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**EVIDENCE**

## Thursday, May 8, 2014

## Chair

**Mr. Pierre-Luc Dusseault**

# Standing Committee on Government Operations and Estimates

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● (0845)

[*Translation*]

**The Chair (Mr. Pierre-Luc Dusseault (Sherbrooke, NDP)):** Order, please. We are going to continue our study on the government's open data practices.

Joining us today are two experts representing two different provinces. In the room with us is David Hume, Executive Director, Citizen Engagement, Government Communications and Public Engagement, at the British Columbia government, and by video-conference, from New Brunswick, we have Diane Nadeau, Chief Information Strategist, Office of the Chief Information Officer.

According to our usual practices, each witness will have 10 minutes for their presentation. Members of the committee will then be able to ask questions as they see fit.

Mr. Hume, thank you for joining us today and for travelling from Vancouver to Ottawa. Without further delay, I give you the floor.

[*English*]

**Mr. David Hume (Executive Director, Citizen Engagement, Government Communications and Public Engagement, British Columbia Government):** Thanks very much for having me. As ever, it's a really fun thing to be able to come to a committee meeting like this. You probably don't get public servants saying that to you very often but when you're coming from a provincial context, it's really interesting to come and talk to federal colleagues. I prepared a few notes that I'll be referring to. I think our clerk helped me distribute those.

I work in the Ministry of Technology Innovation and Citizens' Services in a particular agency called Government Communications and Public Engagement. I've been in the role that I'm in for about five years now.

The direction I received said, “The committee would like to know your opinion on users' needs in relation to the federal government's open data initiative, the economic and social benefits associated with open data, the best practices in other jurisdictions in relation to open data initiatives, and the importance of collaboration between the various levels of government, federal, provincial, and municipal.” So I'm going to work through each one of those items and I'll start at the beginning.

Let me start by talking about users' needs. I can say a few things about users' needs with respects to open data initiatives mainly because I'm the program lead for one of those. I think that what impacts us in British Columbia is also relevant at the federal level as well. There are seven points that I think are important to focus on.

First and foremost is the findability of data. That is to say, if you're going to be able to provide data to the public in this way, they need to be able to find it. It's pretty straightforward.

But there is also the accessibility of data that is in a means that's really suitable for the people who are coming to use it. A number of technologies are available, things like APIs, web mapping services. We can go into details about what those are in the conversation. Making sure that people can connect to the data in a way that is relevant to them and that serves their needs is really important.

The usability of web interfaces as well as the data itself, including the legal terms that are associated with that data, are critically important.

The quality of the data—that it's correct, complete, consistent, and that it's without redundancy—is also a very important element in the usability of it, a very important need that users are looking for.

Users are also looking for value in data and in particular relevant to particular sectors, especially where they can take that raw data and then turn it into information that is applicable in their particular business context.

Engagement with users to understand their needs and make them aware of the resource and spark collaborative innovations is also an important element. Typically we do see users really wanting to see organizations that are running these types of programs do a significant amount of outreach, to be able to learn from them and be able to work with them and bring them together in community events.

Lastly, users are typically looking for signals of internal culture change that indicate that government is really serious about what it's doing around open data. They're going to be looking for policy statements or statements from political leadership that indicate that government is committed to doing what it's doing. But most of all, they're really interested in seeing government consuming its own data. That really sends a signal that it's committed to the ongoing supply of that data.

We can talk in a lot more detail about any of those points. As far as the federal effort is concerned, I think they're mainly doing a good job across all these different levels and making good progress. Speaking as a program owner, I can tell you too that there's always room for improvement. A good example of that is around improving the findability of data, because data is often described in ways that aren't easy for average users to understand. Often it can be quite self-referential to a field. We need to do a better job of improving in plain language the way that data is described so that more people can find it more easily and understand the opportunity of using it. That's going to be work that will be ongoing. At both the provincial and the federal levels, we will need to continue to do this over a number of years.

As far as the economic and social benefits of open data are concerned, you may be aware that McKinsey and Company estimates the open data opportunity to be worth about $3 trillion in value.

● (0850)

That is an extraordinary number. It blows my mind a little bit that this number is that big. I think it's really interesting. I don't think we've met that potential yet, but it is a signal of the huge potential in open data, and I think through better access to data in general.

Data is a foundational element for our digital economy and an important element in decision-making of all kinds, and so data can really contribute to a number of outcomes.

One is that digital companies can use the data in products and services they are building, which creates economic opportunity for them. Teachers and students in schools, universities, and colleges can use data in educational activities helping to create a skilled workforce. Researchers can access data to improve their findings, and that, at the highest level, just improves our knowledge of the world and can help spark innovations and drive ahead our understanding of the world around us. Businesses can inform their decisions with access to data, helping to secure investment in jobs. Government can make more evidence-based decisions about programs and policies and use the data in its own services, improving results for taxpayers.

In B.C. we're seeing things like this happen in all of those different areas that I mentioned. Open data used by journalists has been driving public debates about liquor policy reform, climate change, and education.

Other good examples are applications created by enthusiasts outside of government. There's an application called SchoolZone that helps parents understand how to get their kids to school in the safest way possible by bringing crash statistics together with school locations and helping people plot their route in accordance.

Other examples include something that the B.C. Ministry of Education has done. It has created a Discover Your School app that helps parents understand the data profile of local schools across the province. I can tell you that was really useful when my wife and I were considering buying a house. I think it was a really great use of government using its own open data to be able to help get better information to the public to help inform their decisions.

But as you would expect, I think we would like to see more things happening, especially around the creation of economic growth through data. Our current thinking is it will be important for us to develop a deeper understanding of our data holdings and wrestle with the question about what data can be of the highest value to our society and to our economy. This is important for us to look at, because as an organization we have limited resources to apply to ensuring our data is of the highest quality, reliability, and accessibility. We need to be able to make good choices, to make sure we can maximize the impact of the open data opportunity for British Columbians and Canadians. That is a challenge for us, because much of our high-value data is something we ask currently people to pay for. Those funds are baked into the business models in many programs, and so it's very difficult for us to change if we want to shift to open data where that data is provided for free.

Moving on to best practices in open data initiatives and inter-jurisdictional collaboration, there are many good practices in the different areas I outlined earlier, around the things that users are looking for.

Looking internationally, I am impressed by the U.K.'s work in this area, in particular, in their investment in growing their data capability. It's clear to me that what they're doing is growing past their focus on numbers of datasets published. They are looking at creating a more holistic vision around data capability that will position the U.K. as a global leader in their ability to analyze, manage, and create value from data. I think that's a really strong and interesting approach. They are connecting the publication of data to the creation of a skilled workforce that can use that data. I think that's a powerful conversation. Her Majesty's government report *Seizing the data opportunity*, from October 2013, is very interesting, and I would commend it to you.

Other areas of best practice I can see emerging are a result of the collaboration occurring at the pan-Canadian level, at what's called the open data and information working group, which is part of the public sector service delivery council, the Public Sector CIO Council. My federal counterpart at Treasury Board Secretariat and I co-chair this.

● (0855)

At a working level, we're seeing some real advances in approaches to data inventory and cataloguing, a more standard approach to data licensing. There are a lot of good practices emerging about improving the search of data catalogues. All of these things are related to the findability of data, which as I said, is really fundamental to the whole endeavour.

As part of this, we think data standards created around high-value datasets will also be a very important area of work. In British Columbia we're watching, with great interest, the Canadian Open Data Institute, which was created in the last federal budget. We hope that it can be active in all of these different areas.

We're also seeing leaps forward in consuming data from across jurisdictions to create new kinds of digital services more efficiently than ever before. Our team at DataBC recently created what's called a geocoder, which is basically a tool that allows people to find the location of addresses really quickly. If you've ever used Google Maps and fired an address in there and then you see a point on a map, that's the result of a geocoder being able to relate an address to a latitude and longitude on a map. In B.C., we've recently created one.

This service was created more quickly with a higher level of accuracy than many other geocoders available out there because it was consuming open data from local governments and municipalities, so consuming their address data to create results. The efficiency gain from not having to negotiate with other governments, to be able to access that data, to simply be able to consume it, was a real leap forward in our productivity.

For ourselves, an emerging area of real interest is the idea of promoting data literacy. Our teams run events with schools and help young people learn to work with data, particular with geospatial data. It's really fabulous and exciting to be able to see young people engaged in using these things, and it's really great to be in classrooms and watching a next generation build some skills that we think are going to be critical for the next number of years.

B.C. was an early leader in open data at the provincial level. We got started in July 2011. And I think it's exciting to see other jurisdictions moving forward and leaping ahead of us in many ways —Ontario, Quebec, Newfoundland, and Alberta in particular. I'm looking forward to learning more about what our colleagues in New Brunswick are doing.

● (0900)

**The Chair:** Thank you. I will have to stop you, but there will be questions and you will be able to continue later.

[*Translation*]

We will now go to Ms. Nadeau, who is joining us through videoconference, directly from New Brunswick, and who, let me remind you, is the Chief Information Strategist at the Office of the Chief Information Officer.

Thank you for taking part in our committee this morning, Ms. Nadeau. You have the floor for 10 minutes.

**Ms. Diane Nadeau (Chief Information Strategist, Office of the Chief Information Officer, Government of New Brunswick):** Thank you very much.

[*English*]

Good morning, honourable members of Parliament of the standing committee.

What I have to talk to you about today is a little bit different from what Mr. Hume talked about, but it is very complementary.

The process of opening government data today is in its early stages and there are many opportunities for growth and improvement. Today I will talk about opportunities for an open data strategic plan, and recommendations to address the 10 principles for opening up government data. Some of those principles were named by Mr. Hume so I won't go into them.

The first step in the development of this strategic plan must begin with the understanding of government data and which data can be made public. In order to understand the information throughout the country, this data must be categorized using standard three-tier government taxonomy of capabilities and in some instances, data-specific taxonomies.

The second step is to understand which data is the most strategic to open in order to prioritize and invest in the right projects. I understand that data should be made open by default, however governments in general must be prudent in their investments today. Government will need advice from the private sector, academia, and the public in general to determine which data is the most valuable to open.

In some cases the government will have to ask for business cases to support those investments, even from the industries. For example, in 2006 the Government of New Brunswick geomatics review called to set up a spatial data infrastructure with definition of standards for foundational datasets and outreach. One of the mandates was to foster development of the geomatics industry in New Brunswick.

Today the infrastructure is called GeoNB. It's quite successful. There are currently 46 unique datasets available. We experience over 48,000 downloads of files and about 80,000 page views per year. For a small province like ours it is very good. The portal has also received national and international awards for its ease of use, utility and packaging data, and unique approach to ensuring foundational datasets are maintained as core functions within custodial departments and made available at no cost. Data is also shared today with Natural Resources Canada through a partnership to incorporate it into national networks. This infrastructure has contributed to the success of the University of New Brunswick, which has a world-renowned geodesy and geomatics engineering program, and yes, this has contributed to the development of the geomatics industry in New Brunswick.

This is just one example and there is so much more to accomplish. I appreciate all of the examples that Mr. Hume put on the table.

One issue is that today data is available in each government's format and very few are using international standards and that's more or less the focus of my presentation. As long as the private sector or academia is using the same engine and same local standards, we can share information and we can open it. At the end of my script you can see in the appendix an example where calculations using imperial and metrics actually cost NASA because they didn't translate the information properly.

The future to extend this new industry capability is limited without applying standards. Industries will not be able to expand nationally, regionally, or internationally unless they transform the data over and over again with due diligence, unlike the NASA example. This can be an overhead cost to each industry. Furthermore, the open government data will eventually become part of the industry's value chain. Providing quality, reusable, and timely government data will become more and more crucial.

● (0905)

I want to quote Sam Walton, founder of Walmart:

> People think we got big by putting big stores in small towns. Really, we got big by replacing inventory with information.

He participated in making the value chain very efficient.

The third step is to develop and manage a pan-Canadian information infrastructure of standards. I believe today you have one in the construction industry, and you maintain a national master specification at the federal government. What we are saying here for open data is that we need this infrastructure of standards.

How do we develop this infrastructure to support and prepare our industries? How do we accomplish this, when each government still supports many data silos and finds it difficult to open data even within its own government? How do we start accomplishing this as a country?

The following are our recommendations for Canada to lead. Canada must establish a Canadian data services organization.

Its first purpose is to inform governments and Canadian industry about international, regional, national, and local data standards and taxonomies.

Second is to develop data standards where none exist, by finding the best subject matter expert and supporting his or her organization to develop that standard.

Third is to develop a data governance so that organizations responsible for opening government data get the attention they require to start or continue delivering quality and reusable data, which will eventually become part of the industry's value chains.

Fourth, assure that governments adhere to a standard once approved by the data governance committee. Adhering to a standard will cost government, and therefore this may not be on their list of priorities. Therefore you may need a funding element.

Fifth is to support all the 10 principles.

How will a new Canadian data services organization respond to these recommendations? Let me explain.

In 2008, the Government of New Brunswick performed limited research on international standards. It showed that more than 40 authorities and more than 1,500 standards existed back then. That's six years ago. If we don't collaborate, this will be an overhead cost for each government and industry to locate those standards, analyze them, and use them.

Today, committees establish separate collaboration sites, and they are silos in themselves. We need to transform this space by providing one pan-Canadian repository, and we can all populate it via collaboration. This can be done by forming a Standardspedia. That's an example I will use.

I hope everybody knows about Wikipedia. Wikis are widely used today. The Government of New Brunswick has developed a proof of concept for Standardspedia using MediaWiki, the same platform used for Wikipedia. However, the Government of New Brunswick did not see itself as the owner for Standardspedia and tried to find an owner four to six years ago. Unfortunately, the idea of open data was new at the time. We tried to get funding by academia, ACOA, etc. Unfortunately, to qualify, Standardspedia needed to be made commercially available. We had envisioned Standardspedia to be a free tool to support industries. The concept for Standardspedia has since been on hold, and I believe this is the right time to revive the idea. We would like you to consider establishing a Canadian data services organization and Standardspedia in New Brunswick, which would serve the country and eventually the world.

● (0910)

Information is an asset. Information must be managed as an asset all along value chains. Let Canada become the Walmart of governments around the world.

I would like to thank you for the opportunity to share our opinion with you.

[*Translation*]

**The Chair:** Thank you for your presentation and for sharing your expertise, Ms. Nadeau.

My thanks also go to Mr. Hume for his presentation.

I will now give the floor to members of the committee. Mr. Ravignat, you have five minutes.

**Mr. Mathieu Ravignat (Pontiac, NDP):** Thank you, Mr. Chair.

I also thank the witnesses for their much appreciated presence.

My first question is for Ms. Nadeau. In your presentation, you talked about government data made open by default. You also said that this can be a challenge for some governments.

Right now, the federal government does not really intend to pursue such a policy. Could you tell me what you mean by open data by default and how that can be achieved?

**Ms. Diane Nadeau:** To make data open by default, we are setting up a new system. The information is organized so that it can be entered in databases whose basic criteria are compatible with international criteria allowing direct access to information.

These days, we need to understand the complex systems in place before we can get to the information. The secret is to look at the information, to determine what information we want to make accessible and to provide that information to the public and to industry.

**Mr. Mathieu Ravignat:** What you are saying is very interesting, but I have to cut you off to ask you another question.

Our leader of the official opposition said that an NDP government would be open by default. This concept seems to suggest that the data will have to be submitted within a reasonable timeframe. In your view, is the speed with which the data are submitted an important consideration in making the government open by default?

**Ms. Diane Nadeau:** Yes, it is an important consideration. Governments process a lot of information. They will have to determine which data are more valid and use their resources to make the data open.

**Mr. Mathieu Ravignat:** Thank you, Ms. Nadeau. That is very interesting.

My next question is for Mr. Hume.

[*English*]

In your presentation you talked about the importance—and I see your title is citizen engagement. I understand open government to be basically three things. You have open information. You have open data. You have open dialogue. I want to talk about the dialogue piece, which this government hasn't really done much of. Given you're an expert in citizen engagement, could you perhaps give us some of your best practices?

What needs to be done to ensure that data is used by citizens? How do you do that, and what are the best practices?

● (0915)

**Mr. David Hume:** There are a number of them. Let me go back to a couple of examples where it's been important for our purposes in B.C., just to give you some insight.

We use data as a matter of course when we're doing a lot of communications around public policy issues. That's at a level of using statistics and facts, quick facts and news releases, all the way through to providing interactive maps that allow people to dive in specifically to understand a particular issue in depth.

We recently ran a pretty significant consultation around reform to the liquor policy in British Columbia. As part of that, we created an interactive map that allowed people to see where their.... Colloquially, the map was called “Where you can drink”. It helped you understand the accessibility of liquor in the place where you lived, so where you could buy it, where you could consume it, all those kinds of things. It was an important contribution to be able to understand that if you're going to liberalize liquor laws in the province, what could that impact be, how liberal were they now, and all that kind of thing. It was a really useful exercise because it helped people understand more effectively the issues that were before them in the consultation.

*Merci beaucoup*.

[*Translation*]

**The Chair:** Thank you. I must stop you to give the floor to Mr. Trottier, who also has five minutes.

[*English*]

**Mr. Bernard Trottier (Etobicoke—Lakeshore, CPC):** Thank you, Mr. Chair.

Thank you, guests, for being here this morning.

I want to ask you about a very important area for provincial governments. I'm glad that you're here because we've had representatives from other governments in other parts of the world. We've had municipal governments. But I think there's a real opportunity for Canada to have...and you talked about the open data working group among the provinces in the area of health care, because that consumes typically half of provincial budgets, and it seems to be growing.

I think there are things that we could do with open data, and perhaps the federal government—which doesn't really run any health care facilities, but plays a role in health care when it comes to certain areas where there's a synergy among the provinces, for example, research and drug approvals and so on—could play a role in establishing certain standards when it comes to data.

We've been talking for several years about the importance of sharing information and benchmarks among provinces when it comes to wait times for critical surgery. There are other areas that are equally important, and it's a real frustration among constituents of mine when you talk about the wait time for getting a referral to a specialist, for example.

I'd like to hear from the experience of your provinces. What kind of work is being done in making this more open and transparent for citizens to know what the wait times are? Maybe they can compare notes with other provinces. But it's even for referring physicians in that example of the wait time to see a specialist. A constituent mentioned one time it was suspected they might have had Crohn's disease, so they were referred to a gastroenterologist, and then when they established the appointment with the gastroenterologist it was nine months before being able to have an endoscopy. So when you're told you have a fairly critical illness and you're told just wait for nine months, that's a very frustrating experience for a patient. But that referring physician might have been able to find a specialist who had a shorter wait time.

These are the kinds of situations that come up in health care.

Starting with you, Mr. Hume, what kinds of things is the Province of British Columbia doing in terms of open data around health care to improve the lives of citizens and patients?

**Mr. David Hume:** There are a few things. I could start most directly to your question about the issue of wait times. The Ministry of Health publishes online, although I don't believe they're publishing any open data yet, but you can go and look online about wait times for specific surgeons or for specific kinds of surgery. That's available publicly to help inform people about choices that they want to make around specific surgeons they may be using. Otherwise we're all publishing, to a large degree. A huge amount of the data that we're publishing as open data is vital statistics data. That's births, deaths, marriages, reasons for deaths, those kinds of elements. That's really important in helping people to understand community health and community health indicators that are available as open data for them.

● (0920)

**Mr. Bernard Trottier:** Maybe I'll just ask Madame Nadeau briefly, then I'll have a bit of a follow-up question.

Madame Nadeau, what is the Province of New Brunswick doing with respect to open data related to health care?

**Ms. Diane Nadeau:** Currently we share information with a research data centre located at the University of New Brunswick to do any research related to health. Obviously it's not private information but more aggregate information. I think that's similar to other provinces. We are following on Manitoba or other provinces.

On the question of the wait times, that would be a little bit difficult because trying to find a doctor for whom you don't have to wait nine months when maybe you could have an appointment with somebody else in three months—you would have to have the schedules of all of the doctors, which we don't have today. We don't manage their offices.

I would like to explore that idea, but I don't have any answers for you today.

**Mr. Bernard Trottier:** Okay.

I'm just wondering if in the open data working group that is something that's being discussed, or if there is a plan to address this. It's an ongoing, day-to-day problem and frustration, and perhaps an opportunity in terms of our health care system in the sense that each province has some similar methods. In some ways, Canada might be better positioned than, say, the United States or other places because we have a certain similarity in our health care systems across provinces. We could establish some standards and then compare ourselves.

Do the provinces willingly do that, bearing in mind that there are elements of the health care system that are private and they might not be willing to share that information?

[*Translation*]

**The Chair:** Thank you, Mr. Trottier. Unfortunately, that is all the time you have.

Mrs. Day, it is your turn. You also have five minutes.

**Mrs. Anne-Marie Day (Charlesbourg—Haute-Saint-Charles, NDP):** Thank you, Mr. Chair.

I would like to welcome our two guests. We are happy to have them here.

Mr. Hume, my first question is for you. You talked about socio-economic benefits to the tune of $3 trillion. Who pockets this kind of money? Is that the money you make and redistribute to social housing or health? How does that transfer of money work?

[*English*]

**Mr. David Hume:** My understanding of McKinsey's work on this is that the value that's created is a culmination of not only sort of commercial economic gain but also productivity. So the answer to your question would be yes, there are opportunities to create more streamlined services that could be more efficient. I used the example of a geocoder, which is a small example. They would have access to data in much more streamlined ways to be able to produce all kinds of services.

Yes, within the system that would create opportunities to create savings that then could be re-prioritized to other sorts of areas.

[*Translation*]

**Mrs. Anne-Marie Day:** Does that mean that our various governments could make profits just from open data and redistribute the wealth?

[*English*]

**Mr. David Hume:** I would hesitate to use the word “profit”, but I would say that we would be able to achieve savings using open data as part of our service delivery design, yes. With those savings we would be able to release those funds for other purposes.

[*Translation*]

**Mrs. Anne-Marie Day:** Are you able to provide examples that show the potential for socio-economic development with data of that kind?

[*English*]

**Mr. David Hume:** One of the challenges with that question is that there are so many. One thing that we are active in doing is beginning to share transportation data and highway event data in a much more consumable way. That data will be able to inform anyone who is in the business of moving goods and services around the province of British Columbia how to do that more efficiently. If you use GPS in your car, for example, we would be able to share much more extensively the data that would be impacting your route to home, to work, to wherever you're going, so that you would be able to save time and make better choices when you're on the road, which then has knock-on effects of being able to reduce carbon emissions, pollution, health/air quality—

[*Translation*]

**Mrs. Anne-Marie Day:** Have you set up some kind of public consultation? How are people reacting? Are they reacting? Do you have an evaluation for your site?

● (0925)

[*English*]

**Mr. David Hume:** We are almost always in consultation. One of the strategies we have always used is to be wide open with our users. We're constantly engaged with them through events as well as through social media and other tools.

I think the best thing I can say about the response we have received is that we have served over 300,000 users since we launched three years ago. That number continues to grow steadily. Whenever we are out explaining the opportunity to people, there is always a lot of interest. Especially when you're working with people who are real data users, academics, teachers, students, business people, the response is always very positive.

One of the things about open data is there are often challenging issues that are profiled through the data, but it's also important to understand we're not sharing personal information, so a lot of the challenges that people have with data on that front are not an issue for us on open data at this time.

[*Translation*]

**Mrs. Anne-Marie Day:** Thank you.

Ms. Nadeau, you seem skeptical about open data. You talked about “open by default”, which is a caveat for this concept. You also talked about international taxonomies, meaning international classification.

Could you tell us what the ideal situation would be in this case?

**Ms. Diane Nadeau:** Yes. Right now, all governments, whether at the federal, provincial or municipal levels, are adopting various taxonomy systems to categorize the services they offer. The categorization of data is completely different from one website to another. As a result, when people consult a site, they have to kind of figure out how the data and services are categorized. The same is true internally, within governments. Everyone has their own way of categorizing data.

In New Brunswick, we started setting up a proper classification system. We adopted the Australian system because the data were more open there. In fact, all the information was on their website. We have made some changes since we are a province, not a country.

I agree with the idea of having municipal taxonomies across the country and I think we should apply this principle in the provinces and across the country so that we are all aligned.

**Mrs. Anne-Marie Day:** Which is not the case right now.

**The Chair:** Thank you, Mrs. Day. Your time is up.

Mr. O'Connor, you have five minutes.

[*English*]

**Hon. Gordon O'Connor (Carleton—Mississippi Mills, CPC):** Good morning.

I just want to talk about the different levels of government. There are the federal, the provincial, and the city governments and each of them have their responsibilities. I'm wondering if there are any jurisdictional issues to be resolved or any impediments in information? For example the federal government is also involved in environment, health, resources, and other things, as the provinces are. Is there any possibility that one is stepping over the bounds of the other?

I'll start with Ms. Nadeau.

**Ms. Diane Nadeau:** Yes there could be some instances where we perhaps do some duplication of work. And I think there are a lot more opportunities to share information between the three levels of government, especially in geographic data.

Like I mentioned the Government of New Brunswick shares data with Natural Resources Canada. Geographic data can be used anywhere with just about anything.

I remember in 1998, I did some work with Elections Canada in trying to share information between all of the election offices across the country for the electoral districts. At that time, I don't think it was possible and I think today, it is much more possible.

So yes there are a lot of opportunities for sharing.

● (0930)

**Hon. Gordon O'Connor:** Mr. Hume.

**Mr. David Hume:** Yes I would echo Ms. Nadeau's comments.

I actually don't think the issue is us stepping on each other's toes, it's more an issue of us not sharing enough. The opportunity to actively share data and in an open way means that we can be consuming each other's data much more seamlessly and repurposing those things for the things we need within our own respective context.

The opportunity for us to be able to take federal data, bring it together with provincial data and municipal data to run different kinds of analyses, and create policy options or service improvements as a result of that kind of measurement is really important. And it gets so much easier when the process doesn't involve the creation of a data sharing license agreement or having to negotiate terms between different levels of government and create that kind of red tape around just the sheer access to data that exists in a lot of circumstances right now.

This is why the point about open data by default is an important one. It's because if we assume and we define and we design our data in a way that we anticipate it will be shared, it means it will be consumable by everyone and it will essentially just reduce red tape across the federation.

**Hon. Gordon O'Connor:** Okay.

Ms. Nadeau, my understanding is that New Brunswick does not have an open data site, per se. Are you planning to do such a thing in the future?

**Ms. Diane Nadeau:** Yes, I believe we are. Right now I think the only one that is there is GeoNB. That is listed on the site. We actually have a lot of open data. It's just not organized into an open data site.

**Hon. Gordon O'Connor:** Are all the various departments within British Columbia feeding information into your data site? Or are there some that are not?

**Mr. David Hume:** Well, some are doing more than others, but yes, all of them are. Probably the largest contributor in volume is the Ministry of Health. I think the smallest contributor is the Ministry of Aboriginal Relations and Reconciliation. It just has to do with how much data they're holding and what they are able to make open.

[*Translation*]

**The Chair:** Thank you, Mr. O'Connor.

Mr. Byrne, you have five minutes.

[*English*]

**Hon. Gerry Byrne (Humber—St. Barbe—Baie Verte, Lib.):** Madame Nadeau, New Brunswick is Canada's only officially bilingual province, and presumably you'll be developing your open data sites in both official languages. Obviously the data is numeric, but the descriptors to the data and the capacity to be able to search would depend on which particular language you use.

My question is framed from this point of view. If there were inter-jurisdictional sharing of data, would you perceive there being any problems in the capacity to do searches? If a Canadian citizen were to attempt a search, using both federal and provincial data, and there wasn't a bilingual capacity to be able to do so, would that be any inhibition to being able to have a successful search?

**Ms. Diane Nadeau:** I think there were two questions, so I will answer the first one. Yes, we are bilingual, and the information that would be put out would satisfy the English and French requirements. When we publish information, we have to put it out in both languages.

Second, I would refer you to the search engine Google. If I search even in English for French information, it usually brings back some results. It doesn't just say, "Sorry, I don't speak that language." So, I think it is possible and we have to work towards that goal.

**Hon. Gerry Byrne:** Okay, Mr. Hume, to follow up on that, one of the presenters we've had at committee did suggest that, if the Canadian government and the provincial and territorial governments were to attempt to harmonize, wherever possible, in an open portal, and to develop a single search engine to be able to do this, it would be very valuable. Could you see any constraints if we were to.... At the ground level now, which is what open data is—we're really at ground zero to a certain degree—are we losing capacity and opportunity if we're not moving towards a goal of harmonization, the capacity for jurisdictions to share and to provide data in a mutually acceptable and agreeable format?

Put it in context, as well, with the official languages aspect, if you could.

● (0935)

**Mr. David Hume:** I think, through the work of the open data and open information working group, which I referenced in my remarks, we're trying to create opportunity. We're beginning some work that will be looking specifically at this question of search, and what we would call it is "federated search". The idea would be that, if you did a search at data.gov.bc.ca, you'd be able to find data referencing any jurisdiction that's in the province of British Columbia, as well as any data that is relevant from the federal government; and that capability would be across the country for data portals. That would be the ideal state.

Regarding the question about English and French, I think Ms. Nadeau's comments about the way Google works are right on. It's mainly just a question of how you organize the information. If you're smart about how you tag, organize, and label that information, the question on bilingualism will be less of a constraint.

There are challenges that come when you need to work to standardization in ensuring translation is effective, well-recognized, and standard. But most international standards, which is what you want to be looking towards, are able to accommodate for that, because they're international. They're in multiple languages, not just English and French, so they're intelligible globally.

**Hon. Gerry Byrne:** Thank you.

I am taking from what you said that we need to be smart in doing that. So are we being smart in doing that?

**Mr. David Hume:** Well, we're attempting to be as smart as we can.

**Hon. Gerry Byrne:** Thanks, Mr. Chair.

**The Chair:** Thank you, Mr. Byrne.

Now to Ms. Ablonczy for five minutes.

**Hon. Diane Ablonczy (Calgary—Nose Hill, CPC):** Thank you, Mr. Chairman.

I thank the two of you for being here.

I'll start with Mr. Hume. You impress me because you addressed the questions very logically and that was very helpful.

I want to follow up on Mr. Byrne's question. We've been told that the RDF format is the one that should be used for open data posting. Are you using that or do you intend to use it?

**Mr. David Hume:** We have some RDF data, not a lot of it. It's a new-ish format that a lot of our.... I think the thing to remember about where we're at is that a lot of the systems where we will be pulling data to publish aren't designed to create data in the RDF way. RDF is a really interesting and powerful data format because it can create those interconnections among different datasets, but we haven't done a lot of that so far, no.

**Hon. Diane Ablonczy:** Ms. Nadeau, have you grappled with that question at all?

**Ms. Diane Nadeau:** We have, however the information that we have put open on the site is not using RDF. We understand that there are a lot of RDF schemas out. It's part of the information I was talking to you about in my script. For example, the legal RDF has a basic vocabulary that contains more than 1,500 standards for documents, contacts, economies—those types of things. I believe also you have an XBRL for financial information. There are all kinds of information out there that we're not using.

**Hon. Diane Ablonczy:** Well, I do worry that if everyone does their own thing then it's going to be very hard for the end-user to access information in multiple formats. Hopefully the working group will wrestle that one to the ground.

Mr. Hume, I'm curious about the vision for open data. We've heard from a number of people. I don't think we're posting open data "just because". There has to be a benefit to it, a practical benefit. How would you describe the practical benefit to British Columbians of what you're doing?

● (0940)

**Mr. David Hume:** I think the practical benefit is mainly about.... I'm going to try to describe this in a couple of different ways.

One is the opportunity that open data provides to help people be successful in the things that they want to do themselves. For example, in my case of the education application that I told you about, the Minister of Education published open data and then used that data to create a service for parents that helps them understand the data profile of various schools. That allowed me and my wife to look, in a really logical and effective way, at the different kinds of performance measures, quality indicators, student satisfaction surveys, test results, and other kinds of things about schools in our areas.

My kids are four and two. We were going to buy a house and we wanted to make sure that we were close to a school that we felt would be good. We had limited opportunity to go and see and visit those different schools. It was the best information that we could get our hands on that would allow us to understand what those schools are like. That's, I think, a really practical benefit of open data.

It really allows governments to be able to take data.... When we publish our data openly it means we can consume it ourselves and apply our own creativity and use it in different service capacities, in ways that really make it relevant to people.

It just gets easier for us to do that when the data is published openly in a consumable way. We spend less time trying to organize it, find it, manipulate it, pull it out of reports. We can just go get it and we can start to do things with it. There are real benefits in that.

**Hon. Diane Ablonczy:** That's a good example.

Ms. Nadeau, I noticed in your remarks that you talked about trying to get funding from academia and ACOA for some of your work. I'm curious as to whether there's a budget being set aside by the Government of New Brunswick for this work?

At this point do you have an envelope you're working with? Is there some base funding for you?

**Ms. Diane Nadeau:** Currently, no, there is no funding. As I said, this is put on hold. We had funding for proof of concept, and that was it. We were supposed to be able to find somebody in the industry to take this over, but we haven't found anybody to take this over.

**Hon. Diane Ablonczy:** Interesting.

Thank you, Mr. Chairman.

[*Translation*]

**The Chair:** Thank you.

I will now go back to Mr. Ravignat.

Mr. Ravignat, you have five minutes.

[*English*]

**Mr. Mathieu Ravignat:** While addressing the usability of data with different formats and so forth is definitely a crucial point, so is the usefulness of that data. A lot of the data made available on the open portal by the federal government is geospatial data, and of course it depends on the quality of the data that is produced.

This study also concerns whether or not data is socially useful. As you know, the government did away with the long form census at Statistics Canada. I was wondering whether or not either of you had an opinion with regard to what that has done, from your perspective, to the quality of data available from the federal government.

**Mr. David Hume:** Sure. It's difficult for me to speak on the issue because I'm not responsible for the B.C. statistics agency. I can tell you certainly there is a lot of expert opinion out there that the results of that decision had made the usefulness of that data more challenging. The exact impacts of that I'm not totally clear on because I'm not very close to that issue, but I think you would hear in the experts the challenge of using that data.

[*Translation*]

**Mr. Mathieu Ravignat:** Ms. Nadeau, what do you think about this issue?

[*English*]

**Ms. Diane Nadeau:** What I understand is that the long form census for census data is used to provide funding for the right programs in the right regions. Yes, probably open data could replace some of the analysis in order to replace that form. That's what I'm thinking right now that could be done. I would have to do a little bit more research to find out if I'm totally correct in my assumption.

● (0945)

**Mr. Mathieu Ravignat:** Thank you.

I still want to talk about the relationship between open data and access to information. I don't know if either of you has expertise with regard to the relationship between putting data available as quickly as possible to the public and the growing requests, at least at the federal level, for access to information. I don't know if there is an equivalent provincially, where providing this data may actually help reduce the number and the complexity of the requests for access to information.

Mr. Hume, would you like to start?

**Mr. David Hume:** In certain cases it has. Open data is in a language of freedom of information, or access to information, as a kind of proactive disclosure. Certainly when we have made data publicly available, that has allowed us to deal with requesters, and I'll refer them to things.

But to be clear, that doesn't stop them making the request, right? In British Columbia we have seen a real increase in freedom of information requests over the last number of years, which has been a challenge to manage. Open data does offer us a vehicle to be able to kind of refer people off to be able to access information when it is available. But as I say, it hasn't minimized the number of requests.

[*Translation*]

**Mr. Mathieu Ravignat:** Ms. Nadeau, do you have any comments on this?

**Ms. Diane Nadeau:** I would like to add that we had a reduction committee in 2005. That committee required a catalogue with the government's fees, which needed to be published on the website.

While working with the committee, we realized that it wanted to have access to information other than the fees. It wanted to have the description of services, contact information, and so on. Instead of providing a catalogue with fees, we created a directory with all the services, which we posted on the site.

Right now, 850 government services are published in the same format. As a result, public requests for information have dropped as the information is already on the site.

I know that we had a lot of requests at the very beginning. Then, over the years, the public has pretty much figured out how to use the site. As a result, we have had fewer and fewer questions. That was a real success.

**The Chair:** Thank you for that answer.

Mr. Adler now has the floor.

[*English*]

You have five minutes.

**Mr. Mark Adler (York Centre, CPC):** Thank you, Mr. Chair.

Ms. Nadeau, earlier you referred to the example of Sam Walton saying that information is more important than inventory. Walmart has really proved that case. I don't know if you have been to Bentonville, Arkansas, and seen the actual Walmart facility, but it is run like a military operation. It's kind of a nerve centre. They do have all kinds of weather reports coming in. It resembles very much a Pentagon kind of operation. Ms. Nadeau, you talked about making a business case in developing a strategic plan on open data, to make a business case for the release of specific data.

I want to ask Mr. Hume this. Is all of the data that British Columbia releases free, or does some of it have to be paid for?

● (0950)

**Mr. David Hume:** On the DataBC site, you will be able to get that data for free. For some datasets, you are getting copies of the data rather than access to the raw data. If you wanted full access to the data then you would have to pay.

**Mr. Mark Adler:** How is that data valued? What is taken into account to place a specific valuation on that data?

**Mr. David Hume:** Usually the valuation is associated with the creation and maintenance of the data. So if you take, for example, a dataset like our base geographic data or a digital road atlas, there are a number of different partners that will typically come together to fund the creation and ongoing maintenance of that data.

If you think about something like roads, the datasets get built but they also need to be continually reviewed and ensured that they are properly done. There are also all kinds of levels associated with data that come along with that: telemetry, the aerial photos. There are multiple kinds of data associated with those things. So it's in the creation of that where most of the.... It's in trying to recover for those costs where there is often payment.

**Mr. Mark Adler:** Is it pretty much run on a cost-recovery basis or is there any profit?

**Mr. David Hume:** It's pretty much run on cost recovery.

**Mr. Mark Adler:** It is. Is there any thought to make it a profit centre and to actually make money off this data? I'm assuming that some of the data that goes out is contracted out to a variety of different companies that will organize this data, make some sense of it, and make it available back to the government, and then the government charges for it on a cost-recovery basis.

**Mr. David Hume:** It kind of works like that.

Just to put it slightly differently, we would pay people to go and collect the data, to bring it back to us. That intellectual property lies with government once it's done. It's collected by contractors on our behalf. I would say that there's....

Here's the thing about open data as a philosophy. There's a basic principle there that you create more wealth by sharing the data than you would by selling it. So you create more market efficiencies by sharing data openly without asking people to pay for it, the assumption being that you've paid your taxes so you've paid for the data.

**Mr. Mark Adler:** I agree with you on that. I don't think it should be necessarily sold or privatized. What I am saying, though, is there are data brokers out there who collect on behalf of private companies and resell this data and it's a very big business—

**Mr. David Hume:** Yes, it is.

**Mr. Mark Adler:** —and a lot of data brokers are making a lot of money doing this. I was just wondering if there was any thought at any point given to government going in this direction? I'm not necessarily making a case in favour of going that route, but I'm asking if there was any thought ever given to that?

**Mr. David Hume:** We do value-added types of products all the time. That geocoder I mentioned earlier is a good example of that. There are a whole bunch of address data that are collected and shared by municipalities. What we're attempting to do is bring the address data together so that you can use a geocoder that helps you find authoritative locations across the province. That's a value-added piece, but in that case we're not necessarily charging people to use the geocoder system.

**Mr. Mark Adler:** If you go to specific websites now, a lot of the companies that you go to use these data brokers and they collect profile information on you. When you go to a specific website, you're going to get advertising directed towards you that's different from advertising directed towards Mr. Ravignat, for example. Are you looking at any kind of model whereby you could make that opportunity available to private companies so it's an added source of revenue for government, or not?

**Mr. David Hume:** I want to make sure I understand. Are you thinking we should be selling ads on our DataBC site? I don't think I quite get the question.

**Mr. Mark Adler:** That's exactly it.

**Mr. David Hume:** Oh, no, we're not doing that.

**Mr. Mark Adler:** No possibility at all?

**Mr. David Hume:** No intention of selling advertising on the government website.

**Mr. Mark Adler:** No, okay. I just wanted to clarify that.

● (0955)

**The Chair:** Thank you, Mr. Adler. Your time is up.

We'll now go to Madam Day.

[*Translation*]

You have five minutes.

**Mrs. Anne-Marie Day:** Thank you, Mr. Chair.

I am happy that it's my turn again. I have many questions.

Today, the Quebec City press made an announcement about Laval University, which is located in my beautiful and magnificent city of Quebec. In fact, I invite you all to visit the city this summer. Let me know and I will give you a tour.

The local press announced that a first sustainable development course was going to be offered online. This formula already exists at HEC Montréal, as well as at the Massachusetts Institute of Technology, MIT, and Harvard, in the United States, where it has been very successful.

Have you considered having this type of training in your respective provinces? Do you have any contacts in the universities who could tell us?

It is clearly a way to make education more democratic. I know that New Brunswick is buying a number of medical and dental surgery courses from the Université de Sherbrooke. Have any similar open-access courses been considered by your provinces?

**Ms. Diane Nadeau:** Would you like me to answer the question, Mrs. Day?

**Mrs. Anne-Marie Day:** Yes, please.

**Ms. Diane Nadeau:** In New Brunswick, we currently have online training. In the past, we had a program—and I forget the name—that allowed the public to have access to online services.

To go back to the education sector, I am not aware of everything that goes on. As you mentioned, universities share some medical courses. My daughter's university also has that type of sharing. Schools perhaps do a little less of that kind of sharing.

Some courses are now offered in China, for instance. In this day and age, there are probably a lot of opportunities for sharing.

I am sorry, but I cannot give you a more detailed answer.

**Mrs. Anne-Marie Day:** Are you aware of this situation, Mr. Hume?

[*English*]

**Mr. David Hume:** Certainly the universities are doing a lot in terms of online education. Royal Roads University in Victoria does this as part of its core business. Also, in the public education system, online courses are available for students in the more senior years, in the high school years. That allows them to actually opt out of physical classes and take classes online to be able to do this, and so yes, we are doing that. Sustainable development is also an area of real interest in British Columbia, and so there are a number of courses that do that.

[*Translation*]

**Mrs. Anne-Marie Day:** Ms. Nadeau, you talked about three steps. At the third step, your document reads:

> How do we accomplish this when each government still supports many data silos and finds it difficult to open data even within their own government? How do we start accomplishing this as a country?

In line with those questions, one of our guests, who came from Chicago, told us that, according to the municipal government that was in place, access to some data could be either open or restricted.

How can we turn that situation around? Can you suggest some solutions?

**Ms. Diane Nadeau:** As I said earlier, the second step is to study the data and determine which can be open. We need resources to change the way things are being done today. We must decide whether the system needs to be redone or whether a new capacity simply needs to be added.

In New Brunswick, since our resources are quite limited, we must be prudent in our approach. Each case can be a bit different since every piece of information is different. In health, we will have to be much more careful, but in the area of natural resources, we might be able to make the data accessible much faster.

● (1000)

**Mrs. Anne-Marie Day:** Thank you.

**The Chair:** Thank you, Mrs. Day.

Mr. Cannan, you have five minutes.

[*English*]

**Hon. Ron Cannan (Kelowna—Lake Country, CPC):** Thank you, Mr. Chair.

Thank you to our witnesses.

It's great to have you here and appreciate the experience you've shared with the committee about the liquor road map and where to consume your favourite beverage in British Columbia. It's easy. It's in the Okanagan—international award-winning wines right there.

I know it has been helpful. It's been an ongoing discussion, using information and technology, I was just reflecting with my colleague, when we had all this discussion about RDF and website specification, technology specification, it reminds me of 30-plus years ago when we had the debate over Beta and VHS. So we're just going to the next generation in technology.

I have UBC Okanagan and Okanagan College in my constituency. One of the concerns I hear from constituents about research information is that people want to take that information and build on it. Have you had any challenges to date when you handle the open source access for academia and then for researchers, having their information used for private application and wanting to patent and copyright information?

**Mr. David Hume:** I can tell you that one of the strongest user bases for our dataset, DataBC, is the post-secondary sector. And while our analytics don't tell us exactly who's using the set, whether they're a student, teacher, instructor, professor, or researcher, it's clear that UBC is a big user, and SFU and other provincial post-secondary education institutions are really important.

In other areas of data access, we have other data agencies in British Columbia. Population Data BC is one that provides access to researchers for health-related data. That is much more constrained than the DataBC presence because it involves personal information. We have heard from the research community that they would like more available streamlined access to data that's relevant to them in those kinds of areas. You mentioned the commercialization and IP issues. The open data opportunity there is that our licensing allows people to go and repurpose it for whatever they're looking to do, and that includes commercial purposes. It's cleaner that way.

**Hon. Ron Cannan:** And I think with the medical perspective, my wife works as a doctor, and QHR Technologies is leading the way for electronic medical records. That's more and more with the technology, with our universities integrated with education campuses as well, using that technology.

One quick question for both of you, then, would be on the issue of privacy. We have 10 provinces and three territories. Each one has its own privacy act. We have the federal government respecting privacy. I used to be on the committee, so I'm just filling in. But I'm trying to figure out what the role is for the federal government. Do we sit back and develop the framework and be the referee perspective and have the provinces develop the guidelines? How do you see the federal role in developing this policy on a national basis, or pan-Canadian, as Ms. Nadeau referred to? Maybe you want to answer that question first, Ms. Nadeau.

● (1005)

**Ms. Diane Nadeau:** Yes, it would be great if the federal government would elaborate on the privacy policy more, and then all of the provincial and municipal governments could use it. Today we do share information about health with the University of New Brunswick.

It is quite difficult to decide the information that cannot be traced back to the person. It is very difficult to share information about health very openly. And I'm sure there are other areas, in social development or anything like that. It's very difficult and you will find a lot of resistance. The clearer the policy can be, the better it will be to help us out.

**Hon. Ron Cannan:** Mr. Hume.

**Mr. David Hume:** I'm certainly delighted whenever the federal government can take the lead on a complicated policy issue. Certainly at the provincial level, we're struggling with this. I think it has been one of the challenges around implementing open data within our organization. There's a view that really high-value data has to do with personal information—health data, for example. But there's no real way to publish that.

I think we should be able to get to a place where we understand that with aggregate levels of information, the practices around that anonymization are very clear and well understood across the country. It would be very helpful for the federal government in its work and our collective privacy commissioners across the country to talk to us about that.

**The Chair:** *Merci*. Thank you, Mr. Hume.

**Hon. Ron Cannan:** That's it?

Thank you very much. I appreciate it.

**The Chair:** Mr. Byrne, for five minutes.

**Hon. Gerry Byrne:** On that theme of what the federal government can do to assist, if you had an open portal, are there any other asks that you would have, any type of leadership role that you would like the federal government to assume that could really advance the cause of open data in Canada? Is there anything else you'd want to fill into the blank?

We'll start with you, Mr. Hume, and then Madame Nadeau.

**Mr. David Hume:** I certainly think the strength of the open data conversation has been the emphasis on getting us moving on publishing data. I think the weakness has been that it has seemed to focus us on a lot of technical issues—data licensing, data standards, and those kinds of elements.

The direction that the U.K. is heading in is the idea of data capability, that is, a national data infrastructure. We have made a lot of investments in such things as spatial data infrastructure, and that clearly has been led by the federal government through its GeoConnections program. For federal leadership, the idea of building skills around data analysis, data publishing, data management, and the opportunity for us to build the systems, the ideas, and the insights out of data could be a real focus as far as skills development and economic growth are concerned.

**Hon. Gerry Byrne:** Could you elaborate how the federal government could build the skill base?

**Mr. David Hume:** It has a number of different mechanisms at its disposal. One area is academic funding; that could be a focus. Training initiatives through Employment and Skills Development Canada offer another. There are also the labour market agreements with the provinces, other relationships with post-secondary institutions, and simply leading the conversation with the business community and rallying the tech community and driving this as an element in Canada's overall approach to the digital economy or knowledge-based government—whatever kind of wrapper you would want to put around it.

Those routes would be open. Access to data is a fundamental part of it, but it isn't sufficient. Skills, insight, and the ability to use the data describe the direction in which we really need to go.

**Hon. Gerry Byrne:** Madam Nadeau.

● (1010)

**Ms. Diane Nadeau:** With the open portal, as I said in my script, having access to standards.... Just having the Government of New Brunswick trying to find out all of the different standards we should have, analyze them, and use them, is a huge project. Why should we do this, when all of the governments in Canada need to do it? That's why I'm saying we should do this in a collaborative way, so that New Brunswick does some, British Columbia does some, the federal government does some, and we all collaborate so that we can reuse the research.

It would be great if eventually the industry creates apps and can ingest data with great agility across the country. That means never having to transform the data: they just ingest it and they can use it right away. This is a great advantage.

**The Chair:** Thank you, Mr. Byrne.

[*Translation*]

I thank our two guests for taking part in this meeting and for sharing their expertise with us. It will certainly help us continue our study.

The bell is telling us that we have to go to the House to vote, so we are going to adjourn this meeting.

Since we did not have time to look at future business, let me remind the members from all parties to start thinking of a list of witnesses for the next study. I will not say any more because we have to go vote now.

The meeting is adjourned.