thank you for the invitation to appear before you.

## [English]

The Federation for the Humanities and Social Sciences is the national voice for disciplines dedicated to the advancement of an inclusive, democratic and prosperous society. Our membership includes 76 post-secondary institutions and 80 scholarly associations together representing a diverse community of more than 90,000 researchers and graduate students across the country. The federation mobilizes new knowledge by supporting researchers across disciplines to inform and inspire policy and action in community and institutions, and across society.

The federation fully supports bringing strategic focus and coordination to Canada's research system, while preserving those features that have led to Canada's strong record of research excellence. The new capstone organization must build upon the foundational strength of the federal granting councils, respecting the current structure and funding levels that support the advancement of investigator-driven research and talent development in the humanities and social sciences.

## [Translation]

The federation has three recommendations to achieve that.

First, to ensure the sustainability of federal investments and support for the humanities and social sciences, the new capstone organization, through its mission-oriented research, must recognize that many of the challenges we face are human-centred. Therefore, to contribute to concrete solutions, it is essential that a significant proportion of research be conducted by researchers in the social sciences and humanities.

Second, the capstone organization must integrate support for indigenous research and equity, diversity, inclusion and decolonization.

Third, the capstone organization's governance must be inclusive and build on the strengths of all disciplines.

• (1735)

[English]

Let me offer a few more details about each of these three points.

First, the capstone's definitions of mission-driven research, innovation and impact must be inclusive of all disciplines and account for the inherent differences between natural sciences, engineering, health sciences, social sciences and humanities. Addressing diverse challenges facing our democracy, our prosperity, our environment and our humanity demands insights across all fields. It will be critical that new funding opportunities be conceived not only as scientific and technological solutions but also as human-centred ones that fully consider ethical, environmental, legal and social considerations alongside economic ones.

Second, support for indigenous research and for broader principles of equity, diversity, inclusion and decolonization must be embedded within the capstone. Continuous consultation and partnerships with first nations, Inuit and Métis scholars and their communities are vital. We strongly recommend that the capstone build upon the important progress made by the federal granting councils on advancing indigenous research, increasing equitable access to funding opportunities, promoting inclusive excellence and providing necessary guidance and support to institutions in all of these aspects, including through the dimensions program.

Finally, it's critical that the governance of the capstone be diverse, with representatives from across different sectors and disciplines reflective of Canada's own diversity. The granting councils remain best positioned to address the distinct disciplinary needs and strengths of Canada's research communities, and the capstone must build upon these foundations.

## [Translation]

In conclusion, integrating the perspectives of the humanities and social sciences will be essential to the success of the capstone organization and will enable it to direct research and its funding in a way that improves the daily lives of Canadians.

We look forward to continued dialogue with the federal government as the capstone organization continues to evolve.

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

## [English]

The Chair: Thank you for those opening statements.

We'll now open the floor for questions.

We'll start the six-minute round with MP Kitchen.

Mr. Robert Kitchen: Thank you, Madam Chair.

Thank you all for being here today. It's greatly appreciated. With the witnesses that we had prior, it's so great to continually learn and see so many different aspects.

Ms. Morin, your comment is great because you talked about what I would describe as many disciplines and what we need to have. A lot of times, when we talk about research, I think the average Canadian would think that it's just health sciences or it's natural sciences, whereas we need to also incorporate humanities and social sciences as part of that. Often, that gets broken down.

When we have witnesses coming here, everyone has their own priority. That's what's important to them because that's their area of expertise.

The Canadian Brain Research Strategy is actually very important to me because as a 16-year-old, I was the victim of a hit and run by a drunk driver. I had brain matter draining out of my left ear. I've had a lot of issues that I've had to deal with from the brain, so I would like to see a lot of the research going to that avenue. That's a personal issue of mine.

Those are important things as we move forward.

Ultimately, we have universities, colleges, organizations and businesses. The capstone is going to be an organization that's going to be a bureaucracy. It's not going to be money for brain research, such that they can study more issues of dealing with CTE or whatever the issue may be. They're not going to get that extra money. The money is going to be creating a bureaucracy.

How do we take that money and, instead of creating a bureaucracy, get the tri-council to do the job, doing that appropriate accountability and accreditation and making sure that they're doing what they should be doing?

**Ms. Karine Morin:** Thank you for your appreciation that there are many different research priorities. It really is difficult to pick what is the top or even the many important priorities.

What we understand of the capstone, in fact beyond what the current granting councils do on a disciplinary front, is to bring about that mission-driven research that addresses greater complexity than might be addressed in an otherwise discipline-focused research project. These missions to be defined—and this is where we emphasize that it's important that we not just think of scientific, technological, moon shot missions, but that we look at the complexity of problems that we're facing—are often not to be addressed exclusively or even primarily by scientific or technological solutions.

I like to give the example of the pandemic and how within the first year, there was a vaccine. Those biomedical scientists did their job remarkably fast and effectively. The pandemic persisted. There was more to it than a scientific, technological solution. The whole complexity of deployment within our health care systems, across different populations and across the different provinces—there was much more to the pandemic across the world than that vaccine.

The example would also come from climate science. Our climate scientists have told us the challenges. What needs to happen now is many more changes, from behavioural perspectives—individuals, communities, municipalities—and the different scales. That is where social sciences can come in—

#### • (1740)

Mr. Robert Kitchen: Thank you. I don't mean to interrupt you, but I have such short time.

I appreciate your comments. You talked about COVID. What our researchers and virologists did was tremendous, in coming up with the vaccines. Fantastic. We continue to see that we need to keep doing that.

The problem with that is government didn't do the job it was supposed to do. The Public Health Agency of Canada wasn't proactive; it was reactive. The whole purpose of PHAC was to be proactive, but that's another debate.

Dr. Young, you put out a presentation earlier that I received on the capstone consultation submission that you made. I really do appreciate it. There are a couple of points in here that I think are interesting. In point two, you talked about the autonomy of granting councils. You said, "Each council should retain autonomy to cultivate a diverse and adaptable research portfolio."

Can you expand upon that? What I'm hearing there is that each member of the tri-council should be doing its job, which is looking on the avenue of where we provide the research funding.

**Dr. Jennie Young:** I think to determine the specific areas of research funding, again...it's really from the peers. It's not just the leader of that specific council. Peer review and having that scientific advisory body are really important.

What I was really trying to emphasize there is that we do need each of those granting councils to do their specialized work in those fields, as my colleague Karine just mentioned. What we need, though, is to bring those efforts together and that requires coordination. I think for too long we've been just expecting it to happen naturally. Scientists are not trained to do that. There's no support to actually enable that to happen. That's what we're hoping the capstone will do.

Mr. Robert Kitchen: Thank you.

The Chair: Now we'll turn to MP Longfield for six minutes, please.

Mr. Lloyd Longfield (Guelph, Lib.): Thank you, Chair.

Thank you to the witnesses.

I'm going to start off my questions with Dr. Young. It's great to see you again.

There's tremendous work going on with the Canadian Brain Research Strategy. It's doing some work that's very similar to what the capstone is doing in terms of bringing researchers together from across Canada, but the capstone would go a little deeper into other areas.

I was at a lab at the University of Guelph this morning that was studying fish. They've just received some federal funding, \$1.5 million over two and a half years, to look at Pacific salmon and the effects of bitumen on salmon. Also, while I was in the lab, I saw them looking at the brains of deepwater fish that had a way of regenerating themselves when they were damaged, and taking the research from these deepwater fish and converting it into some stem cell research that could possibly find its way into medical applications.

We don't know where some of the research goes, but going from fish to humans, or looking at the cultural effects of the loss of salmon on the indigenous communities, could you talk about the interrelationships that could be bridged through the capstone?

• (1745)

**Dr. Jennie Young:** I think that you're absolutely right. We don't know where the research will go, and to really understand and to build those interrelations we need a structure in place. I think that part of what you're saying about how it will go deeper than just the strategy we've built is because we need to bring that knowledge into practical application and it needs to be a continuous cycle. It's no longer the traditional model where you have discovery and then it gets applied. To have this happen a lot faster, especially in this rapidly developing field and just how much faster research happens now, we need structure, infrastructure and training in place.

**Mr. Lloyd Longfield:** I can just imagine that, with that structure in place, the work you've already done over the last few years at the Canadian Brain Research Strategy would be accelerated as well.

**Dr. Jennie Young:** Absolutely, because right now now we've been able to bring all of these different stakeholders, including from innovation, entrepreneurship and industry, together in all of these different fields, but we need support to make our ideas happen, to implement the strategy.

**Mr. Lloyd Longfield:** Great. In particular, thanks for the work you're doing with Parkinson Canada and Brain Canada on neurode-generative disease. There are thirty-five people a day are being diagnosed every day with Parkinson's, ALS and on, so it's crisis management as well.

I want to turn my attention over to Ms. Morin on the social sciences.

Some of the research going on around the brain also includes the socialization that sometimes is affected by brain disease. There are things like studying mime. The University of Guelph is doing studies on mime. Why would you want to do that? Mime helps motor control when people have loss of control. There are studies on things like yoga and relaxation and what happens in terms of trying to manage the stress of medical diseases.

On the importance of social sciences, in terms of the capstone, could you drill into that just a bit more for us, because it really does go across disciplines?

**Ms. Karine Morin:** Indeed, when we think of social sciences and humanities, we like to think of the importance of research to people, cultures, institutions and social relations.

You also heard from Chad Gaffield at the start of this study, and he likes to simplify it by saying that it's the study of human thought and human behaviour. What were they thinking? Why did they do that?

Now, we can go about asking ourselves those questions on a daily basis, and we come up with quick answers to be able to move on, but when these researchers dig deep into these issues, they do so with rigour in their methods so that, even though they may take non-obvious topics, in a way, it's to hone those skills of finding the right documents that are going to be pertinent, or, if you're doing qualitative study, talking to the right people who are going to be representative of the issue, or, if you're doing a survey quantitatively, making sure you're asking the right questions.

As much as you may have very precise, complicated and perhaps non-obvious research questions, the skills sets, certainly in the graduate students involved in the research, become really relevant.

In the context of mission-driven research, I think I've just highlighted what will be important. What is the mission looking at? What is the information they will look at? Who will be engaged in that mission research? What questions will be asked?

In a way, the framing of mission-driven research should come from a social science humanity framing in many instances. Not in all, but in many instances, there is a leading role, I believe, for social sciences humanities research to take on some of the pressing problems that we're trying to tackle or even the emerging technologies like artificial intelligence and that interface with humanity. Those are some examples.

• (1750)

**Mr. Lloyd Longfield:** Absolutely, or the U.S. election.... There's a lot of misunderstanding of what happened and how it happened, and we'll be peeling through that for a number of years to come.

Thank you very much for your testimony.

The Chair: Thank you.

Solving that is probably beyond the scope of this committee, but it's interesting, yes.

Now we will turn to MP Blanchette-Joncas for six minutes.

[Translation]

Mr. Maxime Blanchette-Joncas: Thank you, Madam Chair.

Mr. Maltais, how does Acfas see its role in the development of the new capstone organization in relation to the diversity of research forms and types?

Mr. Martin Maltais: I'll ask Ms. Montreuil to answer that question.

**Ms. Sophie Montreuil (Executive Director, Acfas – Association francophone pour le savoir):** Thank you, Madam Chair and Mr. Blanchette-Joncas.

Acfas responded to the consultation hastily launched last June by the three federal research funding agencies. We consulted our community and submitted a brief that addresses the issues raised during the consultation. Our submission today is slightly different from the dozen or so detailed recommendations contained in last summer's brief.

On October 17, we read the consultation report entitled "What we heard". Despite the tight deadlines, the scientific community rose to the occasion with a number of briefs, presentations and testimonies. The report clearly explains that the scientific community agrees with the creation of the capstone organization. In addition to this agreement, the community pointed out specific elements to watch out for during the creation of the capstone organization and the move to merge the three councils. A number of areas for vigilance concerning the entity that will set up the capstone organization have been discussed today, as they surely were during the preliminary hearings.

Mr. Maxime Blanchette-Joncas: Thank you, Ms. Montreuil.

Mr. Maltais, Acfas spoke of the creation of an external advisory panel on the creation and dissemination of scientific information in French. The figure discussed is \$8.5 million over five years. We know that science in French is in decline and even heading for extinction.

Do you think that these amounts are enough to really address the urgency of the situation?

**Mr. Martin Maltais:** First, we welcome this first step. We're satisfied with it and we're involved in this panel. However, we can already see the need to take things a step further. All our colleagues across the country must understand that 22% to 23% of Canada's population speaks French. To maintain the same standard of living, we must be able to pursue science in French as well. In this respect, the structural inequity between the English-speaking and French-speaking communities across the country poses a major economic issue. In order to generate a satisfactory return, francophones across the country must expend 30% to 40% more energy to carve out a place for themselves in English-speaking circles and to publish in English. This comes at an economic cost when resources can be put in place to boost science in French.

The other point to consider is that an equivalent science in the country's two main cultures opens up other horizons for Canada on the international stage. These horizons are currently scientifically under-exploited by the Canadian government. There could be greater commitments. This would encourage granting agencies to ask the following types of questions. How can funding be allocated to ensure a fair representation of the French fact and of scientific activity in the French language? This is a key question.

**Mr. Maxime Blanchette-Joncas:** Mr. Maltais, we know that structural inequalities currently affect access to higher education for francophones in Quebec and the rest of Canada. These structural inequalities or imbalances in the education system are caused by a lack of funding for francophone institutions across Canada, both in Quebec and in francophone minority communities. The data is clear. Francophone institutions across Canada have been underfunded for the past 20 years.

I would like to hear your thoughts on this.

#### • (1755)

**Mr. Martin Maltais:** When it comes to underfunded francophone institutions across the country, the Government of Canada has clear research obligations that deserve attention. A set of measures has already been proposed in recent months as part of the reports submitted. Ms. Montreuil had started to work on this issue.

Ms. Montreuil, do you have anything to add?

**Ms. Sophie Montreuil:** Let me quickly add that Acfas has submitted briefs to various committees, including yours.

For the past two years, the Government of Canada has been working hard on the issue of science in French. Everything is documented. The needs are there and the solutions exist. When creating the capstone organization, it's important to avoid starting from scratch. The consultations have been carried out and the solutions exist. Under part VII of the Official Languages Act, all departments and agencies must now be asked to take positive and proactive measures when creating a new entity such as the capstone organization.

The government is creating the organization at the right time, even though consultations on all aspects, including funding and publication, have been under way for at least two years.

The work is done. There isn't any excuse.

Mr. Maxime Blanchette-Joncas: Ms. Montreuil, you said that it's well documented. According to my data, on average, 50% of the—

#### [English]

The Chair: That's your time. You'll have time in the next round to finish that.

Thank you.

We will now turn to MP Blaney for six minutes.

Ms. Rachel Blaney: Thank you, Madam Chair.

I'm going to ask my first question to Dr. Young.

In your response to consultations, you said, "The unique mandates, independent decision-making processes, and funding priorities aligned with specific research domains of each granting council, including CIHR's institute model, must be preserved."

How do you balance this need for autonomy with the capstone's coordinating role?

**Dr. Jennie Young:** I think it's really perfect to be able to find that balance because we do need to focus our investment on some of the really big problems that require all these different disciplines to work together. We can't just expect it to happen naturally. We need to work with government and to understand the pressing issues impacting Canadians today. We then have to work together and bring everybody's efforts together to do that. Again, that requires support, infrastructure, personnel and training for people to do that.

#### Ms. Rachel Blaney: Thank you for that.

I often make a joke in my constituency about how we need a ministry of connection. I see the same sort of idea where things are happening and people are not talking to each other. They relate to one another, but there's no focus or coordination that allows those things to come together in a beautiful way to really create solutions. It's like that connection part is really missing.

You talk a lot about bringing the linkages between basic research, clinical research and research commercialization for stronger health and economic outcomes. We heard from the last people testifying around the importance of working with industry. However, we've seen what's happened in some cases when the relationship between science and industry becomes a little too close.

I'm just wondering if you have any thoughts about how we balance all of these multiple needs and make sure that there is clear accountability as we're moving forward in these programs and methods.

**Dr. Jennie Young:** I apologize. I didn't understand what you meant by science and industry being too close.

**Ms. Rachel Blaney:** Well, I'm just thinking of SDTC. I'm sorry, my mind's a little bit connected with what's happening in the media, as well as here in the House. I think that's an important warning sign of things happening, it falls apart and then all the good work that's happening dissipates because there aren't clear processes about the guidelines and how they work.

As I see this moving forward. I hear what the other folks who were testifying and what you're testifying about, which is about bringing things together so that it's actually a practical application. As a representative from rural communities, I know that working with industry locally is key to really making solutions.

I'm just wondering if you have any thoughts about how you balance out all of these needs and how the capstone would be able to do that. What kind of methods would it need to put in place?

## • (1800)

**Dr. Jennie Young:** Even though everybody is operating on a different level, whether it's industry or basic research, there are shared needs that, if we met them, would really benefit the entire research process from basic fundamental, to clinical, to entrepreneurship and innovation.

Some of the shared needs are the fact that in Canada we have this incredibly unique culture of collaboration. We want to share our resources and we want to share the data. What we've heard from our consultations with stakeholders in all of these different fields is that we need to bring this data together. When you have data on research and data on clinical research, all different fields and sectors can access it. They can benefit and use that data. It also makes them work together because they're all working on the same data.

That cannot be supported by grant funding alone. It is something that complements and amplifies the impact of the grants that we're funding. There is currently no mechanism in Canada to support things like that.

My understanding of the capstone is that it's really supposed to do something extra on top to fill those gaps and to provide that stability that we do not have because we don't have the number of people and the base that the United States has. However, we do have that really unique superpower of being able to collaborate. It requires infrastructure and resources to support it.

Ms. Rachel Blaney: Dr. Morin, I wonder if you want to add to that.

**Ms. Karine Morin:** I would add that the current funding councils do have strong mechanisms of accountability. There are funding opportunities that currently exist within the councils to facilitate exchange between science and industry, or even science and the not-for-profits.

Sadly, something fraudulent or inappropriate could happen in any sector, so it is important to have the accountability and transparency of those grants that are flowing through, typically, academic institutions. Those mechanisms exist and we would hope that those mechanisms would indeed be adopted and enhanced by the capstone, so that there would be the best assurances that the investments are flowing in the ways that they're expected to.

Ms. Rachel Blaney: Thank you.

The Chair: We'll turn to MP Tochor for five minutes, please.

Mr. Corey Tochor: Thank you very much.

The need for a capstone-like structure is bearing out, with some of the testimony, on some of the problems we have in Canada with funding of research.

Earlier we talked about some questionable studies from humanities and social studies that have been getting federal tax dollars, but we know there are issues with STEM studies as well. I'm talking about the replication crisis in which the results of many scientific studies, particularly in health and psychology, have been discovered to be impossible to reproduce, which is kind of concerning with the dollars going to studies that we can't reproduce afterwards. It's getting a fair bit of attention. Could you tell the committee more about this replication crisis for scientific literature and how the capstone might be able to assist in resolving that?

That's for either witness, please.

**Dr. Jennie Young:** You're right. It is a concern and it's a concern for scientists, too.

What we can build on is the fact that scientists want to share. They want to share their data. They want to share their methodologies. A lot of times it's because the structure isn't there to enable them to do that.

Sometimes experiments can be difficult to replicate because you can't find all of the details of how the person did it. It's not that they don't want to share. It's not that it wasn't done properly, but there's a nuance and that needs to be there.

By making the data available.... Again we have an amazing culture in Canada versus the U.S., where I worked for 14 years, where we actually want to share everything and be very transparent. There's just no infrastructure and support for that kind of collaboration. That's what we're hoping the capstone would have the potential to do. It's to bring together all these efforts.

• (1805)

**Mr. Corey Tochor:** Just to clarify, you said that Canadian researchers want to share, but now you're saying that we can't reproduce some of those results because researchers aren't sharing additional information.

Dr. Jennie Young: Thank you for letting me clarify that.

They're not able to because there's no full structure for it. It takes people and skills. These are technically skilled positions to upload data, to do the analysis and that kind of thing. Our grants in Canada are too small to support those kinds of technical positions. There's no repository for you to share all of your work.

Again, these kinds of things take resources and infrastructure and we just don't have that level of funding with grants alone in Canada.

**Mr. Corey Tochor:** You're right that this could be on some of the studies, but it's wider spread than that. There are studies on studies. The one that I was able to find that is kind of relevant is "Why Most Published Research Findings are False" by John P. A. Ioannidis.

I'm not sure if you've seen or know of this study. It looks at the topic thoroughly—even with the data, there's a lot of research that gets done that we can't replicate.

There are issues there and I'm not sure how the capstone would correct it.

I'll let the other witness comment on this issue.

**Ms. Karine Morin:** Another matter that attracts attention is that pressure of "publish or perish" and that sentiment that every time you undertake a study you better put out something because your next grant depends on demonstrating that whatever prior investment you had resulted in findings that got published. That pressure does seem to now lead to some scientists not quite doing the rigorous work of data analysis and the publications that result are not as sound as they should be. That gets uncovered with time.

That said, in the context of a mission-driven agency, I do hope that there would be some expectations of transparency in the research that would sort of prevent those happenings of cutting corners, of not doing the full analysis or of not making the data ultimately available through infrastructure for data repositories, so that we would not find ourselves with such problems of research findings that are not replicable.

**Mr. Corey Tochor:** I only have 30 seconds left, so this is going to have to be a written response.

Just switching gears a little bit, in the Canadian Brain Research Strategy's recommendation, Ms. Young, they recommend that "The President of the capstone...possess a strong scientific background to ensure alignment of capstone programming with the scientific capabilities across the ecosystem."

Would that mean that no one from the SSHRC side of things could hold that job or would it just exclude the humanities side of the equation?

**Dr. Jennie Young:** Thank you for giving me the opportunity to clarify.

We see that all as science, so it absolutely includes it. Especially for a field like the brain, it is so complex.

If I could go back a bit to your other question, another issue of the reproducibility is just that the brain is so complex. Some of the earlier clinical trials failed because we realized that there were these other factors that needed to be taken into account that we didn't realize. As we collect more data, as we get to understand it, we say, "Oh, this is why it didn't work before", and we can refine it with further study.

The Chair: Thank you.

MP Jaczek, you have the floor for five minutes.

Hon. Helena Jaczek (Markham—Stouffville, Lib.): Thank you, Madam Chair.

Thank you to the witnesses for their testimony.

I would like to follow up a bit on Mr. Tochor's questions.

Dr. Young, in your recommendations, you're suggesting an independent board of directors for the capstone structure itself.

We heard some really persuasive testimony in the first panel today in terms of applied research and the role of polytechnics. Dr. Young, could you elaborate on who you would like to see on that independent board of directors, and do you agree that there's a strong role for applied research?

## • (1810)

**Dr. Jennie Young:** I think, to go back to that independent board of directors, that this was a recommendation from the Bouchard report and the Naylor report, so I take zero credit for that, but I really appreciate your question, because I think that too often we look at it as basic versus applied, and that is simply not the case now. It's kind of outdated in today's era of rapid discovery.

Instead, it's really a dynamic non-linear cycle where you're continuously informing and driving each other, and that means we need the people with the applied knowledge. These are data specialists. These are the people who know how to run an MRI machine. These are technical positions that are trained for at colleges, at NAIT, for example, in Edmonton, where I was.

We need these jobs, and we need them to be working together. That's why funding science and research, especially with these kinds of infrastructure personnel jobs, is not just about discovery versus applied or about basic versus applied.

## Hon. Helena Jaczek: Thank you.

Now, it may astonish my Conservative colleagues, but I think that I personally would be very averse to seeing some large bureaucracy required for this capstone agency.

I am assuming that this board of directors will be very familiar with what the tri-council members are doing. They would have full access to the research funding allocations that each of the tri-council members is making and could therefore ask those tri-council members to allow some of their research to be used in coordination across the tri-council. This might in fact save some funding, potentially, because presumably a lot of the research currently being done in the tri-council would be very useful for these mission-driven projects.

Am I correct in surmising that?

Dr. Jennie Young: Yes, absolutely.

Again, I think that people think it just would happen naturally, but there needs to be that support, the overarching structure, to bring it together. In an analogous way, with our national strategy for brain research, we fully support a national dementia strategy, an autism strategy and, now, the proposed strategy on brain injuries, because they know the specifics of those fields and what is unique to the needs of those fields.

Then we can provide the overarching support that would enable all of this research to come together in a way that's bigger than the sum of its parts.

**Hon. Helena Jaczek:** Ms. Morin, I notice in your bio that you in fact worked at Genome Canada. I'm intrigued. Obviously Genome Canada provides funding for research. Would you see it as an advantage to in fact incorporate not only the tri-council but potentially Genome Canada?

We heard earlier, from the first panel, about TACs. Are there other agencies that could in fact contribute to these mission-driven projects?

**Ms. Karine Morin:** I think what we see across the ecosystem is that different organizations have been able to pilot different modalities of research or different modalities of funding the research.

With my familiarity with Genome Canada, I can absolutely attest to a lot of wonderful things that organization has been able to do. My favourite example is that the genomics alliance research was advancing with an integrated component that looked at the social sciences and humanities components, through the GE<sup>3</sup>LS program, the genomics and its environmental, economic, ethical, legal and social aspects program.

That integration of social sciences and humanities into genomic science is an idea that I'm carrying forward here to say that mission-driven research should have that sort of integration and/or interdisciplinarity and/or at times the lead from social sciences and humanities.

If Genome Canada didn't exist and we relied only on what the three granting councils have done in their regular funding opportunities, we would not have seen the benefits of that modality, so there is, I believe, a risk in bringing everything into the fold, but there's nothing right now that prevents the three funding agencies and/or a capstone to also look at some genomics-related questions.

I think it is a difficult choice to be made, but there are ways of piloting funding modalities that are really essential in learning. I hope those great ideas get pulled into the capstone.

• (1815)

The Chair: Thank you.

Now we will turn to MP Blanchette-Joncas for two and a half minutes, please.

#### [Translation]

Mr. Maxime Blanchette-Joncas: My question is for Mr. Maltais of Acfas.

As part of the reorganization of research funding, what measures does Acfas propose to ensure the active participation of francophone organizations in the management and distribution of funding, so that funding decisions accurately reflect the priorities of the francophonie's vision while avoiding the predominance of anglophone perspectives?

**Mr. Martin Maltais:** I don't know whether I can answer your question directly.

First, it's important to understand that Acfas takes a multidisciplinary approach and represents researchers in all fields. We promote all the sciences and we're the only organization in Canada to do so. We are the world's largest organization promoting science in French. When we speak, our members—individuals—speak, because we consult them to make our decisions.

One of the questions asked during the latest consultations concerned the key principles that should guide further decision-making on the development and implementation of the new organization. Our members responded that language equity, institutional equity for research funding, data-driven management and consultation were the top priorities.

Mr. Maxime Blanchette-Joncas: Thank you.

In terms of representation, what role could Acfas play? As you just said, Acfas plays a key role in promoting and disseminating research in French. What role would you like to play in the newly created external advisory panel on the creation and dissemination of scientific information in French?

### Ms. Sophie Montreuil: Good question.

I think that we're a proven, authoritative and serious voice. As the president, Mr. Maltais, just said, when we make recommendations, we represent a community that stretches across Canada. There are roughly 65,000 French-speaking researchers in Canada. There are 35,000 in Quebec and 30,000 in all the other provinces, from east to west. When Acfas speaks, provides an analysis or makes a recommendation to the government or any other entity, it does so on their behalf.

To answer your question, I think that the least we could ask would be to consider our recommendations in the five briefs submitted. Today's brief will be the sixth. As I said, they cover related issues that directly affect the creation of the capstone organization.

It would also be to continue to involve us and see us as—let me put it this way—an ally. We represent a community worth its weight in gold for Canada. Canada has the distinction of boasting two official languages, which places it squarely within two international scientific networks. Few countries are fortunate enough to be able to promote researchers—

[English]

The Chair: That's our time.

[Translation]

Ms. Sophie Montreuil: —their expertise and knowledge.

#### [English]

The Chair: Thank you.

We'll now turn to MP Blaney for two and a half minutes.

**Ms. Rachel Blaney:** Thank you, Chair. I'm glad I don't have your job. It's hard to stop people who are sharing really important information.

I'm going to ask Dr. Morin and Dr. Young the same question.

This goes back to the earlier conversation that you were having about the makeup of the board, and as I was contemplating this—I am new to this committee, so I'm not as saturated in this information and I am hoping to piece this together fairly concisely—I had a reflection. I know that diverse boards often do the best work because they bring together more complex, differing ideas, and then if you take the time to get there at the other end, you often have the best solution because you've looked at it from so many different angles. In terms of the board, what kind of representation do you expect to be part of that? Is it just the research academic community, or do you want other reference points that speak more broadly to the experience of Canada?

I'll start with you, Dr. Morin, and then move to you, Dr. Young.

• (1820)

**Ms. Karine Morin:** We've placed a lot of emphasis on the disciplinary diversity that would make up that board, but I think you're right that we would also want to look at sectoral diversity. However, I think it can be challenging for people who are not at all familiar with the academic research world to be able to readily contribute to that thinking.

There are some who are outside of academia but still familiar with it who would be at ease exchanging with those peers. There is definitely the diversity, as you say, of the disciplines and the sectors, and individual diversity as well, but to facilitate the exchanges, familiarity will still be critical.

**Dr. Jennie Young:** I agree that it should be a very diverse board, and I can speak to how we built our national strategy. It was based not just on the heads—all these directors of institutes—but also on early career researchers, so there's a diversity of where they are in their career stages.

Also, for us, indigenous knowledge and indigenous ways of knowing are very central to what we're doing, because we're really aiming to look at the brain more holistically. Because we understand that we cannot just look at molecules or even just at brain networks, we really need to look beyond that to other connections with the community and connections with other people. Broadly speaking, across all of the distinct indigenous nations we have in our country, they look at brain health and health much more holistically, and it's like the scientists are just catching on now.

There's absolutely value there. When we spoke with patients, they often told us they do not have a brain condition that just fits into one silo or one description.

**The Chair:** That's the end of our resources. Actually, we're a minute or so over.

Thank you so much to our witnesses.

Our next committee meeting is on Tuesday, November 19.

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

Some hon. members: Agreed.

The Chair: The meeting is adjourned.

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