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Chair

Mr. Dan Ruimy

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● (1545)

[*English*]

The Chair (Mr. Dan Ruimy (Pitt Meadows—Maple Ridge, Lib.)): Good afternoon, everybody. Welcome to meeting number seven of the Standing Committee on Industry, Science and Technology.

Today, we have witnesses from Statistics Canada, Wayne Smith, chief statistician of Canada; and from the Natural Sciences and Engineering Research Council of Canada, Mario Pinto, president; Alfred Leblanc, vice-president, communications, corporate and international affairs; Pierre Charest, vice-president, research grants and scholarships directorate; and Patricia Sauvé-McCaun, vice-president, common administrative services directorate.

We're going to allow StatsCan to do its 10-minute presentation, and then, if it's okay with the committee, we'll proceed to the presentation by the Natural Sciences and Engineering Research Council. This way you can direct your questions to either party.

Without further ado, Mr. Smith, the floor is yours.

Mr. Wayne Smith (Chief Statistician of Canada, Statistics Canada): Mr. Chair, I would first like to thank you for the opportunity to speak to you today about Statistics Canada's priorities and challenges.

Statistics Canada is well known for regular publication every year of a wide range of high-quality economic, social, and environmental data, from gross domestic product to crime rates, from employment to inflation, from post-secondary graduations to field-crop production. These data support the decision-making of governments, business, unions, civil society, and even individual Canadians. Our stakeholders demand that data be both consistent and comparable over time, yet responsive to emerging needs. We work collaboratively with provincial and territorial governments, other stakeholders, and with international organizations and other national statistical offices to meet these challenges. For our most impactful data, we pre-announce publication dates and religiously meet them. Maintaining this continuous stream of decision data remains our major focus.

This year, of course, is a special year in the cycle of statistical production. It is the year in which we conduct the censuses of population and agriculture. For 2016, the census of population returns to a comprehensive and fully mandatory program. Exceptionally, one in four households will be asked to complete the long-form census. The 2016 program will make greater use of administrative data to reduce the burden on Canadians of responding. It will also make greater use of social media to promote the census. We hope and expect that this year about two-thirds of Canadian households will respond to the census via the Internet.

Another plus for the 2016 program is that we expect to release all data from the census of population about 10 months earlier than in previous censuses. The census of agriculture will also be conducted this year and hopes to make some significant gains in Internet response by farm operators.

As I mentioned, Statistics Canada's program must evolve to meet emerging needs. In recent budgets, we've been funded to introduce a triennial survey of household wealth, to generate new statistics to measure the stability of financial markets, to build a new comprehensive price index for new and resale housing, to measure the clean-tech sector, and to determine how best to measure the impact of foreign buyers on residential real estate markets.

Working jointly with other departments, Statistics Canada has made strides in labour market information, developing and implementing a new survey of job vacancies and wages, which has now begun publishing data. We have also fielded a pilot survey on children's health that will fill a significant gap in health data. The survey on job vacancies would not have been possible without direct funding from Employment and Social Development Canada, and the survey on child health would not have been possible without the assistance of Health Canada and the Public Health Agency of Canada.

Statistics Canada also works to increase its efficiency and reinvests savings in the statistical program. In the past year we invested in the expanded and improved statistics on the environment, on energy, and on globalization.

Rising to the challenge raised by the Auditor General in his May 2014 report, we have developed new techniques for estimating small area data, and we'll soon be applying these techniques to generate a wide variety of small area data on new subjects.

Beyond these success stories, there are still gaps where new partnerships and resources are needed to make progress. One example is the digital economy and innovation. Some work has been done on an ad hoc basis, but a more regular and consistent program is needed.

Academic researchers are pleading for Statistics Canada to resume conducting longitudinal surveys that follow children, youth, workers, immigrants, and seniors through time, as some policy questions can only be addressed in this way. Longitudinal surveys are, however, expensive and require time to yield their full potential. Better information about life-cycle transition, such as transitions from school to the labour market, or from work to retirement, and from early old age to the very advanced years of aging, are of particular interest to researchers and to policy-makers.

I mentioned efficiency earlier, and I'm pleased to be able to tell you that Statistics Canada has a permanent management process to seek out and exploit opportunities to improve the efficiency, robustness, and responsiveness of its systems and processes. These systems have been thoroughly overhauled over the past five years and have been improved on all three dimensions of efficiency, robustness, and responsiveness.

Despite budget reductions, as I mentioned above, the efficiency gains allowed us to expand the statistical program in critical areas, and to remove all charges for access to standard statistical products and all limitations on their redistribution by others.

Gains in responsiveness allowed the agency to develop and deploy the new job vacancy and wage survey in record time.

One particular strategic investment is being made into the further development of the use of administrative data and other non-traditional data sources, such as big data and satellite telemetry to replace or complement traditional survey research including, potentially, parts of the census. These techniques can reduce the cost of statistical production and reduce the burden on businesses and individuals while permitting data to be generated for very small geographic areas.

Equally important for the health of the statistical system over the past few years, Statistics Canada has identified each year, and program by program, investments required during the next 10 years to ensure the continuity and quality of its outputs. These are things such as system and survey redesign, implementation of new classification standards, and implementation of new international conceptual standards. These investments have been consolidated into a 10-year forward plan with a corresponding financial plan to ensure that the necessary financial resources will be available.

A final priority I'd like to mention is the government's commitment to reinforce the formal independence of Statistics Canada in law. While Canada's statistical system is much envied, one area of weakness that stands out among developed countries is the absence in law of formal protection of the national statistical office's independence. Canada has endorsed guidelines from the United Nations and the OECD that set out principles and recommendations in this regard. Statistics Canada is working on recommendations for consideration by the government that would follow international guidance and bring us in line with other developed countries.

Turning to challenges, the first one I would mention is a very positive one. The government's emphasis on evidence-based decision-making and monitoring of results is giving rise to what I have described as a tsunami of demand for Statistics Canada's services that will temporarily tax our capacity as we adjust to this new level of expectations, but adjust we will.

The second challenge at the forefront of our thoughts is the impact on data quality of declining household survey response rates. This is a phenomenon throughout the developed world for both public sector and private sector survey organizations. It reflects both greater difficulty in contacting households and the faster pace of modern lives which affects the willingness of Canadians to participate. We're tackling this issue through a combination of improved survey processes, new response channels, application of behavioural economic theory, improved survey design, and greater use of administrative data to displace or shorten surveys.

The final challenge that's very front of mind for us at the moment is the temporary decline in the effectiveness of our informatics support. Statistical agencies are essentially applications of informatics. Every stage requires intensive informatics to actually carry out the work. There has been some degradation in the level of support that we've been receiving, and we're working on this issue with our partners.

I believe I've pretty much exhausted my time, so I'd like to close by thanking you again for for this opportunity to address the committee on the work of Statistics Canada.

● (1550)

The Chair: Thank you very much.

We will move to the Natural Sciences and Engineering Research Council of Canada.

[*Translation*]

Dr. B. Mario Pinto (President, Natural Sciences and Engineering Research Council of Canada): Thank you, Mr. Chair, and ladies and gentlemen of the committee.

My name is Mario Pinto. I am the president of the Natural Sciences and Engineering Research Council of Canada, also known as NSERC.

I am happy to be here today to talk to you about NSERC's role in growing Canada's prosperity and well-being.

[*English*]

NSERC invests over $1 billion each year in natural sciences and engineering research and innovation in Canada's post-secondary institutions—colleges, polytechnics, and universities. Our investments support over 30,000 science and engineering students, and 11,000 professors, world-leading researchers in their fields.

Our investments also enable partnerships that connect industry with discoveries and the people behind them. This ensures that discovery research is constantly being enriched by industry and market perspectives. We currently work with 3,550 companies. We are very confident in these investments. The OECD has stressed human capital as a basis for innovation and ranks Canada number one in the percentage of highly educated individuals in the workforce. These investments have never been so critical.

The world is in the midst of what some call the fourth industrial revolution, and Canada's success will largely depend on fully mobilizing Canada's discovery and innovation ecosystem. The hallmark of the present revolution? It is progressing faster than ever before at a scale and scope that is both unprecedented and unpredictable.

Powerful new technologies have emerged from fundamental science and are converging across physical, digital, and biological worlds. These enabling technologies are transforming economies, societies, and industries. Most examples are within NSERC's purview: energy storage, advanced robotics, the Internet of things, 3-D printing, next-generation genomics, automation of knowledge work, and advanced oil and gas exploration and recovery.

The impact will be felt across the whole of Canada's economy in agriculture, fisheries, forestry, oil and gas, transportation, construction, and manufacturing. All are being completely transformed. To use an example, graphene, a revolutionary nanomaterial 200 times stronger than steel, resulted from pure discovery research. We are already seeing the use of carbon fibre in the aerospace industry because of its lightweight qualities. Graphene, which is even lighter and stronger, could eventually replace all steel structures in aircraft, vastly improving fuel efficiency and range. The many industry applications of this breakthrough at reasonable cost will rely on further discovery research.

To effectively participate in the fourth industrial revolution, Canada needs scientists, engineers, and business leaders who are empowered by a research and innovation system that is adapted to this technological reality. Now is the time to embrace fresh thinking about how to pursue research and innovation activities. Today's research and innovation ecosystem is much more collaborative and non-linear than ever before. Done right, there is a very active dynamic linking discovery and innovation.

Discovery-based research, which draws on different thinking and uses a different lens, produces new firsts in knowledge, as well as new opportunities and inventions which are certainly of value to innovation. Innovation, which is attuned to market needs and opportunities, creates a new context for discovery research, and helps test and realize the value of inventions. In the process, it generates challenges that inspire further discovery research.

In a highly functioning, discovery-innovation dynamic, there is a constant back and forth of information and ideas. Many different players are involved, and with guidance they act in an integrated and purposeful way. For example, NSERC partnerships help SMEs increase their bandwidth, grow their intellectual property, and maximize their worth in global value chains.

I would now like to share a few comments about budget 2016.

● (1555)

We were very pleased to see an increase of $30 million a year to NSERC's discovery budget, which is ongoing. This will have a positive and much needed impact on our community. Budget 2016 also included other strategic investments that can be effectively leveraged by NSERC's discovery and innovation programs. These include enhanced funding for the Canadian Institutes of Health Research and the Social Sciences and Humanities Research Council, our sister agencies; two Canada excellence research chairs related to clean and sustainable technology; and welcome support for optics, genomics, stem cell research, drug development, theoretical physics, clean technologies, agriculture advances, electric grid technologies, and NRC's IRAP.

NSERC is also eager to participate in a variety of initiatives: in the federal government's new innovation networks and clusters to help high-impact firms reach their potential, with currently five regional offices that broker relationships between the local academic and industrial sectors; with Indigenous and Northern Affairs Canada on the effects of climate change in the Arctic; with the Minister of Science, who will have NSERC's full participation for the review of federal support for fundamental science; and with Minister Bains on the development of the innovation agenda.

I would like to mention some of the challenges we face.

Mastering the S and T revolution requires an empowered brain trust that can work across disciplines and borders. Our cutting-edge engineers and scientists must also have a global reach to access the 95% of S and T knowledge generated outside of Canada.

One of NSERC's most significant challenges is ensuring that Canadian researchers have the necessary funding to pursue discovery research that will yield benefits for Canadian society and our economy. Budget 2016 funding for NSERC will help address pressure that has been created by inflation, a broadening mandate to include the colleges and polytechnics, and a growing client base, a 30% increase since 2007. This is a good start. Other countries have been investing heavily, and Canada will need to do the same to remain competitive.

NSERC's new strategic plan, NSERC 2020, will help us mobilize Canada's discovery and innovation system and face today's technological reality. We will back bold ideas and the best talent, and connect communities to address Canada's biggest challenges and greatest opportunities.

We have been focusing on initiatives that will coalesce NSERC's diverse research expertise to work on such critical issues as R and D on the integration of renewable and clean energy sources into smart electricity grids. NSERC is keen to work with ISED and the Department of Natural Resources and the Department of Environment and Climate Change on these aspects.

NSERC is also looking to help support the next agricultural revolution: precision agriculture. We are looking forward to working with Agriculture and Agri-Food Canada on this initiative.

NSERC continues to invest in other strategic priority areas: aerospace, automotive, and high-tech manufacturing; forestry and wood products; fisheries and oceans; health and life sciences and technologies; and natural resources and energy. We are helping Canada's critical and crucial industries adapt and grow in the fourth industrial revolution.

Ladies and gentlemen, in summary, we are an organization with deep knowledge and connections to the academic world and with expertise and connections to industry as the result of thousands of partnerships with Canadian businesses. That is what makes us different, and that is one of the ways we provide value. We also provide rigorous quality assurance through expert peer review of projects, grants, and awards. In so doing, we de-risk R and D investments. We build the feedback loops from industry to academia to optimize technologies and help companies grow and participate in global value chains and trade in value-added to contribute to interconnected economies. We assemble pan-Canadian networks that bridge to international partners.

● (1600)

[*Translation*]

We are ready.

Thank you very much.

I will be happy to answer your questions.

[*English*]

The Chair: Thank you very much.

We will begin with Mr. Longfield.

Mr. Lloyd Longfield (Guelph, Lib.): Thanks, Mr. Chair.

Thank you, witnesses, for your tremendous presentations. I wish we had more than the few minutes we have to see what you're doing. You've touched on a number of areas that we're working on as a committee. We're looking at a manufacturing strategy for Canada that will include innovation. It will include using data and statistics as well as our research partners.

In other roles, I sit on the industry, science, and technology committee, which also has interactions with you, and I chair our national caucus for the government for post-secondary education and innovation, but enough about me. I'm very excited to have you here.

I'd like to start off by asking Dr. Pinto questions around the college and community innovation program. The planned spending is $40.7 million in 2016-17 and the polytechnics are a very important part of the innovation ecosystem. Looking at the vision going forward of where that money may be spent, and also in the new five-year strategic plan that NSERC has developed, what role will the polytechnics be playing in terms of moving forward with Canada's innovation agenda?

Dr. B. Mario Pinto: Thank you very much for the question.

We view this in the light of embracing diversity, and that is one of the foci in our strategic plan. We present an innovation ecosystem that embraces colleges, polytechnics, small universities, very large research-intensive universities, etc., and we attempt to tap into the best of the best in all of those sectors. That said, we have invested $47 million in 2015-16 in the CCI suite of programs. That's up from $28 million in 2010-11, a very good trajectory.

We do so by investing in applied R and D projects. We have a suite of programs, the engaged grants for colleges, applied research and development grants, college-university idea to innovation grants where we bring together colleges and universities and marry their expertise, and even industrial research chairs at colleges. These are all worthwhile investments. We fully intend to support those as we go forward, but with an integrated innovation agenda where we trade between partners, bring the universities together with industry, bring the universities together with colleges, polytechnics, and we have a combined ecosystem.

● (1605)

Mr. Lloyd Longfield: Very good. I know that the funding for colleges has been less than that for universities, but the network is a different network, I realize.

I'm a mechanical engineering technologist, a college grad myself, and applied science is something that I'm hoping we can work together on.

Centres of excellence and commercialization and research will see their funding increase from $8.2 million in 2014-15 to $12.5 million in the coming year. Is the number of centres of excellence going to increase? We're looking at cluster development. Are the centres of excellence numbers going to increase, or are you going to be investing in particular centres of excellence? Do you have a detailed plan on that yet?

Dr. B. Mario Pinto: Our system is based on quality assurance and peer review. While it is true that we can put out specific calls in strategic areas, for centres or even for networks of centres of excellence, we leave it to the community to come together and to formulate their own ideas, and to come forward with the best possible ideas, and they compete. We insist on competition and we disfavour programs or projects that are funded outside our suite of programs, because that gives us quality assurance. It gives our industrial partners quality assurance and validates the projects. We intend to continue the calls for CECRs, centres of excellence for commercialization and research, in the future, depending on our budget allotments, but we will not target those areas necessarily.

Mr. Lloyd Longfield: I'm from Guelph, so you could almost guess where that question was coming from.

I have one more question in terms of expenditures. I apologize to Mr. Smith for leaving him out of my questions, but I know there will be lots of questions for him coming from my colleagues and colleagues across the table.

What is the difference between the grants and scholarships programs with NSERC, the actual spending of $863 million last year, and the Canada graduate scholarships with spending of $42.5 million in 2014-15?

Dr. B. Mario Pinto: This is historical. At one time each of the councils had their independent graduate scholarship programs. Those were referred to as post-graduate scholarships: doctorate, post-graduate, and master's. In moving to a harmonized approach with our sister agencies, SSHRC and CIHR, we decided to generate a more prestigious scholarship, the Canada graduate scholarship, CGS, at the master's level, and CGS at the doctoral level. They have slightly higher monetary value, but they also aim to recruit a higher calibre of student. That program is proceeding extremely well. They have been devolved to the different universities, the CGS M, for example, and we are proceeding now to look at how we can tweak the system to ensure fairness for the smaller universities with respect to our quota system. But both programs are working extremely well.

Mr. Lloyd Longfield: I'd love to see how it ties together with Statistics Canada. Would Statistics Canada be working with the graduate programs to see which sectors need the most help, or to try to evaluate the investment in research to see whether results are coming out?

● (1610)

Mr. Wayne Smith: We don't have a specific program intended to do that, but we do produce a range of data that can be used for those purposes. There are specific projects that we could potentially carry on with NSERC to carry out a more in-depth evaluation.

Mr. Lloyd Longfield: It seems like a natural fit.

Thank you, Mr. Chair.

The Chair: Thank you very much.

We're going to move to Mr. Dreeshen.

Mr. Earl Dreeshen (Red Deer—Mountain View, CPC): Thank you very much, Mr. Chair, and welcome to all our guests today.

Mr. Smith, I'm a former math teacher and one of my students worked for your department for a number of years, so I have great knowledge of what has to happen as far as statistics are concerned. But I'm also a farmer, so when we talk about the agricultural census form coming back, and I've seen the long forms and I know all that is designed with that, you've mentioned that it's going to be presented in such a way that it makes it relatively easy to submit answers over the Internet.

What time of year is it going to be coming out? Are the questions changing from what they have been in the past? What are you looking at specifically on the agriculture point?

Mr. Wayne Smith: The census of agriculture started with large farms in December 2015. We're working on the collection of the census from that point through to September. A lot of the contact with the farms will occur during the May-June period largely because in order to save money we're piggybacking on the operations of the census of population to make the whole operation more efficient. We're well aware this is difficult for some farmers, particularly during seeding periods, and there's a fair bit of flexibility for the responses to come back from the farms. As I indicated, we'll be in the field until September to collect them.

In terms of the content of the census, the struggle in statistics is always between continuities: you have the same information available and you can look for trends over time and new issues that need to be addressed. There are slightly fewer questions in the census of agriculture this time because we intended to obtain some of the information through administrative data. There will be some additional questions looking at issues of current concern. Organic farming and deployment of technology, for example, are where we would be looking for additional content. This time we hope to persuade the largest possible number of farm operators to respond via Internet.

One of the advantages of responding via Internet is that, based on the type of farm, it jumps you past a whole bunch of questions you don't have to answer. It guides you through the questionnaire as opposed to a paper questionnaire, where you wind up looking at every question and trying to decide whether or not it applies to you. We started that process in the last census. We're hoping that more and more farmers will adopt that response channel, and the result will be a reduction in the perception of burden as a result of the census of agriculture.

Mr. Earl Dreeshen: You mentioned that you needed some protection in law. I wonder if you could expand upon that. I didn't quite get where you were going with the statement you made during your address.

Mr. Wayne Smith: If you look at the statistical legislation of most developed countries, for example, the United Kingdom, Australia, and New Zealand, and other countries with the Westminster system, but also Europe, in law certain specific powers are assigned to the chief statistician or director general of the national statistical office, powers over things that involve decisions about statistical methods, analysis, dissemination.

In many pieces of legislation there's a specific reference to the independence of the statistical office. The difference in Canada is that our legislation essentially creates the head of Statistics Canada as being simply a deputy minister. It has none of those provisions. Almost all of the powers in the legislation are assigned to the minister and delegated as opposed to directly assigned to the chief statistician.

International standards have strongly suggested specific provisions in law that would enhance the independence and they exist in most of the other developed countries.

That is what we're looking at, bringing us in line with what is done in most other countries.

● (1615)

Mr. Earl Dreeshen: In the answer to Mr. Longfield, there was a discussion about colleges, universities, and polytechnics, and of course the research dollars that are there as you try to work with those various organizations. I, too, was involved with the colleges and universities.

You talked about pure and applied research and the dollars that go into each. I'm wondering if you could discuss that somewhat. You talked about broadening the mandate for colleges and universities in your discussion. I wonder if you could fill us in on where you see that going. We know there are going to be advancements in those areas and that you're going to play a major role in that. I wonder if you could expand on that, please.

Dr. B. Mario Pinto: Mr. Chair, I'd be pleased to. First of all, let me just step back a minute and point out that even the universities do a great deal of applied research. They don't just do discovery-based fundamental research. It's this dynamic between discovery and innovation that we are reinforcing.

Sixty-five per cent of the faculty in universities were hired in the last decade. This has given rise to a very different workforce. It's a highly entrepreneurial workforce, and they are very keen to partner with industry. Twenty-seven per cent of our faculty partner with industry at the moment. We don't divide this up into discovery only and applied research only.

The colleges and polytechnics offer a much more ready presence with industry to solve their problems immediately. The universities, for example, may work on the next generation battery technology, but they may work in concert with a college in looking at new ways of generating and mining lithium.

I think it's the marriage of those two expertises and the synergy that we try to exploit. We are the convenor. We bring those partners together. We try not to distinguish and differentiate so much between the fundamental and the applied. We recognize that there's a spectrum of different types of research, and we try to get the best of the best working together.

The Chair: We're going to move to Mr. Masse. You have seven minutes.

Mr. Brian Masse (Windsor West, NDP): Thank you, Mr. Chair, and thank you to the witnesses for being here.

I have a couple of questions for Statistics Canada. This has been an interesting voyage I've seen over the years. I was part of the complete count in 2000 when I was a city councillor. I found that was particularly important, especially for regions like mine where we have a lot of immigration, multiculturalism, different languages and cultures, and so forth. We actually did the door-to-door canvassing campaign. I was tasked with that by the mayor at that time to help be part of that process.

The value of the long-form census was clear. I would like you to explain the difference between a short-form census and a long-form census with regard to the quality of the data, and what the data could subsequently be used for.

Mr. Wayne Smith: The short-form census goes to 100% of the population. It has about 10 questions on it. Most of them are basic demographics such as age, sex, and relationships between people, whether they are married or not. There are also language questions about official languages, mother tongue, and so on. We ask 100% of the population. Because it is a census, the estimates that we generate from those questions have no sampling variability. There is no “accurate to within between 0% and 1%, 95 times out of 100”. The numbers are considered to be the numbers. They are considered to be absolutely accurate, not subject to sampling variability.

The questions that we ask on the long-form census are a much larger set of questions. We get into education, ethnic origin, visible minority status, and so on. We won't be getting into income this time. The long form is fairly onerous on the population. Since 1971, instead of asking those questions of 100% of the population, we ask them of.... The ratio has varied over time. It has been one in five, one in three. It is now one in four. For this census round, we are going to do one in four.

Those estimates are very solid for larger areas and larger populations. As you get into very, very small units, there is more sampling variability. There is more statistical variability as a result of sampling.

The view is that the trade-off, the reduction in burden and the savings in terms of costs, justifies that decrease in the reliability of the estimates.

● (1620)

Mr. Brian Masse: That's really important. That is why in the last Parliament I tabled a bill to provide independence for the chief statistician and so forth after the long-form census was eliminated.

With regard to the data assimilation and the maintenance of it, does that continue to stay in Canada?

Mr. Wayne Smith: No data leaves Canada. It doesn't leave the possession of Statistics Canada, actually. The microdata, the actual responses, we control it completely.

Mr. Brian Masse: That's good to hear because at one time I had to fight a campaign when Lockheed Martin wanted to move that to the United States, which would have subjected the information that they kept in-house, at least part of the outsourcing, to the Patriot Act . I'm just wondering if there has been additional outsourcing since that time.

Mr. Wayne Smith: I'd like to comment on Lockheed Martin, if I could. It was Lockheed Martin Canada. No data was taken out of Canada. It was never planned to be.

Mr. Brian Masse: No, it wasn't, because we did a large public campaign, because the plan of Lockheed Martin was actually to assemble it in the United States. That was a part of the original outsourcing. Statistics Canada at that time actually had to get additional funding to maintain it in Canada.

Mr. Wayne Smith: Well, I challenge the facts; I don't think that's the essence.

They were originally brought on to develop systems for processing, because we were trying to move the processing initially in an entirely different way. Initially, they were supposed to be in the data centre, operating the data centres, but under Statistics Canada management and control.

Mr. Brian Masse: Yes, under the control.... We can have this debate later.

I am more worried about what else has been outsourced in that, because when they went to do that data management system, part of that component required information going to the United States.

Mr. Wayne Smith: I am not agreeing with the description of the facts.

Mr. Brian Masse: No, you don't have to.

Mr. Wayne Smith: In terms of the current census and even the one before, nothing has been outsourced. All of the work is being done by Statistics Canada. There are no private sector companies involved, American or Canadian, in the actual processing of the data. It's being done by Statistics Canada. The only new partner in the relationship is Shared Services Canada, which is providing the infrastructure. All of its employees have been sworn under the Statistics Act, and they are subject to all of the penalties of the act if they divulge confidential information in an inappropriate way. So, there is no outsourcing.

Mr. Brian Masse: Okay.

I have a document here regarding some of the programs that were reduced or cut from 2006 to 2015. Are those going to be restored with regard to that information, and can we get an idea of which ones will be restored after this budget and which ones won't?

Mr. Wayne Smith: There was no funding in the most recent budget for restoration of any of those programs, the ones that you are referring to, things that we've eliminated in that period.

There are a handful of them, a very small number, such as the residential care facilities survey, where Statistics Canada, working with other partners or on its own, was able to put the survey back in place. It was considered to be too essential. Overwhelmingly, the program reductions that occurred over that period are still.... Those programs are still discontinued.

Mr. Brian Masse: Is there any possibility of resurrecting some of those that were discontinued for their value for research and for application?

Mr. Wayne Smith: Within Statistics Canada's own resources the potential is very limited. As I mentioned in my remarks, we actively look for efficiencies, and when we can find them, we reinvest in the program. In some cases that reinvestment might be for resurrection of one of those surveys. In other cases it might be in something that's considered to be an even higher priority.

Essentially, we're talking about programs that were cut in that period worth in the order of $30 million. Statistics Canada does not have the resources to reverse even a large portion of that on its own. It would require an investment of new resources.

● (1625)

Mr. Brian Masse: How much time do I have, Mr. Chair?

The Chair: You have about 20 seconds.

Mr. Brian Masse: Great, now we can sing and dance. No, I'll save it for my next round.

I want, however, to take the 20 seconds I have left here to say thanks to Statistics Canada and the workers for their valuable information development. One of the weaknesses we've had in many sectors is not having reliable information, not only overall but also for backstopping other surveys and information gathering and data management. I'll leave it at that.

Thank you, Mr. Chair.

The Chair: Thank you, Mr. Masse.

We're going to Mr. Jowhari. You have seven minutes.

Mr. Majid Jowhari (Richmond Hill, Lib.): Thank you, Mr. Chair.

Thank you, panellists. I appreciate your taking the time to give us a briefing on your plans and priorities. Thank you to the other members who joined to help us.

As you know, our government has announced an agenda of growth, specifically focused on the middle class and specifically with significant investment in infrastructure under transit, social, and green development.

To start, Mr. Smith, I have two questions for you.

I was quite pleased to see that for all of the four programs that you have identified in your report on plans and priorities you have key metrics, key performance indicators and targets of what needs to be done.

I also was pleased to hear that you highlighted two of the six sectors to be included in the plan you are putting forward for the next year, i.e., clean technology and agrifood, which were two areas you highlighted. You also identified health resources, advanced manufacturing, digital technology, and resources as areas that your department will be focusing on in the future.

Under each one of these or in all the programs, do you have the specific key performance measures and indicators defined to help the government and help us measure the growth so that we can figure out where the gaps are or whether or not we are excelling in that area? Do you have those measures, or if you don't, how fast would you be able to put them in place so that we can leverage your resources and expertise to monitor our progress?

Mr. Wayne Smith: We have in place a broad infrastructure that allows measurement of growth down to individual industries and to reconstitute....

To use clean tech as an example of what we're able to do, part of the proposal around clean tech is.... This is not a standard industry that is defined by Statistics Canada, so our first problem is that we have to define it. We're currently working with Natural Resources Canada and Innovation, Science and Economic Development Canada to define that industry, to define what types of businesses belong in that industry.

Once we've done that, we have a wide range of information from surveys and tax data that allows us to calculate estimates of the output of that industry, for example, and to track that output through time. We can then create in principle a baseline of what the situation was before a government policy and can track the development of that industry over time.

For businesses that have benefited, for example, from development loans from the federal government, we also have the ability to look at them individually to see how their business has developed over time and compare them with a control group.

The capacity is thus there, but generally speaking much of the actual work of exploiting the data is done in the departments and granting councils and agencies rather than by Statistics Canada.

My view would be that, depending on the granularity of what people are looking at, we have an infrastructure in place that would allow us to address those kinds of needs.

Mr. Majid Jowhari: Help us understand. For a dollar invested in pick any company within the clean technology sector, how did it help us in our growth of GDP?

● (1630)

Mr. Wayne Smith: Well, I'm prohibited by law from divulging any information about an individual business. What I can tell you is that all of the businesses in that industry that actually received money from the federal Business Development Bank, for example, did they do better than businesses that did not, or did they do the same or worse. In principle, if they've done better, you have some suggestive evidence at least that the program was effective in promoting the growth of that business. We can do that, but we have to do it for groups of companies and not for individual enterprises.

Mr. Majid Jowhari: Okay.

This is on a totally different topic, foreign investment, especially in the hot markets of real estate, and Toronto and Vancouver are prime examples. Budget 2016 proposes to increase funding to Statistics Canada so it can collect data on various topics, including the purchase of Canadian housing by foreign buyers, and clean technologies—let's focus on the foreign buyers—and adhere to the International Monetary Fund's special data dissemination standard plus. What's this special data dissemination standard plus? Why is it important to meet this standard? Does Statistics Canada have the expertise and resources necessary to carry out this new mandate?

Mr. Wayne Smith: SDDS plus is a series of measures that have been proposed by the International Monetary Fund to measure the financial health of countries. There was an initial round called SDDS, which stands for special data documentation standard. What it is, as I said, is a series of measures that when you look at them can say that a country is in good shape financially, or there's some serious issues developing in terms of the financial system.

With SDDS, yes, Canada signed onto that proposal, and we made changes to our statistical program to be able to publish everything that they wanted us to publish and in the time frames they wanted us to publish it. SDDS plus is an embellishment of that standard. It requires us to publish more data than we were publishing and in greater detail than we were publishing previously. We were funded to do the additional work. This isn't taking money away from any other program. We were given money in budget 2016 specifically to do this. Given that we have the money and the financial resources, it represents no problem for us to carry out the work. It's relatively straightforward. We know exactly what needs to be done and how to do it. We will be able to, relatively quickly, create things that are necessary. The one area where it's going to be a little more challenging is that we need to create an index of retail, resale, and new housing prices, including condominiums, a comprehensive index. At the moment, we're producing a price index of new houses only, excluding condominiums. We have a fair bit of development work.

The Chair: Sorry, we're way over. I don't mean to cut you off. Thank you very much.

We're going to move to Mr. Lobb. You have five minutes.

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

Mr. Pinto, I have a question for you.

With the agenda on innovation and growth of the economy, etc., obviously there's going to be some investments from NSERC, and there has been for many years and will continue to be so. One of the complaints I've heard for many years is the time it takes from when a business comes up with a concept that wants to partner with NSERC, to the time the project works its way through the public service and the granting arm, to the time it is approved to go. Whether it's automotive, software, hardware, or what have you, this is a concern I've heard over and over. What is the average time—I know you can't pin it down on one specific item, but maybe an average—from when you work with a project until it's actually granted?

Dr. B. Mario Pinto: That's a very good question. The answer is that it depends on the particular type of program. Let me talk about the first encounter between the academic and the industrial partner. This is called our engage program, and it's meant to be a very quick first date. We have built that program up. We have had over 6,900 of those engage grants since 2009.

Mr. Ben Lobb: On those engage grants, then, what is the average?

● (1635)

Dr. B. Mario Pinto: The turnaround time is 21 days.

Mr. Ben Lobb: Twenty-one days. Is that to let them know that it's good to keep going with the application?

Dr. B. Mario Pinto: That's from application to funding.

We have a long way to go with some of our other strategic network programs, for example, or for the collaborative research development grants, because we have to evaluate many partners. We're working to reduce those times.

Mr. Ben Lobb: Of all the money you grant, what percentage would be for the 21 days?

Dr. B. Mario Pinto: I don't know offhand for the engage grants. Can anyone can help me—

Mr. Ben Lobb: Would 5% of all the money you grant be granted in 21 days?

Dr. B. Mario Pinto: Let me just check.

A voice: It's 3%.

Mr. Ben Lobb: It's 3%?

Dr. B. Mario Pinto: Yes.

Mr. Ben Lobb: So for the other 97%, that's a lot more than 21 days. Of the other 97%, what is the average?

Dr. B. Mario Pinto: It's three to six months.

Mr. Ben Lobb: Then there are going to be some that are 12 months, 10 months, 11 months, and on and on. I'm not criticizing you. I'm just stating a fact.

The point is that on innovation, whether it's in software, which I used to work in, or automotive, which I also used to work in, you can understand that a lot of the time people who run these businesses can't wait six months to hear if a grant's going to get approved, because they could be out the door before that time comes.

What work will you be doing internally to ensure that due diligence is still being done but that the granting times are as efficient and as smooth as possible? You must hear these criticisms.

Dr. B. Mario Pinto: Yes, absolutely. I ran incubation and accelerator centres in my previous life, and I fully appreciate the problem.

We're working very hard to reduce the times while still maintaining the quality assurance of both the industrial and the academic partners. I think we're moving to a very streamlined approach, where we can have a pre-clearance, for example, through a letter of intent in some of our programs, so that we can do a first pass very quickly and then provide the necessary guidance to those partners to develop a more competitive proposal much faster.

I agree with you fully. We have to reduce those turnaround times —there's absolutely no doubt—and we're certainly working on it. We're also working on one application process with our partners, for example with Mitacs and with NRC IRAP, so that we can extend our runways, reducing the administrative burden with one application, and I think that will also go a long way.

Mr. Ben Lobb: Fair enough. We'd love to have you back in a year maybe, and see how the progress is working out on that.

Mr. Smith, I have a question for you. You were commenting on the real estate application you're working on right now. I would hope that you guys are working in partnership with CREA. I wonder how that relationship works, because of course we see their data produced every month. What relationship do you have with them and how are you working collaboratively with them?

Mr. Wayne Smith: We're well aware of the CREA index. We're also very well aware of the National Bank Teranet, I think, that produces an index of housing prices—

Mr. Ben Lobb: Do you work now—

Mr. Wayne Smith: We're aware of their methods. We've looked at it with Finance Canada as to whether these indices on their own would meet the requirement, and the view was that the level of quality wasn't sufficient.

Mr. Ben Lobb: Are you saying that CREA's data is unreliable, their monthly data that they publish?

Mr. Wayne Smith: No. CREA's data may well be reliable for the purposes for which it was developed and intended, but for the purposes of—

The Chair: I'm sorry. You have about 10 seconds.

Mr. Ben Lobb: Sorry, sir, but they report on sales, so I don't know how more accurate you could be than reporting on actual sales.

Mr. Wayne Smith: When you're building a price index, it's more about the issue of controlling for the variation and the quality of the housing. Otherwise, the price movements may simply be a change in the average quality of the housing. It's about controlling for those kinds of factors, and that is not their intent, so I'm not faulting them or suggesting that their data is unreliable for any purpose for which people may currently be using it.

As I said, in talking to Finance Canada, the sponsors of this particular project, the conclusion was that the data really wasn't quite robust enough for the purpose.

The Chair: Thank you very much.

We're going to move to Mr. Baylis, please, for five minutes.

Mr. Frank Baylis (Pierrefonds—Dollard, Lib.): I have some questions about cost recovery.

When did Statistics Canada get into cost recovery?

Mr. Wayne Smith: We got into cost recovery.... Well, I guess we've always been in cost recovery to some extent. It became a significant factor in the mid-eighties. There was a census in 1986 that was cancelled and then reinstated. At Statistics Canada, as part of the reinstatement package, we were asked to generate a much larger amount of money from the sale of our products and services. Prices rose by 300% to 400% on our standard products, and we started instituting licensing procedures, so that if anyone bought our product, they could use it themselves, but they couldn't re-disseminate it.

● (1640)

Mr. Frank Baylis: Does cost recovery guide some of the things you decide to study?

Mr. Wayne Smith: Let me be clear. The cost recovery I was talking about is a thing of the past. The pricing of our products and services, the restrictions on re-dissemination, that's all gone. Our standard product is free. Our data's free on the Internet. Anybody can take it. Anybody can re-disseminate it.

Every year we generate about $100 million in revenue through providing statistical services to other organizations, primarily federal government departments. Employment and Social Development Canada and Health Canada are examples of major clients of ours that ask us to carry out large surveys on their behalf.

In that domain, it's mainly a client-driven business. It's one of the issues that arise when people are concerned about surveys that have disappeared. In some cases a department has come to us and said they want to pay for a survey. We do the survey. Then they decide they don't really need it anymore, and the survey stops.That's one of the reasons that happens.

About one-fifth of our total production today, every year, is funded by other departments, primarily federal government departments, sometimes the provinces, sometimes the private sector, but very little. The buyer calls the tune, not in setting the standards, our professional standards, but in choosing what data's going to be collected.

Mr. Frank Baylis: If we were going to compare that with other jurisdictions, other countries that may or may not have cost recovery, is there any benefit or competitive advantage that their companies or industries, or even their governments, might obtain if they weren't subject to that?

Mr. Wayne Smith: No, actually, they envy us. The other countries come to look at our system and say they wish they had what we have.

Mr. Frank Baylis: Which? Statistics departments of other countries, or the—

Mr. Wayne Smith: The statistics agencies of other countries have said it's an issue for them because they can't take money and carry out statistical work. In some cases it doesn't happen, in which case it's a loss to everybody. The society doesn't get the data. In other cases, the survey may be carried out by an academic or private sector survey firm, but the data is held by the department that paid for it and not made public. The department benefits but the rest of the public doesn't.

We require that any data we collect, any survey we do, has to be made fully public. Everything we do becomes available to everybody to use in the wake of our completing the work.

The reality in Canada is that, although it's not quite true in other countries, there are very few organizations, provinces, territories, universities, almost none, that are able to carry out large-scale surveys. Even the private sector firms increasingly don't have that capacity anymore. In Canada the alternatives to Statistics Canada are relatively few.

That's not true in the United States, where there's a very dynamic industry operating out of universities notably and some private sector firms. There's something similar in the U.K., but other countries, like Australia and New Zealand, are more like us.

Mr. Frank Baylis: Mr. Pinto, you said that out of 3,500 companies about 27% are related to industry. In 30 seconds, what's the benefit that comes out of that, your researchers working with companies?

Dr. B. Mario Pinto: There is a dynamic equilibrium between the academy and the industrial sector. Very often an industrial problem poses a challenge that a university researcher happens to be working on. That sometimes happens over coffee, believe it or not. They're able to provide very deep insight and solve a problem.

Conversely, a university researcher may have a wonderful discovery but is unsure of how it should be developed. Perhaps he doesn't even recognize how it should be developed. Having an industrial partner seize upon that invention will lead to innovation. My ideal model, of course, is co-location.

I see I'm out of time.

● (1645)

The Chair: Yes, you're out of time. Thank you very much.

We're going to go to Mr. Dreeshen.

Mr. Earl Dreeshen: Thank you.

I'd like to share a little bit of my time with Mr. Lobb. However, I usually talk too much, so I'll try to make it quick, and perhaps we can deal with some of the issues.

In respect of the graphene discovery you spoke about, with the revolutionary nanomaterials, I was in Edmonton at the U of A when the machine came in there. I'm not sure whether or not it was found there, but I'm curious about where your collaboration takes place. It's not just in Canada. There are other things done in other universities around the world. I'm curious about where that came from. I'm also curious about who reports these scientific discoveries to the public and when this reporting takes place.

Dr. B. Mario Pinto: These are interesting questions.

I cannot tell you exactly which particular industry the academic collaborator would partner with, but they are free to choose who they partner with. At the moment we are wrestling with the whole issue of whether we will allow international industrial partners, for a variety of reasons, as you might expect. For the moment we've restricted it to Canadian partners. I think, though, in view of my previous comments on going global, we will have to consider the other 95% of the knowledge out there to effectively exploit our discoveries.

When do we disclose? As soon as we fund a particular project, that particular material is available, but perhaps not the exact details because of intellectual property considerations. It is left up to the particular university and researcher to file patents, to protect that IP, etc. We don't intervene with a heavy hand at that point.

Mr. Earl Dreeshen: Thank you very much.

The other question I have is for both organizations. Has the minister met with the department heads and given any written direction as to what the agenda is going to be over the next four years?

Perhaps Mr. Pinto could go first, and then Mr. Smith, because I do have another question for you.

Dr. B. Mario Pinto: Yes, in my case Minister Bains has met with the portfolio heads, and I have had several meetings with Minister Duncan as well.

Mr. Wayne Smith: Well, I've certainly met with Minister Bains and Minister Duncan as well. I think most of what we've discussed is what's contained in the mandate letters that everyone has seen, in terms of where Statistics Canada is going.

Mr. Earl Dreeshen: For my last question, and I don't want to get into a lot of details here, I was curious about what Mr. Masse was talking about regarding Statistics Canada and information going to other areas. There seemed to be a bit of a debate there. I wonder if you could state what the rules are and what you follow as far as the security of Canadian information is concerned.

Mr. Wayne Smith: Under Canada's Statistics Act, any information acquired by Statistics Canada under that act is strictly confidential. It cannot be demanded by the courts or the police. Anybody who's going to be in contact with that information has to be sworn under the Statistics Act. They're subject to jail terms and financial penalties in addition, obviously, to being fired if they were to willfully or negligently disseminate that information.

As Mr. Masse pointed out, at one time we looked at using an external firm on our site under our supervision. In the process, we ultimately backed out of that; it did not happen. We've completely taken over the operations that the firm used to do. In 2011 and in the current census, there's no outsourcing to a private sector company. In 2016 the only organization involved in our operations for the census or for any of our other collection operations is Shared Services Canada.

The Chair: Mr. Lobb.

● (1650)

Mr. Ben Lobb: I'll wait until the next round.

The Chair: Thank you very much. We will take that extra time and bank it to the end.

We are going to Mr. Arya, for five minutes.

Mr. Chandra Arya (Nepean, Lib.): Thank you, Mr. Chair.

In my first round I will limit my questions to Mr. Smith.

Mr. Smith, I have three questions. We have only five minutes, so I'll just ask all three. You can choose to answer one or all three.

You mentioned a formal protection in law of the statistics office. I would like you to elaborate on that, if possible.

You also mentioned the lack of willingness by households to participate in the surveys you conduct is a matter of concern. What are you doing to mitigate that?

My major concern is the different numbers I get from different agencies. For example, the number from the University of Ottawa for high-tech employment in Ottawa is 68,000. From Statistics Canada, it's 42,000. That's a big difference. While I can understand the difference may be in how you define “high-tech sector”, even then the difference is huge.

Looking at only Statistics Canada numbers for Ottawa, in 2014 your number was 64,000, and it crashed in 2015 to 40,000. That is a significant difference, which we know is not at the street level. From the University of Ottawa the number has been quite constant and slightly increasing during the last several years.

Why is there that difference?

Mr. Wayne Smith: As you intuited, one of the problems is definition. It's an abiding frustration of mine that there is a standard classification of industries and, of course, it doesn't really correspond to evolving trends in industrial production. Everybody makes up their own and defines them themselves, and so we have variations on what is high tech, what is biotech, what is clean tech, and if you add them all up, particularly the ones that are promoted by the trade associations, you wind up with 500% of the Canadian economy, because people add in different things.

Mr. Chandra Arya: I hear you.

Mr. Wayne Smith: I'm just saying that part of the problem is definitional.

The data that you're referring to is from our labour force survey, and our labour force survey is a sample survey. It's a very large one at the national level, but this total sample in Ottawa in the sense that it's a metropolitan area is relatively small, and the number of cases in that.... When you start estimating by industry, we're talking about very small numbers.

Those numbers are subject to extraordinary sampling variability. We usually caution people. We urge them to use the three-month moving average, but nonetheless, you can expect significant changes in these numbers that have nothing to do with anything that really happened on the ground.

Mr. Chandra Arya: Will it make sense for you to collaborate with the agencies, for example in Ottawa, that are also investing huge amounts of money in conducting a detailed survey for the local economy?

Mr. Wayne Smith: The issue would be funding, and every municipality across the country wants that.

I mentioned that we've been developing some new techniques that might allow us to estimate more accurately for small areas, using combinations of administrative data and survey data. We also have another information source, the survey of employment, payrolls and hours. It is an enterprise-based survey, not a household-based survey that has the potential to get down to smaller areas. The better thing for Statistics Canada to look at would be trying to deal with this to generate more reliable small area numbers using this alternative dataset for at least larger municipalities across Canada than to try to solve it locally.

Mr. Chandra Arya: What about formal protection in law for the statistics office?

Mr. Wayne Smith: If you look at legislation of other countries, you'll see specific provisions that include things, for example, like the method of selection of the chief statistician, that there should be a selection committee, what the criteria for selection are, as opposed to the situation in Canada where the chief statistician is appointed indefinitely, but at pleasure. The chief statisticians in other countries are appointed for fixed terms, on good behaviour, which gives them greater protection.

The distribution of the powers under the act tend to be based on how and what, so the “what authorities” appropriately belong to the government, the minister to the political level deciding what statistics are required. But on the how—the statistical methods, the analysis, the dissemination—in order for the data to be credible, there shouldn't be political intervention in those matters, and therefore ideally those powers should be—

● (1655)

Mr. Chandra Arya: Do you have political intervention in these matters now in Canada?

Mr. Wayne Smith: No. There are some points where some people might want to debate me, but in general, Statistics Canada has had a strong convention in Canada of political independence, of independence for the statistical office, and successive governments, generally speaking, have respected that very thoroughly. But it is an anomaly that Canada is one of the few countries that hasn't dealt with this formally in legislation.

The Chair: Thank you very much.

We go to Mr. Masse. You have five minutes.

Mr. Brian Masse: Thank you, Mr. Chair.

Thank you to our witnesses.

I'd like to go to Mr. Pinto for this round to make sure that we get a couple of questions in with regard to innovation and movement of some of the research chairs and centres of excellence.

AUTO21 was discontinued. Do you have any comments about that? I'd like to hear them and go from there.

Dr. B. Mario Pinto: First of all, networks have a finite lifetime at the moment under our rules, so there's a 15-year run, and they were extremely successful, but came to the end of the program. Now, we can discuss, of course, whether one should be looking at a different architecture for the program, but they were extremely successful.

Now, there was another program that came on board through Automotive Partnership Canada, of course, and that also was well-subscribed.

Mr. Brian Masse: It just seems bizarre that one of the weaknesses we've had is actually moving patents and other types of research and technology to market. AUTO21, for those not familiar, had 2,400 students go through. It was one of the first unique ventures with the university and the private sector, being the automotive companies. The students were doing everything, such as environmental research on new technologies for solar and other things. They even built buggies and so forth, and competed successfully with them. It was fun. It got a lot of people into engineering. Approximately $2.6 billion of their work went to the market for services; there were some 320 patents and licences, and 8,600 publications. At the end of the day we have a facility and all this research. We have a footprint where people know they can go and get that type of an education and be successful when they exit it, and you're saying to me that it was worthwhile, but we just kind of said “see you later” to our policy of 15 years. With building private sector contributions—

The Chair: Sorry, Mr. Masse, I hate to cut you off—

Mr. Brian Masse: Thank you, Mr. Chair. I appreciate that, and thank you for giving my witness time.

The Chair: Thank you.

We've finished the first round. We have a little bit of time, so we're going to do a second round of four minutes, four minutes, four minutes. Mr. Masse, you'll have two minutes.

Mr. Brian Masse: Thank you, Mr. Chair.

The Chair: This will take us to where we can finish off and then go in camera for 15 minutes. Thank you.

We'll go to Mr. Dreeshen or Mr. Lobb.

Mr. Earl Dreeshen: Mr. Lobb can finish off.

The Chair: You have four minutes.

Mr. Ben Lobb: Mr. Smith, I have another question for you.

Earlier in your comments you said the data on studies is available for all. I'm curious more on the actual raw data and the data that is stored at the research data centres in universities and other places around the country. That is not free for all and available for all, and you do have to pay for it. I've had a number of constituents in my riding complain about that. They feel, as taxpayers, they've had to pay twice. They've had to pay their taxes for the department and so forth to conduct them, and then when they want to access it, it's several thousands of dollars to actually get the data in its raw form to be able to run their own models.

I wonder if you have any thoughts on that. Should there be a fee? I know there are different rates, but it seems that for a large corporation, like an oil company or what have you, $5,000 or $10,000 wouldn't be much, but for a small community organization that, say, wants to study a Health Canada report, $5,000 is a lot of money.

● (1700)

Mr. Wayne Smith: Perhaps I could talk about the Canadian Research Data Centre Network. There are about 26 centres at the moment. They're established in universities across Canada. It's a partnership we're quite proud of. The funding is a combination from Statistics Canada, from the research and granting councils, particularly SSHRC and CIHR, and from the universities themselves. The offices themselves are Statistics Canada premises—

Mr. Ben Lobb: Sorry, but we are tight for time. I mean specifically on these fees that are charged.

Mr. Wayne Smith: That's where I was going to. Statistics Canada isn't levying charges. Most of the researchers in those research data centres are not paying for access. If somebody came along who was not affiliated with that particular university and said they wanted to have access, then it would be the funding partners. The universities, among others, are trying to avoid free riders, so they're basically saying they need them to contribute money for that purpose.

Mr. Ben Lobb: Right. If you work at a university, it's a different price. But if you're an individual who wants to gain that data and then conduct your own analysis of the raw data, you pay a different price. This is the issue, that universities have one price, public institutions have another price, corporations have a price, and a private individual has another price. The issue with many groups is that it seems unfair that a university would have a much lower rate, albeit they are the host, but a community group, with limited means, has to pay quite an exorbitant rate.

Mr. Wayne Smith: I'm not aware of a case where this has arisen. The kind of data that we have in the research data centres require analytical skills and capacity that are not commonly available outside the universities.

Mr. Ben Lobb: The one issue that I can cite is the Health Canada study on industrial wind turbines. It was done by Health Canada in collaboration with Stats Canada. When Wind Concerns Ontario went to retrieve this data and information, this was the price they were told. That's the specific case I would cite.

The Chair: You have about 20 seconds left.

Mr. Ben Lobb: Okay. This should be a quick answer.

What is the number of people who are neither enrolled nor looking for jobs in the country right now, people that are not working, not enrolled? Do you have a number for that?

Mr. Wayne Smith: We have it. I don't have it with me, but I'd be happy to provide it.

We can tell you for various age groups how many people are not in employment or not in education or training.

Mr. Ben Lobb: Is that a published number?

Mr. Wayne Smith: It's a number that you can calculate from published sources. It is available.

The Chair: Could you forward that to the clerk? Then we could distribute it.

Thank you very much.

We will go now to Mr. Arseneault.

[*Translation*]

You have four minutes.

Mr. René Arseneault (Madawaska—Restigouche, Lib.): Thank you, Mr. Chair. If I have time left, I will share it with my colleague, Mr. Jowhari.

Gentlemen, madam, thank you for being here.

I have learned a great deal in this meeting. This fourth industrial revolution will be the fastest and most powerful in the history of the modern industrial world. That is fascinating. There is also the fact that Canada will have to try to seize every opportunity and take advantage of every possibility in order to be able to ensure its development.

I gathered that there is collaboration among postsecondary institutions, colleges, polytechnical schools and universities.

Given what can be taught in our postsecondary institutions and what that industrial revolution will bring with it, do you see any areas of expertise where Canada may be behind the rest of the world?

Perhaps Mr. Pinto could answer.

[*English*]

Dr. B. Mario Pinto: You know, I think bringing together different partners will automatically give us strength. You'll find that universities now have joint programs with colleges and polytechnics, trying to cover the bases, to make sure that Canada will have an edge, to fill those gaps.

Are there areas where Canada is not able to compete effectively? It's difficult, having seen everything we fund on a competitive basis, to imagine that we would be left out. If you ask whether we can be number one in the world, or be in the top five in the world, or the top 10, I think that would be a different question. I don't think we will be left out in any areas if we're very smart about exploiting the synergies between the different institutions we have. We have tremendous talent in Canada. It's up to us, I think, to convene those partners in the most intelligent way and to interrogate very effectively on whether we are bringing together the correct expertise.

Having sat back and looked at everything we fund, I think we're very strong in different sectors. Could we be number one? If I were honest, perhaps we could in quantum technologies. In cybersecurity could we be number one in the world? Yes. But with the others, I would have to qualify.

● (1705)

[*Translation*]

Mr. René Arseneault: In my constituency, if we compare the number of university students with the number of college students, for example, we can see a shortfall on the technical side compared to the professional side.

With this industrial revolution, are we going to have a shortage of technicians or people trained in colleges and polytechnics rather than in universities?

I say that because I am surrounded by engineers and it is tiring me out.

Voices: Ha, ha!

[*English*]

The Chair: You have one minute to answer.

Dr. B. Mario Pinto: I think we have to train very broadly in terms of skill sets. I think you have to train people in creative and critical thought, number one. There's no doubt that we have to teach people skills. It's that collective experience that will lead to an effective workforce for Canada and lead to an innovative workforce, a productive workforce. But to choose, a priori, emphasis on one sector and not the other, without all the data from Statistics Canada, for example, it would be very, very difficult for me to make that judgment call at the moment.

What I have seen from my personal experience is that the collective experience, brought together from different sectors, is the magic combination.

The Chair: Thank you very much.

We're going to Mr. Dreeshen for three minutes.

Mr. Earl Dreeshen: Thank you very much, Mr. Chair. I would like to come back to some of the things that were discussed regarding NSERC earlier. You talked about advanced oil and gas exploration recovery, all the types of things that are involved there. This is probably a good time to talk about the world-class regulations that we have. The rest of the world looks at what we do. I think that becomes an important aspect of it. You have the studies. You know what is taking place. It is so important that we recognize the excellence that is here in so many ways.

We also have to understand the reasons why sometimes our oil and gas industry seems to be demonized. As Canadians, it seems as though we apologize for everything, and we don't recognize that there has to be a certain amount aggressiveness when it comes to telling the story of our oil and gas industry. It's very important that we deal with that. Could you give us a bit of an outline as to some of the things that you have been able to do as you have partnered with the oil and gas industry?

Dr. B. Mario Pinto: Absolutely. You know we've had some very lucrative strategic partnerships in that area.

As you correctly point out, the regulatory aspects are fantastic, but so are the technological advances; the use of microbes, for example, to treat waste resulting from the oil sands; the use of a fungus, for example, to convert the residue from oil sands processing into valuable organics. There is value added, right? I think we have to talk about those things. We have to celebrate those successes. Those are made-in-Canada inventions and innovations. I think we're reticent to boast, as you correctly pointed out. I think we have to do a much better job of doing that.

We have similar technologies in the mining industry which again we should celebrate. From NSERC's point of view, many of us have featured those stories and anecdotes on our websites, and we celebrate those successes. Now I realize that “data” is not the plural of “anecdote”, but it certainly is a good start. We are doing our part to celebrate all of our successes without prejudice, without bias.

● (1710)

Mr. Earl Dreeshen: Thank you very much, I appreciate that. I'll leave it at that.

The Chair: Thank you.

We're going to Mr. Longfield for three minutes.

Mr. Lloyd Longfield: I'll be splitting my time with Mr. Baylis. I have a very brief question for Dr. Pinto.

I've been very fortunate to direct some of the manufacturers in my area to use NSERC engage grants. It's a great tool with a fast response. They've got good solutions from engage. I haven't had the same success getting them to the college network. The college network is really an equal network in supplying solutions to manufacturers in particular. Could you comment on how the NSERC engage program works within both colleges and universities, and how it could be promoted differently?

Dr. B. Mario Pinto: Certainly. We have parallel programs with respect to the engage program through the college community innovation fund and also through the university system. They should work in parallel. I don't see any obvious reason why there would be blocks. There may be cultural differences, but other than that, I don't see any big impediments. I can certainly look into that, though, and get back to you.

Mr. Lloyd Longfield: If you could help with our promotion, that would be great for our innovation network.

Dr. B. Mario Pinto: Certainly.

Mr. Lloyd Longfield: Thank you very much.

I'll turn it over to Mr. Baylis.

Mr. Frank Baylis: I have a quick question on the centres of excellence. I'd like to know how many there are. Is there more money for them in the budget? Have you identified the ones that are working and those that are not working? Have you stratified them?

Dr. B. Mario Pinto: First of all, all our centres are reviewed externally periodically every five years. We look very critically at the impacts and outcomes.

We have a variety of programs: the networks of centres of excellence, the business-led networks of centres of excellence, and the centres of excellence in commercialization and research. They are at different points of maturity along the innovation pipeline. We demand very different things of those three network programs.

The programs are evaluated very rigorously and they don't get a 15-year run automatically. They're reviewed at the five-year mark and they may or may not get an extension for the next five years. It's a very rigorous review with international panels. We take those evaluations very seriously.

It's not an automatic licence to continue operation. As was pointed out, AUTO21 had a very successful 15-year run, but that was dependent on performance at all of the reviews.

We do our best to ask the critical questions. I emphasize that the questions are different depending on whether it's the centre of excellence in commercialization and research or a network of centre of excellence, which is more at the front end of the innovation ecosystem.

The Chair: Thank you very much.

Mr. Masse.

Mr. Brian Masse: Thank you, Mr. Chair.

Mr. Smith, I'm curious in terms of outsourcing. Is Lockheed Martin still involved with regard to some of the operations and outsourcing that we have?

Mr. Wayne Smith: No.

Mr. Brian Masse: No, they're done. At one point—

Mr. Wayne Smith: There's none.

Mr. Brian Masse: There is none.

Who has taken over that responsibility?

● (1715)

Mr. Wayne Smith: We did.

Mr. Brian Masse: It's back in house.

I thank you for that. I think it's an important point to make, because Canadians did speak well on this in terms of a moral issue.

Lockheed Martin, for anyone that was aware, conducted an activity that across the world is actually illegal. The use of cluster munitions and scatter bombs by Canada is not even legal because we've signed a convention treaty. As well, they've been involved in infamous projects such as the stars wars program.

A lot of Canadians felt compelled to state that this was very disturbing, because when munitions come over to Canada.... If you're an immigrant, like my grandfather and my wife were, those weapons could have been used on their families. Even some of the legal and illegal warfare that goes on was affecting their families, including places like Iraq most recently.

That's an important point to make because there was an actual public campaign about it, CountMeOut.ca. The Privacy Commissioner was involved. There are others that actually looked at the Patriot Act, including the privacy commissioners. I want to commend the in-house development of that because it gives confidence in the product that you provide which is very valuable.

Thank you.

The Chair: You don't even have to answer.

That will conclude our interview with our witnesses.

I would like to thank our distinguished guests for coming here and being patient with us as we asked lots of great questions.

We are going to suspend. We have a few minutes while they switch over the translation. Then we're going to go in camera for the last 15 minutes and finish our things.

Thank you very much everybody.

[*Proceedings continue in camera*]