



HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

44th PARLIAMENT, 1st SESSION

Standing Committee on Science and Research

EVIDENCE

NUMBER 038

PUBLIC PART ONLY - PARTIE PUBLIQUE SEULEMENT

Tuesday, April 18, 2023

Chair: The Honourable Kirsty Duncan



Standing Committee on Science and Research

Tuesday, April 18, 2023

• (1105)

[English]

The Vice-Chair (Mr. Corey Tochor (Saskatoon—University, CPC)): I call this meeting to order.

Welcome to meeting number 38 of the House of Commons Standing Committee on Science and Research. Today's meeting is taking place in a hybrid format, pursuant to the House order of June 23, 2022. Members are attending in person in the room and remotely using the Zoom application.

We have a busy committee today. First off are the witnesses for the support for the commercialization of intellectual property study, and then in the last hour we have our in camera business to discuss.

I would like to make a few comments for the benefit of witnesses and members.

For interpretation for those on Zoom, you have the choice at the bottom of your screen of floor, English or French. For those in the room, you can use the earpiece and select the desired channel. All comments should be addressed through the chair. In accordance with our routine motion, I am informing the committee that all witnesses have completed the required connection tests in advance of the meeting.

We will start our witnesses with five minutes for each for an opening statement, followed by rounds of questions. Today I will hand the floor over to Mr. Hinton for five minutes.

Please do your best to keep it within five minutes. I'll give you a heads-up when there is about one minute left.

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

Mr. Jim Hinton (Intellectual Property Lawyer, As an Individual): That's great. Thank you.

Thank you to the committee for inviting me to speak.

I am Jim Hinton, an IP lawyer and patent and trademark agent with Own Innovation. I am a senior fellow at the Centre for International Governance Innovation, a co-founder of the Innovation Asset Collective, as well as an assistant professor at Western University.

I'll begin my remarks by explaining why Canada has been focusing on the wrong thing when it comes to innovation policy and then move to concrete suggestions on how Canada can properly position its innovation policy.

Our misorientation on innovation policy has created significant risk to Canada's economic prosperity. If we don't reorient, Canada is at risk of becoming a middle-income country.

IP and data aren't everything, but they're almost everything. More than 90% of the value of companies today is in intangible assets. Registered IP like patents and trademarks are only the tip of the iceberg. While the U.S., China, Europe and other savvy countries have shifted decades ago to intangible asset capture, Canada has not prioritized owning and commercializing intellectual property.

You can't commercialize what you don't own, and as a country Canada does not own very much IP. For example, in the clean technology space we own less than 1% of global IP. No one is expecting us to be China or the U.S., but we are barely in the game, and things are actually getting worse. We need to get our own piece of the pie.

As we've heard from other witnesses, IP provides freedom to operate, which prevents or discourages others from taking your market. However, importantly, others' IP limits your freedom to operate, even though you don't intentionally steal anything. They leverage their IP position to limit your ability to grow and scale. In many ways, IP is zero sum. You have the IP and you get paid. If you don't, then you end up paying.

Currently, we allow our publicly funded IP to be given away. We do the hard work of funding the research and creating the great ideas, but then we assign the rights to that IP to foreign companies. They make the money on our IP, sell the products back to us and, most devastatingly, they use Canadian-funded IP against us.

More than half of all industry-assigned IP that comes out of Canadian universities is assigned to foreign companies. Canadian universities are actually limiting the freedom to operate of Canadian companies. They are not going to like me saying this, but as it currently stands for research outputs, Canadian universities are part of the problem. In a particularly egregious example, for Canada's so-called AI strategy, with hundreds of millions of dollars in public funding, only 7% of the IP generated ended up in Canadian industry hands, with 75% of the IP generated being owned by foreign companies. That cannot have been our intention.

Enough about the problems. They're well documented. It's on to solutions.

First, we must understand what success in the innovation economy means. Success is having Canadian-owned IP commercialized globally and at scale. We need a whole-of-government approach to embed Canadian-owned IP and data assets in global value chains. We need to decrease our IP deficit and move from being IP renters to IP owners.

To do that, we need to instill the mechanisms and infrastructure to support economic prosperity and increased productivity.

First, have full stack and coordinated IP education, so companies know the rules of the game. We have existing programs like the Innovation Asset Collective, CIPO outreach, IP law clinics, IRAP IP assist and new programs like ElevateIP, IP Ontario and other provincial efforts. These programs need to be turbocharged.

Second is IP generation to ensure that companies capture what they create. It's providing resources to support Canadian companies to action IP strategies and ensure that all innovation programs make IP costs eligible.

Third is IP retention, because the wealth accrues to the IP owner. We need to ensure that Canadian companies are the ones commercializing and making money from the IP. Mandate universities and research institutions to prioritize Canadian companies and steward publicly funded IP for Canadian economic benefit. In the review of SR and ED, we must ensure that IP being funded is beneficially owned by Canadian companies.

Fourth is collective action. Even if we do IP education, generation and retention, that will not be enough. The world of IP is already owned. We need to catch up. Take a collective effort to increase freedom to operate with patent collectives, data collectives and across all strategically important sectors. Every sector is now an IP sector.

Fundamentally, we need to take a whole-of-government approach to increase freedom to operate for Canadian companies. If we get this right, it will mean economic prosperity for generations. If we get it wrong, it means that we won't be able to pay for the social programs that Canadians rely on.

I'm happy to discuss it.

• (1110)

The Vice-Chair (Mr. Corey Tochor): Thank you so much for that testimony.

We'll have the second five-minute opening statement and then we'll go into rounds of questioning.

Ms. Gagné, the floor is yours for five minutes.

[Translation]

Ms. Marie Gagné (Chief Executive Officer, Synchronex):

Good morning, I'm Marie Gagné, CEO of Synchronex, a network of college centres for technology transfer and innovative social practices.

A CCTT is a centre for innovation and applied research. We have 59 of them in Quebec, 49 devoted to technology and 10 for social innovation. Each centre specializes in a field ranging from aerospace and integration of people with disabilities to agriculture and artificial intelligence. Each centre has its own area of expertise. They bring together a total of 2,400 experts across Quebec. They are the equivalent of technology access centres or polytechnics in the rest of Canada. Each year, our experts work with 6,000 businesses on 11,000 innovation projects. We're talking about intellectual property commercialization support here today.

Commercializing an invention means making it an innovation and integrating it into the market. Commercializing an invention means using it. The committee's study could be called "Support for the Use of Intellectual Property". Because over 50% of Canada's GDP is linked to the activity of small and medium-sized enterprises, we need to develop a model that meets the needs of SMEs. They need a model that is both simple, to help them overcome their reluctance to innovate, and fast, to quickly show them the benefits of innovation. SMEs also need a low-cost system to protect profit margins, which took a hit during the pandemic and are currently being hampered by inflationary pressures.

There's no doubt that traditional patent management is neither simple, quick, nor inexpensive. We would argue that intellectual property needs to be put to work and licenced. In 99% of cases, when we work with businesses, we give them usage rights in their field of activity. Let me give you an example. If we develop a new alloy for a dental business, we assign that business the rights to use that alloy for dental purposes. We can then continue to work on that alloy and adapt it for a battery or aerospace business, for example. We apply flexible, simple, effective intellectual property management.

We're certainly not into all or nothing. We're about incremental innovation. When we have an all or nothing, we work together with universities and then it's a more formal type of intellectual property based on a patent, and the university's development office works on it. In Quebec, this is done in cooperation with Axelys, an agency that deals with intellectual property.

So my recommendation to the committee is pretty straightforward and has to do with funding. If we want our businesses to be able to use intellectual property, and therefore commercialize it, we need to support even more funding for applied research, and therefore the technology access centres and polytechnics. They have expertise in innovation at the grassroots level, which enables the use of intellectual property.

In the most recent budget, we received over \$100 million in additional funding for the college and community innovation program, which is administered by the Natural Sciences and Engineering Research Council. Those funds will be available for three years. Three years is not enough time to develop long-term strategies, nor is it enough time to attract, hire and retain top talent. So we need sustained recurring funding, and the \$170 million requested was a minimum amount.

- (1115)

We need to support innovation in our SMEs so that intellectual property gets used. We also need to more adequately support networking, bridging between the applied research done in colleges and the university community. We need to shorten the time between idea, invention and innovation, that moment when a new technology hits the market and gets used. To do that, we need to more adequately support the relationship between universities and applied research organizations in the development of projects, upstream of business involvement, to reduce the risk to business. We need to make sure that what we offer to businesses is easy to integrate and promotes wealth creation for Canada.

I'm ready to answer your questions.

[English]

The Vice-Chair (Mr. Corey Tochor): Thank you so much for that.

We will now enter the first round of questions, which will be six minutes apiece for each MP.

Kicking it off, we have MP Mazier for six minutes.

The floor is yours.

Mr. Dan Mazier (Dauphin—Swan River—Neepawa, CPC): Thank you, Chair.

Thank you, Mr. Hinton, for being here today.

The Globe and Mail reported that Canada's spy agency specifically warned Canadian universities about research ties to Huawei. Are you aware of this advice from CSIS?

Mr. Jim Hinton: Yes, CSIS is actively monitoring Canadian research institutions for IP transfer and reviewing ties to foreign government actors. Then we saw the banning of 5G organizations like Huawei in particular.

Mr. Dan Mazier: Thank you.

Despite this warning, the University of British Columbia admitted at this committee that they are still working with Huawei technologies. We also know that multiple Canadian universities have transferred intellectual property to Huawei. Do you have any idea how many universities have ongoing research partnerships with Huawei despite the warnings from CSIS?

Mr. Jim Hinton: There are at least 20 Canadian universities that have been working with Huawei.

More recently, I pulled up some recent patent data, and the University of Toronto, McGill, Ottawa, Laval, Waterloo, UBC, Carleton, École Polytechnique, Western, Regina and McMaster all continue to work with Huawei. Nobody's told them to stop. They're getting money and they're happy, so they'll continue on.

Mr. Dan Mazier: Canadian universities receive government funding for research. This means that intellectual property transferred to Huawei by Canadian universities could be funded by these research funds. Would you agree?

Mr. Jim Hinton: Canadian universities are getting money. I think they got \$3.34 billion in federal funding, and Huawei would be one of the beneficiaries of this funding.

Huawei's been able to generate hundreds of patents out of Canadian universities over the years.

Mr. Dan Mazier: Thank you.

Has the current government done anything to guarantee that government research funding is not being used to develop intellectual property for Huawei or for the other entities that CSIS warned against?

Mr. Jim Hinton: No, it's the opposite. There are incentive programs through NSERC to encourage Canadian universities to partner with organizations like Huawei. There's nothing stopping a researcher or a university from continuing to work with those organizations. As we've seen, they'll continue to do that unless somebody steps up and says that we need to reconsider this. We did see, out of Alberta, that the Alberta government said that enough is enough and those universities were told to stop.

It's clear that the universities aren't governing themselves well enough. Somebody needs to come in and say, "It's time to handle this more appropriately."

Mr. Dan Mazier: Thank you.

The Alberta government has done it. Have any other governments that you're aware of?

Mr. Jim Hinton: Early this year, we saw that Canadian researchers were working with Chinese military scientists, and then very quickly that was pushed back on. However, corporate actors like Huawei continue to be available for partnership, and a lot of these universities are in long-term agreements with these and getting a few millions dollars here and there to send the IP and all the commercial value back to Huawei.

• (1120)

Mr. Dan Mazier: Mr. Hinton, CNN Business reported that Huawei backtracked on a patent application they filed for a facial recognition system intended to identify Uyghurs from other ethnic groups. As you know, Parliament declared Beijing's treatment of the Uyghurs a genocide.

How do we know that technologies being developed with Huawei in Canadian universities are not being used by the Chinese Communist Party for uses such as surveillance of minority populations?

Mr. Jim Hinton: We don't know.

If you look at the list of IP that's coming out of Canadian universities, it's being assigned to organizations like Huawei. It's artificial intelligence, it's photonics, and it's advanced processing. Somebody needs to understand this, and we need to get to the bottom of it.

There's a transparency issue here. We don't know who or what is being done with Canadian publicly funded research, and there are egregious examples that we need to make sure are not happening. There are policies in place, but the fox is in charge of the henhouse. The researcher who wants to get the money is the one checking the boxes to say that there's no issue here. They're not security experts either, so they're not trained on what the geopolitical issues they need to be looking for are. They don't have that expertise. We need somebody to do that proper governance.

Mr. Dan Mazier: I guess I have about a minute left.

Is there anything else you want to add from your opening statement or to any of the questions I've asked?

Mr. Jim Hinton: Yes. I think Huawei is one example. It's an egregious example, because we're working with them through the front door when we're worried about them going through our secure data networks.

However, it happens across the board. We basically give away our IP to global companies all the time. We're just happy to participate, and that 75% of the AI IP is just abysmal. Nobody should be thinking we need to be funding and giving away our IP like that. They're profiting off of us. They're using that data. There's no control over it. That's not how innovation works.

Mr. Dan Mazier: Thank you.

That's all, Mr. Chair.

The Vice-Chair (Mr. Corey Tochor): You had 21 extra seconds. Thank you for being very tight with your time.

We're now moving on to Madam Diab for six minutes.

Ms. Lena Metlege Diab (Halifax West, Lib.): Thank you very much, Mr. Chair.

[*Translation*]

Welcome to our witnesses today.

Ms. Gagné, I have a few questions for you and I'll start by congratulating you for your experience in this field.

As a woman, I'm very interested in the challenges that women face in the area of intellectual property commercialization. Can you tell us about that this morning?

Ms. Marie Gagné: Are there any pitfalls for women in commercializing intellectual property? I would say that it's women's struggle in general to take their rightful place in society.

Are intellectual property issues more important? In social innovation—the door I want to open—when we talk about commercializing new ways of doing things and new approaches, anything having to do with equity, diversity, inclusion and decolonization is part of those new practices. This is very often forgotten when we talk about commercialization of intellectual property. That's why I prefer to talk about using intellectual property.

In addition, intellectual property that is created in social innovation generates multiple types of wealth, because it can be transferred across multiple organizations. We often want knowledge to multiply and be shared far and wide. Therefore, if we want to help women and minorities take their place, we mustn't forget the mechanisms that need to be put in place to support the use of intellectual property in social innovation. One way to do that would be to create a funding program dedicated to applied college research and adapted to its realities at the Canadian Institutes of Health Research, but also at the Social Sciences and Humanities Research Council. It could use the same model as the Natural Sciences and Engineering Research Council of Canada's college and community innovation program. That would start appropriating new and innovative societal practices more broadly.

• (1125)

Ms. Lena Metlege Diab: You brought up something very important. What supports would you say are currently in place in Quebec and in the rest of Canada? Also, can you recommend any improvements the government should make to support research?

Ms. Marie Gagné: We talk a lot about the economic value of intellectual property, when what we should be talking about is socio-economic value. Top social science researchers can be found in colleges, polytechnics and universities in Quebec and Canada. Support is needed to bridge the gap between basic research and applied research. Additional funding is also needed to support knowledge transfer to interested stakeholders, in other words, not-for-profit organizations and organizations with limited means but the ability to access broad segments of the population. In many cases, they include vulnerable groups in society who have been shunted aside, as well as professional settings that are very much in need of social and societal improvements. Health care, in particular, comes to mind. The focus is on managing disease, not on managing health. If we want to manage health, we have to focus on social innovation pre-technology.

[English]

Ms. Lena Metlege Diab: Thank you.

Mr. Hinton, you spoke about three things in terms of IP—education, generation and retention. I want to ask you specifically about education.

You spoke about a lot of programs. From the ones that you've identified and used or that some of your clients have used, what in particular is out there for females or people from indigenous communities or marginalized communities that they can use? What can you recommend based on what you're aware of?

Mr. Jim Hinton: The Innovation Asset Collective, an organization I co-founded, is a \$30-million federally funded pilot program. It has a fantastic report on women and under-represented groups. We worked on that for quite some time. My colleague there, Myra Tawfik out of the University of Windsor, and the team prepared a fantastic report as well as action items.

There's a specific funding program for women and other under-represented groups within the Innovation Asset Collective, but that is limited, very limited, and time-limited now. That will stop by the end of March unless there is renewed funding. There needs to be full funding for that and for taking the recommendations. Myra and the team at IAC made a number of recommendations to expand resourcing for women and other under-represented groups.

Ms. Lena Metlege Diab: Thank you. That's my time.

Thank you very much.

The Vice-Chair (Mr. Corey Tochor): Thank you for that round.

I'll move now to MP Blanchette-Joncas for the Bloc.

[Translation]

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

Thank you to the witnesses for participating in this important study.

Ms. Gagné, from the CCTT network, Synchronex, it's always nice to see you. In your opening statement, you talked about the three-year funding the government earmarked in the budget to support the college and community innovation program.

I examined the budget as well, and this is how much I saw: zero dollars. There is nothing, despite the consensus within the scientific community and among all stakeholders, including the ones at this table and all the witnesses we've heard from in the year and a half the committee has existed. The government has turned a blind eye, even disregarding the recommendations in a report the government, itself, commissioned on the science ecosystem. I'm talking about the Bouchard report, of course, which was released on March 20.

Specifically, I'm interested in hearing your views on that lack of investment in research—research investment is, after all, the first phase of the innovation chain. Meanwhile, our competitor and neighbour to the south has doubled the core funding allocated to its biggest program, the National Science Foundation, in the years ahead, under the CHIPS and Science Act.

Canada continues to drop in the global ranking when it comes to research investment. Do you agree with that observation? Also, what risks does that pose to your activities in the long term, tangibly speaking?

• (1130)

Ms. Marie Gagné: Thank you.

Knowledge development is the foundation of wealth creation. As everyone knows, businesses and organizations have to innovate in order to set themselves apart locally, nationally and internationally. Today, being innovative is just as important in municipal governance as it is in the business community. Pursuing innovation means going after knowledge and coming up with new research, which can then be applied. For that reason, I have to agree with you.

It's really important to provide greater support for research. I'm talking about research overall, not just basic research. A look at technology readiness levels, or TRLs, reveals the importance of providing support to every link in the chain. After all, a chain is only as strong as its weakest link. If you want to access innovation and knowledge and get that knowledge out to businesses—going from TRL 1 all the way to TRL 8 or 9—you have to make sure both basic research and applied research are very well-funded.

That's how you get knowledge developed in universities out to the stakeholders in need of that knowledge—businesses and organizations. That's where wealth creation happens. Wealth is created when an invention becomes an innovation and the knowledge is put to use. Accordingly, research as a whole needs to be better funded at every TRL.

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

I'd like to talk more about the budget. As you know, the crux of the issue is money. The committee recently met with Jeffrey Taylor, the chair of the National Research Advisory Committee at Colleges and Institutes Canada. He told us that Canada's colleges received only 2.39% of tri-council funding in 2020.

Can you tell us where you stand on that? Could you also talk more about the issue you raised earlier in relation to short-term funding and the three-year budget investment? On a practical level, how does that impact your organization and the members you represent?

Ms. Marie Gagné: There's no doubt that we welcome the additional funding allocated to the college and community innovation program, which the Natural Sciences and Engineering Research Council of Canada administers. As I said, this is non-recurring funding, which is a problem because it doesn't allow for long-term strategy development or the purchase or introduction of new equipment. Something else it doesn't allow for is attracting and retaining top talent. Clearly, when you're forced to offer people temporary contracts, you can't be competitive.

Providing very good support for basic research but inadequate support for applied research impacts Canada tremendously. Applied research is where wealth and value are created. It's really time to adjust how research funding is apportioned and increase the overall level of funding throughout the chain. If we don't want to abandon an invention midstream and run the risk that it will never benefit a business or innovative solution, research has to be adequately funded at every stop along the way, every TRL.

• (1135)

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

Ms. Marie Gagné: Ongoing funding is the crux of the issue.

Mr. Maxime Blanchette-Joncas: Exactly. I completely agree.

Ms. Marie Gagné: In an inflationary environment...

Pardon me. Please go ahead.

Mr. Maxime Blanchette-Joncas: Not to worry.

Let's come back to intellectual property. How do you think we should support the development of a research continuum? I'll be even more specific. How do we bring basic research players—universities—and applied research players—college centres for the transfer of technologies and others—closer together? The point is to turn inventions into innovations.

[*English*]

The Vice-Chair (Mr. Corey Tochor): I'm sorry but we're out of time for this round of questions. I would ask the witness to please submit a written response to the last question.

We move now to our guest MP for the day.

Welcome, MP Angus, to our committee. For six minutes, the floor is yours.

Mr. Charlie Angus (Timmins—James Bay, NDP): Thank you, Chair. It's an honour to be at this committee.

Mr. Hinton, I want to start with you. I was interested in how you talked about how IP is leveraged against companies, against our potential innovation. We certainly know that, with Google, Amazon, Meta and Apple, there is this whole concept of this kill zone for innovation. Their data banks are without parallel. They have predictive abilities to anticipate. They have a massive legal war chest and control of the market.

How do we, as Canadians, even play in that game when we see the kill zone of innovation around so many start-ups?

Mr. Jim Hinton: Those big companies have amassed tens of thousands of patents. Their datasets are unparalleled globally, and we continue to feed those as users. They always say in the last year they've generated more data than they have in all the years before that, so it's always continuing to ramp up. What we need to do is reduce this asymmetry.

There's a significant freedom-to-operate limitation when you're getting into markets where these big players are, so you need to reduce the IP and data asymmetry. You need to build an IP position that you can leverage against them. It's not about getting patents for protecting your inventions as much as it's about getting patents that are going to read on what they're doing and neutralize the threat of what they have. These big players need to be neutralized. If you do it one-off with one company at a time, they're going to keep buying you up or knocking you out and restricting your ability to grow in scale.

Mr. Charlie Angus: One of the arguments that has been used is on antitrust, but antitrust tends to be on competitive pricing, whereas this is a whole different thing. This is about limiting future potential and future possibilities by just buying up or sidelining innovation. Given their massive power in market share and data power, you mentioned the idea of IP collectives. Is that what we have to look at as Canada?

I would love for us to take on antitrust, but I don't think our American neighbours are going to like that very much. Antitrust is going to have to come out of the United States, really, to make this happen—or Europe—but I don't know if we could do that. Would the IP collectives be a way of trying to level the playing field somewhat?

Mr. Jim Hinton: Maybe as a first competition policy, antitrust is absolutely a strategic lever to embed Canadian companies in global value chains. That's what the Americans use their antitrust policy to do. They grow their companies using competition policy, or not using it, to ensure that their companies are inserted into global value chains. That is absolutely a lever we can use to increase the freedom to operate for Canadian companies, if done strategically.

As you mentioned, IP collectives—the Innovation Asset Collective, which I co-founded, and Mike McLean was here earlier at the committee and spoke on that—need to be funded and expanded. Right now it's just for data-driven clean-tech companies. It needs to be much broader than that.

On the data side, we saw this with Sidewalk Labs. If you read the book that's out on that, I get a brief mention because I helped work with the Waterfront Toronto team on that to reorient the policy. It's about reducing the asymmetry in data and allowing Canadian companies to be able to access Canadian-generated data and to use that as a commercial asset.

There are the privacy concerns that need to be navigated and managed. However, ultimately, if the data is an asset and these big companies are able to use that to far out-commercialize you because they have access to that information, then we need to be able to get to that scale. We can really only mimic that scale, because we're a small open economy, in a collective way—so pooling data assets that Canadian companies can access and commercialize.

Mr. Charlie Angus: I'm really interested that you raised the issue of Sidewalk Labs, because I certainly pushed for the investigation at the federal level. Would it seem that we are naive in dealing with these companies? We were turning over a massive piece of prime real estate to one of the biggest companies in the world to do whatever they wanted. We were told it would be really cool for Toronto to give over all this land, all this potential, and, hey, they'll get all of our data, but they'll put it in some kind of trust maybe at a library someplace.

The whole thing from start to finish raised serious questions about public interest, public space and the public right to know, yet all those seemed to go by the wayside because it was Google and they were supposed to be cool. Is there a naïveté to Canada's approach to this?

• (1140)

Mr. Jim Hinton: Yes, absolutely. We got the bum's rush on the whole thing, and we were hoodwinked into doing that deal. Luckily we got out of it, because it would have been generations of economic opportunity lost. It was a land grab but a data grab, which is really even worse. There was some predatory contracting and all sorts of things embedded in there. On the record, I am saying that the patent terms were laughably stupid. They were trying to make the Canadians agree to things that were just foolish. They said they weren't going to sue us in Canada, but if we entered the U.S. market they would use their patents to sue us. It wasn't a partnership. It was them coming in...and it was at all three levels of government where we saw it: Toronto, Ontario as well as the federal government.

Everybody sort of saw the Google.... Maybe at the time, the Google brand was stronger than it is now with what's happening with some of the other data aspects, but it was a failure of political leadership across the board.

Mr. Charlie Angus: Thank you very much.

The Vice-Chair (Mr. Corey Tochor): Thank you for that round of questioning.

Now moving on to our five-minute round, we have Mr. Soroka from the Conservatives.

The floor is yours.

Mr. Gerald Soroka (Yellowhead, CPC): Thank you, Mr. Chair.

Starting off with Mr. Hinton, would you say that basically we do a poor job of trying to patent anything in Canada?

It seems that we do job creation at our universities to do research. That's about it, and then we sort of just let the money flow out. Is that a good assessment?

Mr. Jim Hinton: Yes. It's really on two fronts.

If you look at our research institutions, it's philanthropy. We're giving this stuff away. Universities are great. We do two things well, education and basic research, but that's being given away.

When it comes to applied research and commercialization, it doesn't happen. There was \$4.5 billion spent on research and development at universities in 2018. Guess how much they made in commercialization? It was \$54.4 million. Anybody can turn \$4.5 billion into \$54 million. It's easy. You can make more money: Just don't spend as much money as you spent before.

It's not happening. Universities are not doing commercialization. They're doing either basic research or philanthropy. We need to get more of the reorientation around supporting Canadian companies and having Canadian headquarter companies commercialize and scale globally.

If you look at some of the funding initiatives, even as recently as yesterday with Ericsson and Nokia, Canadian public funding is there. These are global companies. We're giving them money to generate IP, and then we're going to buy that back from them. Maybe it's a little bit better than Huawei, but it's still no good.

This is not what innovative economies need to be doing. We need to be the ones setting up Canadian branch plants in Finland or Sweden, or wherever else there's great talent, harvesting data and IP from them and then commercializing it globally. We're doing it backwards.

Mr. Gerald Soroka: Okay. Because we've been working with these big tech companies for so long and they've patented so much, are there really any patents left that aren't going to infringe on them to some degree? Are we now forced to work with them because we have no patents of our own?

Mr. Jim Hinton: I work with Canadian companies. In the software space especially, you will be infringing on somebody else's patent because there are so many patents out there. Up until last year, IBM was filing 9,000 patents—more than all of Canada's combined. There's this upward trajectory.

Now the Chinese are filing millions of patents annually as well. There's no bottom to intellectual property generation. You just keep filing more patents.

Canadian companies aren't capturing at the same scale. They're not meeting the same pace. The IP deficit is growing and getting worse. When you factor in intangible assets like data, it starts to dramatically increase because of the value and opacity of how data can be commercialized and used.

Mr. Gerald Soroka: Obviously this government realizes this, and that's why they're starting to change so many things.

One of our colleagues brought up about women, indigenous and under-represented people having funding available. Is there anything in there where they have to patent it to have long-term stability, or is that just a quick job creation to make it look like they're doing something?

Mr. Jim Hinton: On the IP initiatives, yes, but they're significantly subscale. You can't give \$40 million to Nokia and then, in the same breath, give \$10,000 through NRC IRAP's IP assist to a Canadian company. You're increasing the asymmetry rather than trying to catch up. You're putting wind in the sails of the foreign companies and then you're putting anchors on the Canadian companies.

• (1145)

Mr. Gerald Soroka: Yes. There are a lot of restrictions and a lot of problems that this government is doing...or their lack of it.

What other areas do you think they need to improve upon?

Mr. Jim Hinton: When you look at the strategic innovation fund, if a Canadian company wants to get this, there are IP retention terms in there. If you leave, then you have to either pay it back or leave the IP behind. That doesn't happen with Nokia. Finland gets the IP immediately. The patents have Nokia Finland's address on them.

We give Canadian companies a worse deal than we give these big established players. Those are the ones we want to insert into that value chain and capture some of that value, and we're doing the opposite.

Mr. Gerald Soroka: Would you say that these foreign companies are well aware of how easy it is to get research done at our expense? Knowing that they're going to profit highly from it, are they intentionally coming here to work with us?

Mr. Jim Hinton: Yes. There's a reason that Ohio doesn't want southwestern Ontario's Volkswagen battery manufacturing facility. It's not economic. There are no spillovers happening. If there were 100 jobs in a factory 10 years ago, then there are 10 now, and eight of those jobs are coming from Volkswagen Germany. There are two people pushing around brooms in a factory.

I used to work in southwestern Ontario for a heavy truck manufacturer. These are parking lots. The Mexicans took the jobs. Canadians don't want these jobs. Nobody wants these jobs, but we're funding companies to create the atmosphere of jobs.

We gave \$30 million to the Michelin plant. Michelin has 10,000 patents. It's an IP game. It's not about jobs.

Mr. Gerald Soroka: Okay. It's more looking like we're doing something than actually doing anything.

Can you give us other opportunities where this government should change the direction, and how it could do that to make sure that the patents stay with us?

Mr. Jim Hinton: It's simple. It's about prioritizing Canadian companies and doing whatever you can through tax policy, innovation policy and competition policy to increase Canadian companies' freedom to operate globally. It's putting the wind in the sails of the Canadian company using domestic markets. Strategic procurement is another example. There are a lot of levers.

The Americans do it. Certainly, the Chinese and Koreans do it. You see the Scandinavians doing it, as are other European countries. We're not doing it. We're just being taken advantage of.

Mr. Gerald Soroka: That sounds very....

Okay. That's it for me then.

The Vice-Chair (Mr. Corey Tochor): Thank you so much for that.

We're moving on to MP Lauzon for five minutes.

[*Translation*]

Mr. Stéphane Lauzon (Argenteuil—La Petite-Nation, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for being here.

Ms. Gagné, today, we heard how the transfer of patents to other countries gives rise to national security concerns. The Minister of Innovation, Science and Industry introduced a certain number of measures to address national security concerns, which we've talked a lot about in the past year. Among those measures are working closely with universities to make them aware of the risks associated with the transfer of intellectual property, as well as developing new national security guidelines for research funding to help post-secondary institutions better identify, assess and mitigate the risks.

What's more, under the Investment Canada Act, foreign investors have to undergo a review, including enhanced scrutiny for all sensitive sectors, such as universities. I'm not sure whether you know this, but the government introduced Bill C-34, an act to amend the Investment Canada Act. Can you talk about the importance of that scrutiny in protecting Canadian intellectual property?

Ms. Marie Gagné: Having sat on a number of committees and worked with universities, I have a slightly more nuanced view than Mr. Hinton.

Universities are increasingly sensitive to and aware of the importance of having mechanisms to analyze the potential national security risks of partnering with foreign companies. I think the progress is well-paced. Quebec is even establishing practices to limit risks associated with research and innovation investments through strategic industrial research networks. Things don't change overnight, of course.

Nevertheless, things have changed dramatically in the past two years. How do you assess the risk of working with an industry partner? The controls are becoming tighter and tighter. Where it gets complicated, and Mr. Hinton talked about this, is figuring out who is behind the main company. That can be very challenging. If there were people dedicated to that and if there were a central office to help us determine whether the prospective partner posed a risk, that would provide added value.

● (1150)

Mr. Stéphane Lauzon: Very close to my riding, I have education-based research centres, so colleges and universities. The Saint-Jérôme CEGEP is one example. Those institutions have been pursuing innovations, doing a lot of work on plastic-based materials and working closely with universities and the private sector. Businesses play a crucial role because they are the ones that create demand for the technology.

Yesterday, I was at Lion Electric, a company that opened the first battery manufacturing plant in Quebec. A thousand feet from the plant, a research centre is being set up, and it will work with universities.

Mr. Hinton, do you think funding industry partners that work with universities and the private sector is a good way to ensure that Canada produces cutting-edge intellectual property?

[English]

Mr. Jim Hinton: Yes, as you mentioned, the strategic alignment is key: to make sure that we have Canadian universities that are generating the IP and then Canadian companies that are around that to be able to be the receptors. Then, from a value-chain perspective, from critical mineral batteries to electric vehicles and even self-driving vehicles, there are Canadian companies across the value chain that own intellectual property and that are inserted into the global value-chain end of commercializing. We need to make sure that the Canadian company that is receiving that IP gets wind in its sails and is going to be able to commercialize and expand its market opportunity.

Mr. Stéphane Lauzon: Thank you.

Do we have more time left?

The Vice-Chair (Mr. Corey Tochor): You have four seconds.

Mr. Stéphane Lauzon: Okay, let's ask another question.

A voice: Oh, oh!

Mr. Stéphane Lauzon: Thank you, Mr. Chair.

The Vice-Chair (Mr. Corey Tochor): Thank you so much.

With that, we are now on to a two and a half minute round. We have MP Blanchette-Joncas for two and a half minutes.

[Translation]

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

Ms. Gagné, I have a quick question for you, and I'd appreciate a quick answer. How can we further support the development of emerging technology companies?

Ms. Marie Gagné: I'm going to speak for my own bailiwick.

Applied research centres can help emerging companies get to a minimum viable product quickly. Those start-ups need help when it comes to fast-tracking the development of the first version of a product that can be commercialized.

That is why it is incredibly important to bring applied research players and start-ups together. The first version of the product has to be commercialized quickly so it can be improved quickly to arrive at a second, better quality, version. Bringing those two together is extremely important because start-ups have very limited research capacity and little money for equipment. Giving those companies access to cutting-edge infrastructure in applied research is immensely valuable.

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

I'm glad you're here, Mr. Hinton. You said something very important. Only 7% of the IP generated under the pan-Canadian artificial intelligence strategy is owned by Canadian interests. That's very worrisome, I must say.

Other experts who appeared before the committee said that Canada was at a crossroads. Do we want to be a net consumer of innovations invented and produced elsewhere, or do we want to be a net exporter of homegrown solutions?

Tell us, if you would, about the tangible risks and consequences of doing nothing—of not having a real strategy and not turning things around to fix this. What could happen to Canadian business, to Canada's economic prosperity?

● (1155)

[English]

Mr. Jim Hinton: Yes. If you look at the makeup of the Canadian economy, if we don't have our global champions, then our prosperity is going to continue to erode. We're always going to continue to pay more and more for the world's IP. Even from a tax perspective, we're going to have less and less of a tax base with companies offshoring their IP, so we won't be able to pay for the social programs that we need and want. It will continue to erode.

We need to turn into Canadian companies that are commercializing globally and bringing wealth back into the country, instead of really doing the opposite. It's existential. This is generational wealth transfer that we're losing now, and it takes decades to catch up. It takes 20 years for the patent to run its course. We have to put pieces in place, as the Chinese did 15 years ago for generating, capturing and then expanding their IP strategies.

[Translation]

Mr. Maxime Blanchette-Joncas: Thank you.

[English]

The Vice-Chair (Mr. Corey Tochor): Now we are on our last round of questions, our last MP questioning.

MP Angus, you have two and a half minutes.

Mr. Charlie Angus: Thank you, Mr. Chair.

We've seen Joe Biden's IRA. When I talk to people in industry, one of the things that they're so invigorated by is this whole-of-government approach, a whole larger economic strategy, not just sprinkling tax credits. They are in a global IP war with China as to who's going to be the innovator, who's going to control that market, so they incorporated all these facets in order to make sure that green technologies are going to advance America's economic, social and climate targets.

Now we've just seen in the recent budget of the Trudeau government that we have \$85 billion in green investments, which is great. We've managed to secure a number of commitments to ensure jobs and apprenticeships. However, do you see Canada actually tying these investments to a larger IP strategy so that we actually benefit and are not just the traditional hewers of wood and drawers of water?

Mr. Jim Hinton: No. The recent budget and budgets before it... Just on the upstream side, if you fund so everybody buys an electric vehicle, that doesn't ensure there is any economic value happening. We saw with wind turbines in Ontario that it's a massive wealth transfer to whoever owns the IP on those wind turbines, such as Samsung, Siemens or Korean companies.

It doesn't necessarily mean there's going to be any economic benefit. A lot of that demand side means that we're going to end up buying American cars, electric vehicles, and there will be nothing left here. We're going to be doing the hard work of physically assembling the pieces that the robots won't do, but we're paying for everything else. It's backwards. It's missing the IP capture part. Insert Canadian companies into the electric vehicle value chain. Do that.

The Americans are doing it. The U.S. Department of Energy has been doing it for 15 years—systematically. Any time a Canadian company files a patent for a battery, they're getting called up by Chinese investors who are saying they want to invest in their company because the Chinese want to own that piece of the value chain. We're not doing that.

Mr. Charlie Angus: We can do that without being on the wrong side of our global trade agreements, as the Americans are doing.

Mr. Jim Hinton: Absolutely. These are all standards, approaches and playbooks that other countries have taken. We've modelled the

Innovation Asset Collective off of the French, the Korean and the Japanese approach to being higher performing on intellectual property.

There's nothing offside of trade agreements in ensuring that Canadians are participating in the global economy.

Mr. Charlie Angus: Thank you.

The Vice-Chair (Mr. Corey Tochor): We are ahead of schedule a little bit, so we're going to squeak in two rounds of four-minute questioning.

Now we have MP Lobb for four minutes.

Mr. Ben Lobb (Huron—Bruce, CPC): Thanks.

Thank, Mr. Hinton.

One question I wanted to ask you is about the net benefit test. The net benefit test for 2023, indexed, is just under \$2 billion, but most of the small tech start-up companies don't IPO at \$2 billion in Canada. They have an enterprise market value of many multiples less than \$2 billion.

Do you think that Canada needs to take another look at the net benefit test? We are investing so much here at the university level, and through SR and ED and IRAP, only to see, when it's about to blossom, a U.S. private equity firm come in, take it out and consolidate the market that it has created.

Do we need to look at the net benefit test?

Mr. Jim Hinton: Countries are going further and further upstream to acquire companies that are going to fill those links in their value chain. If we say we want to be good at electric vehicles or critical minerals—or you name the sector—there needs to be a coordinated effort to make sure we retain those companies. Companies are going to come and go, and they get bought and sold, but we want to retain as many of them possible. If they go under because they're bad companies, we make sure that happens as well.

We need to be able to keep filling the pipeline and then accelerating those companies to scale. It's all about scale. You can't scale if the foundation you're built upon is already owned. That's what happens when you own 1% of the clean tech IP, for example. Generally speaking, we own 1% of global IP across all sectors.

● (1200)

Mr. Ben Lobb: I don't want to be a conspiracy theorist, but when Magnet Forensics sold in Kitchener-Waterloo, I noticed it was just under the threshold that would have required a net benefit test. I'm not saying the industry minister would have decided against that sale, but I thought it was a little interesting that it did come in under that amount.

BlackBerry recently sold 32,000 of its older patents, which it says are non-core, to a U.S. private equity company—whatever it was. There had to have been tens of millions of Canadian taxpayer dollars invested in SR and ED and IRAP and all these things to come up with some of these patents—not all, but some.

Do you think the Canadian government or the taxpayer has any right at all to any of those dollars when they are sold, or is that just part of government business?

Mr. Jim Hinton: It's way too late to be looking at it now.

When we fund this Nokia deal with \$40 million of public funding, where are the terms in there? Start today, but not after the tree has already been cut down and it's gone.

From my understanding, a lot of the IP and the value in the BlackBerry portfolio has been extracted. They've licensed it out, and now it's just about converting the stack of patents in the corner of the office into a pile of money. The commercialization—

Mr. Ben Lobb: I have a last, quick question before my time runs out.

We had the Canadian IP Office appear a month ago, and they said that everything is great and that they are faster and more robust than ever. I know you don't want to get on the wrong side of them with your applications, but without shooting yourself in the foot, is that the sense? Is there the sense that they're doing better, or is there more work to be done yet?

Mr. Jim Hinton: They were set up to fail to a certain extent. It's three years to get a trademark examined. A trademark is a one- or two-page document. It's a relatively simple thing. There is a significant backlog, so they need support from an administrative perspective in processing these documents.

From a strategic perspective, how do we use the Canadian Intellectual Property Office to empower Canadians to better file domestically but also, predominantly, where the global markets are?

The Vice-Chair (Mr. Corey Tochor): Thank you so much for that.

Madam Bradford, you have four minutes.

Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.): Thank you, Mr. Chair.

Thank you, Madam Gagné, for appearing before our committee again.

Mr. Hinton, welcome to Ottawa. I believe the last time we met was in December when we made the announcement about ElevateIP and the \$90-million investment the federal government made into accelerators and such incubators as Communitech, which got \$38 million of that. That will help companies in Ontario, Manitoba and Saskatchewan. Of course, you were at that announcement. Here's a quote that you gave us at that time. You said that, without protection, "IP is going to flow out of the country. Then the value from that IP being commercialized is lost forever and then we're going to have to pay to use that technology, even though we built it." It was similar to what you said in your opening comments this morning.

As the founder of Own Innovation, you'll be directly involved in advising start-ups through the ElevateIP program. Can you tell us how you and your company are benefiting from that and how this ElevateIP program will help address some of these problems that you've been identifying in your testimony this morning?

Mr. Jim Hinton: Yes. ElevateIP is a relatively brand new program. I think a number of different aspects have been working and consulting with Communitech to help frame this, supporting them on how to best frame it for Canadian companies. I think education is a key piece, making sure that companies know the rules of the game but also at a sector-specific level—within different sectors and how they manage intellectual property there. I think that's table stakes, and we need to be doing that. People need to know how to manage IP.

In terms of the next piece, to me, I'm hopeful and optimistic that a lot of the funding will flow into the companies to be able to generate IP and retain IP and get the patents they need or any other intellectual property protection they need.

Ms. Valerie Bradford: Right. It seems that it will help address the issue that 90% of the value is in intangible assets like IP. Can you tell me how you're utilizing this through your company, Own Innovation, in the companies you're working with so that they can leverage this program?

• (1205)

Mr. Jim Hinton: It's from the education side but then also from the resourcing perspective so that they can get the patent they need. These early-stage companies talk about the valley of death, or going from an idea to commercialization, making sure you get that patent in place. You need to file it most times before you're commercializing. That oftentimes is the spot where you need the resources the most. Then, as the company grows in scale, it's managing that freedom to operate the risk that's out there and using IP intelligence and IP landscaping to understand who the players in that market are and who you'll necessarily be bumping into, and then building a position, starting today, that you will need five to 10 years from now.

Ms. Valerie Bradford: In your opinion, then, this ElevateIP program will help address some of these long-standing issues that you've identified.

As well, I was interested and actually kind of alarmed to hear in your opening statement that universities are involved in helping to sell to foreigners the IP that's being developed on their campuses. Do you know why this is happening? Why would they do that?

Mr. Jim Hinton: It's because there's no incentive otherwise. They're happy to work with these global companies. It's really a photo op. Universities in Canada are mandated with two things: basic research and education. In countries like Finland, economic development is one of those priorities. If that was priority, a mandated priority with checks and balances for Canadian universities, then we'd be able to see economic development.

Right now, Canadian universities have oversold. They're not doing innovation. It's Canadian companies that do innovation, and we should be supporting them. Canadian universities should be supporting the Canadian companies—not us trying to find ways to get higher performing out of Canadian universities.

Ms. Valerie Bradford: Right. I think a lot of the Mitacs programs and the colleges do more applied research, where they actually partner up with existing companies to help solve actual problems. It's not theoretical research but it's to solve a problem that they're facing. I think that's kind of a more direct approach sometimes than the theoretical research we get.

Mr. Jim Hinton: Canadian colleges are chomping at the bit—

Ms. Valerie Bradford: Yes, they are.

Mr. Jim Hinton: —for more resources on intellectual property. They've been neglected. They need more resourcing and support. IP Ontario is relatively new and is starting to fill some of that gap, but it's significantly subscale. Even with ElevateIP, you talked about \$90 million and four years spread across the country. Two days later, you're down the street and Nokia's getting \$40 million.

A bunch of small companies can get picked off very easily and then major companies get significantly more resources to be able to continue to accelerate away.

It's the scale, and we need to bring that scale up. A start-up strategy is okay, but we need a scale-up strategy. Start-up companies are going to come, they're going to fail and they're going to grow. The ideas aren't that great, but once they're in the market and they already know where the next dollar is going to come from, we want to be putting more resources behind those, because the most valuable form of IP, I would say, is knowing what people are willing to pay for and then continuing to go down that line.

Ms. Valerie Bradford: Right, and I think ElevateIP is for the ramping up. The start-up, like you say, is not the problem. It's growing to the next...before you're profitable. That's what's happened—

The Vice-Chair (Mr. Corey Tochor): I apologize. We're a minute and 30 seconds over our four-minute allotments.

Ms. Valerie Bradford: Thank you.

The Vice-Chair (Mr. Corey Tochor): I would like to thank the witnesses for being here in person and online.

We will now suspend for one minute before we enter the in camera business section of our meeting. We'll suspend and then we'll be right back, so don't go too far.

[Proceedings continue in camera]

Published under the authority of the Speaker of
the House of Commons

SPEAKER'S PERMISSION

The proceedings of the House of Commons and its committees are hereby made available to provide greater public access. The parliamentary privilege of the House of Commons to control the publication and broadcast of the proceedings of the House of Commons and its committees is nonetheless reserved. All copyrights therein are also reserved.

Reproduction of the proceedings of the House of Commons and its committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the Copyright Act. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the Copyright Act.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Also available on the House of Commons website at the following address: <https://www.ourcommons.ca>

Publié en conformité de l'autorité
du Président de la Chambre des communes

PERMISSION DU PRÉSIDENT

Les délibérations de la Chambre des communes et de ses comités sont mises à la disposition du public pour mieux le renseigner. La Chambre conserve néanmoins son privilège parlementaire de contrôler la publication et la diffusion des délibérations et elle possède tous les droits d'auteur sur celles-ci.

Il est permis de reproduire les délibérations de la Chambre et de ses comités, en tout ou en partie, sur n'importe quel support, pourvu que la reproduction soit exacte et qu'elle ne soit pas présentée comme version officielle. Il n'est toutefois pas permis de reproduire, de distribuer ou d'utiliser les délibérations à des fins commerciales visant la réalisation d'un profit financier. Toute reproduction ou utilisation non permise ou non formellement autorisée peut être considérée comme une violation du droit d'auteur aux termes de la Loi sur le droit d'auteur. Une autorisation formelle peut être obtenue sur présentation d'une demande écrite au Bureau du Président de la Chambre des communes.

La reproduction conforme à la présente permission ne constitue pas une publication sous l'autorité de la Chambre. Le privilège absolu qui s'applique aux délibérations de la Chambre ne s'étend pas aux reproductions permises. Lorsqu'une reproduction comprend des mémoires présentés à un comité de la Chambre, il peut être nécessaire d'obtenir de leurs auteurs l'autorisation de les reproduire, conformément à la Loi sur le droit d'auteur.

La présente permission ne porte pas atteinte aux privilèges, pouvoirs, immunités et droits de la Chambre et de ses comités. Il est entendu que cette permission ne touche pas l'interdiction de contester ou de mettre en cause les délibérations de la Chambre devant les tribunaux ou autrement. La Chambre conserve le droit et le privilège de déclarer l'utilisateur coupable d'outrage au Parlement lorsque la reproduction ou l'utilisation n'est pas conforme à la présente permission.

Aussi disponible sur le site Web de la Chambre des communes à l'adresse suivante :
<https://www.noscommunes.ca>