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Chair

The Honourable Judy A. Sgro

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• (1210)

[English]

The Chair (Hon. Judy A. Sgro (Humber River—Black Creek, Lib.)): Order, please. We are reconvening our meeting.

Pursuant to Standing Order 108(2), we are now commencing a study of infrastructure and smart communities. We have several witnesses with us today. From Hydro Ottawa, we have Charles Berndt, supervisor of smart grid technologies, and from the IBI Group, by video conference, we have Gary Andrishak, director. Thank you very much, Gary, for joining us.

As well, from the City of Mississauga, we have Shawn Slack, who is the director of information technology and chief information officer.

Welcome to all of you.

We will open it up. Mr. Slack, perhaps you would like to go first. You have five minutes for your opening remarks.

Mr. Shawn Slack (Director of Information Technology and Chief Information Officer, City of Mississauga): Good afternoon, everyone. Thank you.

Today I'm here before the committee to talk about the municipal perspective on smart cities and hopefully provide some information that might help form a program for Canada and to advance Canada's reputation as a leader in smart city technology.

I have a short presentation to go through today to demonstrate some things that can be done and where I think we should go as cities across Canada.

One of the things driving the smart city idea is expectations. The public expects connectivity everywhere. At Celebration Square in Mississauga, we have 23,000 users every month using free public Wi-Fi. It's an expected service.

The workforce expects connectivity. When you go to an airport or a coffee shop, no matter where you go, you see that connectivity is an expectation.

A modern city relies on connectivity. Our services are all connected. Whether it's an advanced traffic management centre or a transit control room, everything is connected. We need that kind of technology both to enhance customer service and to be more efficient in how we provide services.

Smart cities need to plan. This picture from the Ontario Summer Games shows the volleyball courts that were built, and one of the

mandatory requirements was Wi-Fi for reporting on the games in real time.

One of the challenges is that the consumer is setting the pace of technology and change, and it is a challenge for cities to adapt and to meet that expectation when delivering city services.

The other challenge is that everything is connected. As we're seeing when we buy things such as buses or fire trucks, any service that is now being implemented is connected, and we have to be prepared to connect those devices and to take advantage and use that connectivity to evolve a city in the way it provides efficient services.

What we're seeing around the globe is countries stepping forward and figuring out how to be competitive globally by leveraging smart city technology. We're also seeing industry redefining itself. I've been working with ITAC as well, and the tech sector has gone to saying that IoT—the Internet of things—and the smart city concept are really defining the technology sector.

I think some of the biggest opportunities in smart city technology lie in innovation and partnerships. Collaboration is how we will advance smart cities, working with post-secondary education, the tech sector, and other public agencies collaboratively on defining the smart city and new services.

As an example, in Mississauga we have a private fibre network throughout the city and throughout the Region of Peel with over 45,000 strand-kilometres of fibre, but it doesn't just connect one agency: we've partnered and we've worked together. The agencies that now share that private fibre network to deliver our services. Collaboration makes things cost-effective and allows speed, and really is foundational to having a smart city.

One of the challenges around implementing smart city technology is that you have to improve service. Connecting does not necessarily achieve what the goal should be. As you connect, whether it's your advanced traffic management system or bus rapid transit or light rail transit, you have to look at where connectivity and integration across agencies can improve service.

What does it look like on the street? It's pylon signs, cameras, and cabinets. An example is this pylon sign that we had during the ice storm. Another example is that we had quarantine areas for the Asian longhorned beetle. We were able to disseminate that message quickly through connected signs.

The message is to invest for the future. The network and the connectivity needs to be driven out to where the service is consumed. These are just examples of the new way of building smart cities. You need to show the linkage and show how it improves service, whether it's LED lighting and smart lighting or whether it's taking information in real time back to a traffic management centre, managing incidents in real time, modifying services, improving the flow of traffic, and then coordinating it.

I think one of the biggest challenges is that when you build your infrastructure, whether it's fibre or other, you plan and work with other agencies and share the cost and move much more quickly.

At the end of the day, a broad set of services and multiple agencies can share the infrastructure and all benefit together. The challenge with smart cities is to find your partners, find the benefit, and work together, and then you can work much more efficiently. Everything is connected—the snowplow, the fire truck, the bus, the light rail transit, the worker, and our consumers.

In summary, I think that modern city planning must really integrate the smart city. In building cities, technology has become a major factor, so encourage and reward partnerships, and look at innovation and proof of concepts. Proof of concepts reduces risk. By trying something at a smaller scale, you can learn, retune, and then move on to solve real-life problems that people care about and improve city services.

I think another opportunity is to get a baseline measure of smart cities across Canada. Let's ask the cities across Canada about the types of things they are doing today so we can use that information as a baseline, tell our story, and then tell Canada's story.

Thank you.

•(1215)

The Chair: Thank you very much, Mr. Slack.

I think you were also here representing the Federation of Canadian Municipalities today.

Mr. Shawn Slack: That is correct.

The Chair: Okay. Thank you.

Mr. Berndt, go ahead.

Mr. Charles Berndt (Supervisor, Smart Grid Technologies, Hydro Ottawa Limited): Good afternoon, Madam Chair and honourable members of the committee. Thank you for the opportunity to speak with you today.

I have a few opening remarks on what I feel might be important considerations regarding the utility sector and how it may relate to smart communities.

The term “smart community” brings to mind information technology, and the role information technology has in transforming the utility landscape cannot be overstated. It has transformed customer service approaches across many industries, and the electricity sector will be no exception. This technology will not just connect customers everywhere and all the time; increasingly, it will connect their homes, appliances, equipment, and vehicles through the emerging Internet of things. While utilities will continue to manage the grid, smart grid technologies and the Internet of things

will “connect the customer to the control room”, giving them a much bigger role in the electrical utility.

The Internet of things has broad implications for the electricity industry and for the future of smart communities. It is likely to result in significant product innovation, game-changing partnerships, and converging markets, as both new and existing market participants seek to enable customers to harness the grid's potential for efficiency, revenue generation, convenience, control, and environmental performance. In essence, it creates a new digital ecosystem for energy, to which utilities will have to adapt. It opens the door for energy market participants that exist purely in the digital space, a scenario that has led to creative disruption in many other industries.

These changes are likely to be driven at the customer level. Customers who have options for localized generation and storage and ready access to smart home technology are unlikely to remain passive consumers. Some will want to be sellers of energy or to sell a reduction in their consumption at times of peak demand, referred to as “demand response”. Technology makes this relevant, because they can participate without even thinking about it. Working through intermediaries called “aggregators”, they can take a set-and-forget approach, since aggregator systems can communicate directly with their appliances. In the same way that smart phones have transformed business models in other industries, smart homes and smart communities are likely to transform the energy industry.

The pace of this change may vary from one customer segment to another. However, it seems likely that smart energy design—including distributed generation, microgrids, electric vehicle infrastructure, and energy efficiency—will increasingly be a focus for new subdivisions and high-rise developments, particularly if government standards emerge that encourage or require it. The impacts of the changes I have described will be felt by the local distribution companies the most, as they are closest to the customer. They will see new opportunities, as well as a need for transformation in the way they do business. Most importantly, a reliable and smart local electricity distribution network that allows power to flow in both directions, coupled with sophisticated back-office functionality capable of handling transactions, will be the key enabler for the smart city.

In essence, there are opportunities to leverage the modernization of electricity infrastructure and services to create not just a smart grid, but smart communities and a smart city.

The challenge, of course, will be how to pay for the modernization that will be required, particularly within the utility sector. Already, in many jurisdictions, the cost of electricity has gone through enormous increases and is approaching critical levels. To ask the ratepayers to completely cover the costs of this change may be untenable; however, the costs of not enabling the benefits of smart communities may have a greater long-term impact. The conversations around this issue are already occurring at the city level, and perhaps it is now time for a national conversation to take place.

Thank you very much. I'd be happy to take questions.

The Chair: Thank you very much, Mr. Berndt.

We now have Gary Andrishak from the IBI Group.

Thank you very much for joining us.

Mr. Gary Andrishak (Director, IBI Group Inc.): Thank you, Madam Chair and members of your committee.

My name is Gary Andrishak. I am a director of IBI Group, a global firm providing consultation in fields of intelligence, buildings, and infrastructure. I was asked today to comment on the future significance of autonomous vehicles within our urban environment, so this is my presentation.

Every day we are inundated with news articles about a driverless future. By now, we know autonomous vehicles, or AVs, are coming—the question is not if, but when—yet most articles focus on two basic topics. One is the technology: who is building driverless cars, and how they will work? The other is safety concerns: will your driverless car be willing to kill you to save the lives of others?

These opinions tend to fall into two camps: either driverless cars will exacerbate the ills brought on by the private automobile, a suburban dystopia, or they will become a way to fix them, an urban utopia. Both positions recognize the disruptive potential of this new technology. It is undisputed that driverless vehicles will change people's behaviour and how cities move, function, and feel. Not since the last reset, the advent of the automobile in the early 20th century, have we had the opportunity to reshape the places in which we live.

Which one is more likely to happen, utopia or dystopia? The answer lies not in the driverless car phenomenon itself but in how it will link to the wider dynamics of the mobility ecosystem. If you consider driverless cars only on their own, chances are they will indeed produce a bleak future urban scenario. People will be able to live farther out, making the effects of sprawl even more acute. Traffic will get worse, not only because of longer commutes but also because owners can choose to have their cars circle around empty instead of paying for parking or driving back home unoccupied. Traffic congestion will increase but will somehow not really seem to matter, as we'll be otherwise occupied within our vehicles, reading, sleeping, or playing computer games. Pollution will likely increase unless they are powered by alternative energy sources.

However, it doesn't have to be this way. Driverless cars aren't happening in a vacuum. Three important urban mobility components are occurring in parallel: a transit renaissance, the rise of shared mobility, and the emergence of on-demand technology.

In isolation, these three components do not have the power to reset our complete mobility model. True, the transit renaissance in new light rail lines can move the needle toward compact, mixed-use development, but they are costly, take years to build, and impact metropolitan areas only in patches. True, shared mobility in the form of ride-sharing services such as Lyft are space-efficient, but they need coordination, require sufficient passenger demand, and are less convenient than the private automobile. True, on-demand technology such as Uber and similar services have revolutionized the taxi

industry, but they cannot move as many people as efficiently and cost-effectively as rapid transit.

That said, combining the disruptive potential of driverless cars with these three components can have a positive, long-lasting, synergistic effect if they work in concert with each other. How might this integrated approach look? In its simplest form, imagine driverless cars that do not need to be owned by each household but can be used by many, which is shared mobility. Instead of investing in a car, you only pay a fraction of the cost, and you don't have to drive.

Imagine these cars bringing people to rapid transit stations and then picking other people up for the ride home. Instead of needing parking at each station of your destination, the vehicle makes another trip within the community without congesting highways.

Imagine an app that allows for real-time pick-up anywhere, with pricing integrated into your transit ticket, which is on-demand technology. Instead of figuring out how bad traffic will be and how much your travel fare is going to cost, you'll have the answers at your fingertips.

The result will be a system that is safer, cleaner, faster, cheaper, and more convenient, one that requires less land for highways and parking. Space can be repurposed for other uses, such as urban agriculture, affordable housing, and community spaces—in other words, the idea of urban living that most people would agree with.

This positive scenario for a driverless future will only happen if correct policies, initiatives, and incentives are put in place by the public sector. These measures include revamping parking regulations to adapt to the new driverless reality, developing incentives for redevelopment of parking structures and service parking lots to highest and best use for community-supportive services, pursuing strategies for the reuse of street parking and excess road space, implementing congestion pricing on major highways and shopping and employment areas, applying progressive taxation by commute distance for single-occupancy and single-ownership vehicles; and combining fare integration for private sector on-demand services with public transit.

● (1220)

In conclusion, a century ago we let the disruptive technology of the private automobile set the pace of development without giving serious consideration to the unintended consequences of commuter gridlock and suburban sprawl. This time around, we can and must do better.

Thank you.

● (1225)

The Chair: Thank you very much, Mr. Andrishak.

We're going to open it up for questions from the various members of the committee.

I'd like to acknowledge that Marc Miller, the parliamentary secretary to the Minister of Infrastructure and Communities, has joined us. Congratulations on your new appointment. We look forward to seeing you whenever we're dealing with infrastructure. Thank you very much.

Mr. Rayes, you have six minutes.

[*Translation*]

Mr. Alain Rayes (Richmond—Arthabaska, CPC): Thank you, Madam Chair. I would also like to congratulate Mr. Miller.

Mr. Miller, I am looking forward to asking questions and hearing your replies during the question and answer period. Congratulations on your appointment. I also thank the three witnesses for taking the time to come and meet with us.

Before I start, I'd like to tell you that before being a federal member of Parliament, I was the mayor of a municipality of 45,000 inhabitants. In fact, I left that position not that long ago. This matter was already being talked about a great deal at the Union des Municipalités du Québec, of which I was the vice-chair. I think this is of particular interest for many cities.

My first questions are for you, Mr. Slack, but before I ask them, I'd like you to clarify something.

In the agenda we received, it says that you represent the City of Mississauga, but I think the president said earlier that you represent the Federation of Canadian Municipalities. Are you here in both capacities? I would simply like to know which hat you are wearing.

[*English*]

Mr. Shawn Slack: Thank you for the question.

I'm with the City of Mississauga. I am the director and chief information officer. Through the city manager's and mayor's offices, I have been collaborating with the FCM to make sure that we have a strong representation of the issues across Canada at the municipal level.

I also collaborate with the CIOs of all the major cities across Canada, including Ottawa. We share challenges and opportunities, and we partner. We have partnerships with Calgary, with Surrey, with Edmonton. We work together, and we collaborate and work on projects together.

[*Translation*]

Mr. Alain Rayes: Thank you for that clarification.

I was happy to hear you say at the start that in 2017, the population expects—in fact, it has expected this for some time—to have access to the Internet not only at home, but everywhere: in public places, in downtown cores, in parks, and in the various sports and cultural buildings.

When you purchase something now, a paper guide is no longer included. We go and get information on the Internet, from wherever we are. A modern city must be current and meet that need, not only for reasons of efficiency, but also for convenience, and to improve the quality of life of our citizens.

You work for a large city. Personally, I have concerns that center on small and medium-sized municipalities. The city of Montreal, in

Quebec, claims to be a smart city, on the cutting edge and so on. However, before we even think about smart cities, we have to consider the fact that there are hundreds of communities not only in Quebec but throughout Canada that still do not have access to a certain level of Internet dependability and speed.

The Federation of Canadian Municipalities does not only include large cities. Are these concerns a part of the federation's current work?

[*English*]

Mr. Shawn Slack: That's an excellent question. The answer is that connectivity is foundational. Without it, you cannot build a smart city. You need to have connectivity for the city's services, but you have to have connectivity for the residents too.

I think the Canadian Internet Registration Authority has a project around testing connectivity and performance. I think in larger cities you'll find that for the most part it's pretty equitable, but as soon as you go into rural areas, it becomes a real challenge. Building infrastructure out to rural or smaller communities cannot be done with the tax base that's available in those communities.

I think that's where public-private sector partnerships and federal, municipal, or provincial programs should be established to ensure that broadband connectivity is universally accessible across the country. I agree that it is a major challenge.

• (1230)

[*Translation*]

Mr. Alain Rayes: I won't ask you if you consider that a \$500 million amount, over a certain number of years, would be enough to connect all of Canada. I think we all know the answer to that question.

What projects have you completed in the city of Mississauga that involved federal aid? Have you had access to particular programs, and if so, could you mention one or two where the federal government was able to help you in the work involved in making Mississauga the smart city it is today?

[*English*]

Mr. Shawn Slack: Absolutely. One of the things we're trying to be is shovel-ready with our projects. For Canada 150 we made several submissions. Some of those are the approved projects I can't speak to today because there's a sequence, a timing, to making announcements, like Wi-Fi in the parks, which is twofold. We already have Wi-Fi in some of our parks, but we've identified a dozen more. In 2017 we're going to provide broadband in the parks for people to use, but it's also introducing technologies around participation in parks and measuring participation. If you have high participation, it means that you have more wear and tear and you've got to pick up garbage, so that's one example.

[*Translation*]

Mr. Alain Rayes: Thank you very much.

[*English*]

The Chair: I'm sorry, Mr. Rayes; your time is up.

Mr. Hardie is next.

Mr. Ken Hardie (Fleetwood—Port Kells, Lib.): Thank you, Madam Chair.

I'm starting with some reflections about where I come from, which is metro Vancouver. Notwithstanding the marvellous things that technology opens up to us and some things like privacy lurk that in the background, I submit there are some foundational things that we may be looking to smart technology to help us overcome, some decisions that weren't necessarily good ones in the past. I'm going to ask Mr. Andrishak to reflect on this a little, being a resident of Metro Vancouver.

Our smart-city plans started in the late sixties with a decision not to allow freeways to be built into Vancouver and the whole concept that we needed a livable region. What did that look like? We asked people, and a number of things emerged. One was the concept of the town centre, where people didn't necessarily have to travel a long way for their recreation, their commercial needs, their services, or even their work. The second was more of a reliance on public transit to move people around.

The combination of visioning and land use planning, and then reasonable adherence to that plan, led to decisions that improved livability in the region—led to, for instance, a very strong investment in public transit. I submit that many of the smart-city things that many cities are talking about are really there to make up for the fact that this didn't happen in the past. We're doing our best to minimize the need to travel, which then minimizes the need to build roads and have a lot of the private automobile infrastructure.

Mr. Andrishak, as somebody who's maybe been a little more involved in metro Vancouver's affairs, can you expand on that, or add to it?

Mr. Gary Andrishak: I can, and I appreciate what you've said about looking at mobility from the viewpoint of pursuing walkable, bikeable, and public transit alternatives to simply getting in your car.

Going back to my statements about driverless vehicles, if we feel somehow that they're the panacea that's going to solve all our problems, you know from living in metro Vancouver that this means somebody in Abbotsford is going to get into a driverless vehicle and say, "This is fine. I'll just drive to work." It doesn't make a lot of sense.

The one thing I didn't mention is that I run a transit-oriented development practice across North America, and when I travel to other cities, I talk about two success stories. One certainly is Vancouver and the fact that I believe Vancouver is the only major city in North America where vehicle trips have gone down significantly over the last few years. The other one is Portland, Oregon, and the fact that it was blessed with small blocks, but early on, when it embraced light rail transit it, looked at it not as a utility but as a city-shaper. Over the course of 40 years it has become probably the most integrated transit city in North America.

It really goes back to what I'm suggesting: if we're looking at driverless vehicles, we have to understand the whole mobility ecosystem. To do that, you have to understand your land use as well.

●(1235)

Mr. Ken Hardie: I have just one quick question, and maybe this is something you could submit your ideas about off-line, just so my colleagues will have more time to ask their questions.

For federal infrastructure projects, we have three buckets: transit, social, and green. Rather than just being an ATM for the provinces and the municipalities—you know, "Here's money; go off and do something"—I need your recommendations regarding a framework under which the federal government could actually see the value-add going in as these investments are being made. By value-add I mean supporting livable communities but also supporting a better economy.

As we've seen on the health side, there are some issues when the federal government tries to suggest what other levels of government should do with federal funding, and so I'd like your thoughts, either now or off-line, about what kind of framework or relationship agreement needs to be established between the levels of government so that when we do allocate money into infrastructure, we have a reasonable assurance that it's going to have a cumulative value-adding effect.

Do we have time for an answer on that?

The Chair: You have 35 seconds for an answer.

Mr. Gary Andrishak: I have two very quick responses.

First, transportation planning and land use planning have to happen together. I find many governments split those up, and it can't be that way. They have to be looked at together.

Second, Mr. Slack spoke of partnerships, and governments really have to work more proactively with the private sector. For example, I'm convinced that transportation in outlying regions would be better served by the private sector than by transit agencies.

I can tell you off-line how to pursue some of those ideas.

The Chair: Thank you very much.

Mr. Nantel is next.

[*Translation*]

Mr. Pierre Nantel (Longueuil—Saint-Hubert, NDP): Thank you very much, Madam Chair.

First of all, let me introduce myself. I am the member for the riding of Longueuil—Saint-Hubert and I'm responsible for heritage issues. I was recently appointed critic for the electrification of transportation file, and I am very proud of that. I share this task, of course, with my colleague Robert Aubin, who is the transport critic. In that context, I think you have undertaken a very relevant study, even though when it comes to what we call smart cities, we talk about connectivity more than about electricity. That being said, one can function very well with diesel and be interconnected.

Mr. Berndt, from Ottawa Hydro Limited, referred earlier to the smart grid and the smart client. Not only will the latter consume electricity, but he or she will also be able to put some back into the grid. I've seen that in certain provinces, these issues are different. In Quebec, electrical rates are by and large the best in Canada. However, in Ontario, there was recently some panic around these rates. Given that very difficult aspect of the situation, you must be having to deal with a lot of unhappy people, and certainly with issues of non-payment.

My question is for all three witnesses.

In your opinion, could the federal government's intervention be better coordinated?

In all humility, I get the sense that the large municipalities and provinces are taking the lead but that at this time, there is no overarching vision on the part of the federal government in this regard.

Does anyone wish to respond to that statement? Mr. Berndt, you have the floor.

• (1240)

[English]

Mr. Charles Berndt: Thank you very much.

That's a very excellent question, and it's very true that there is quite a bit of disparity among the various regions, particularly in the contrast between these two provinces.

I think there certainly is a role for the federal government to set the tone and the direction. I would point directly to the federal government's annex on the pan-Canadian framework on clean growth and climate change, because I think that touches on many aspects of what we heard today—the electrification of transportation, the greening of the electricity grid, and the interconnectivity of all these devices. I think along that same vein, there is an opportunity to set the tone and the direction and to spur on innovation in that sector and in that direction.

[Translation]

Mr. Pierre Nantel: Mr. Andrishak, is there someone in Ottawa it would be possible to speak to concerning the work that you do?

While surfing on Google, I saw that you had received yet another prize from an investment firm.

[English]

Mr. Gary Andrishak: I'm old enough to remember the Ministry of State for Urban Affairs. It seemed to me that this has been lacking for the last 40 years. It seems to me that what we're talking about here, the integration of transit and environmental design, can't be looked at separately. They're inextricably linked. When the last government was forming, I was excited, thinking that this kind of ministry would somehow appear. This is a big topic. It can't be handled in small pieces.

[Translation]

Mr. Pierre Nantel: In the case of a city like Mississauga, which goes to the trouble of connecting all of its transportation services, parks and so on, the use of these wireless systems allows people to use public transit, for instance, without having to worry.

On this, I could give you the example of my employee; this morning he wrote to me to inform me that he was unable to attend an event because his car had broken down. He took the bus from where he lives in Montreal to go to a metro station. However, when he transferred, he had to pay a second time. You can just imagine what an automobile driver who has to wait for the bus in the cold, and has to pay a second time when he transfers, was feeling. Is that not the perfect formula to make people detest public transit?

However, during my last trip to Winnipeg, I was able to coordinate my travel from the station to the airport. The schedules that were provided were very precise, and I appreciated that very much.

Do you have the impression in Mississauga that we can do more, environmentally-speaking, in the context of the smart city? There is an immediate ecological footprint. Even if your buses all used diesel fuel, there would be an increase in the number of passengers, and a drop in greenhouse gases in Mississauga.

[English]

Mr. Shawn Slack: It's an excellent question. This is a significant challenge in the greater Toronto area, because you have such a large population base. There is a movement to go to an integrated transit system within the GTA, but it's in its early stages. There's the Metrolinx rollout of Presto and integration across transit systems. We have a major investment in north-south light rail transit in the Hurontario corridor of 26 new kilometres of light rail transit. We're looking at having shovels in the ground in 2018. It's a great initiative. That will certainly change traffic patterns and the use of transit, but these are long-term investments.

The Chair: Thank you very much, Mr. Slack.

Go ahead, Mr. Iacono.

[Translation]

Mr. Angelo Iacono (Alfred-Pellan, Lib.): Thank you, Madam Chair.

I am going to share my time with my colleague, Mr. Sikand.

I thank the witnesses for having come to talk to us about smart cities. I am from the third largest city in Quebec, the city of Laval. I would like to see my city become as “smart” as the others one day.

Mr. Andrishak, in light of your expertise, what advice would you have to give us in order to have more and more cities in the country become smart cities? How can the Government of Canada help them to head in that direction?

• (1245)

[English]

The Chair: We've lost our connection to Mr. Andrishak.

Mr. Gary Andrishak: [Technical difficulty—Editor] for a symposium to continue what we're doing here today, which is getting together and talking about solving big problems, but the way that you solve big problems, I think, is to incrementalize them and start out with smaller ideas.

One thing I will say, to go back to what I suggested at the start, is that automated vehicles are coming. They're going to be here. If we're not on top of that, we're going to have the same situation we had when drones showed up at RadioShack. Everyone thought they were interesting, and then suddenly there were too many, and then we had a problem.

The first thing is to define the problem, and the second thing is to get venues together where people actually talk about how to integrate and build upon these issues.

Mr. Angelo Iacono: Thank you.

Mr. Gagan Sikand (Mississauga—Streetsville, Lib.): My question is for Mr. Slack.

I remember spending a bit of time in Stockholm circa 2005-2006, and three things really stuck in my mind when I was there. One was that their lights were turning on as I walked. There were motion sensors. They had the side ramps for bicycles, and they actually had free Wi-Fi then.

Moving beyond smart cities to global cities, ultimately, what's the forum in which our cities discuss innovations with other cities in the world, not just within Canada? What are those channels, if there are any?

Mr. Shawn Slack: That's a good question.

I actually participate in some global forums. I was in China last September. There were 68 countries in attendance, all presenting on the great cities around the world. Masdar City is a really interesting example of solving very challenging problems, such as trying to lower the outside temperature of a city by 2°. They did that through city-building, through the design of the buildings, the shape, how they cast shadows, and the air flow.

What I take away from that is that when you go to some of these more progressive countries where they're doing greenfield building, smart-city-building, they're able to innovate and build an entire city as a smart city. From that we're able to learn what applies there in our own build form. That's the opportunity when you're looking globally at what's happening out there.

Mr. Gagan Sikand: Could you please provide some commentary on the federal government's position, or the position we could take going into the future?

Mr. Shawn Slack: I think there are two things.

If you're going to invest and you're going to encourage Canada's movement towards a greater smart city movement, you have to get a better handle on what we have today. There are cities across Canada that have great innovation and great smart technology already. Get a handle on that and do an assessment across Canada of the cities. Now you have a baseline. Then you can decide what types of problems you might want to solve, and they will differ. The small communities will differ from the larger communities.

If you have that baseline, two things could happen. You could tell the story of Canada. We have a strong brand as a country, but we don't have a strong technology and innovation brand as a smart city leader. I think that's a huge opportunity, because there are great things happening. Use that information to drive programming around

investing in innovation and smart technology across Canada, and get everyone involved.

Collaboration is a great way to kick this thing off. I heard someone talking about a contest as a potential way to kick this off. That would be a great way to initiate it, but there has to be some sustainment, and I think there has to be a story told across the country.

Mr. Gagan Sikand: As an MP—

The Chair: You have one minute left.

[*Translation*]

Mr. Angelo Iacono: Mr. Slack, what are the impacts of your initiative on the environment, on sustainability, efficiency, and costs?

[*English*]

Mr. Shawn Slack: The sustainability is a bit of a challenge when you're looking at programs that have one-time funding. I think that's where partners really need to be put together. Free Wi-Fi is a partnership. We partner with post-secondary and we partner with the private sector too. We're able to use that partnership to put in place an infrastructure to provide free Wi-Fi in all our facilities and also to provide free access for post-secondary institutions to secure Wi-Fi in their facilities—in this case, Sheridan College. The benefit to Sheridan was enough for us to share costs and create a sustaining model going forward.

● (1250)

The Chair: Thank you very much.

Mr. Badawey is next.

Mr. Vance Badawey (Niagara Centre, Lib.): Thank you, Madam Chair.

I want to preface my comments by stating that I respect the fact that it was asked that we establish a vision. That's in fact what we're doing here with this entire strategy that we're embarking on as of today's meeting, to plan and prepare for investing in the future, which is the new norm, I think, with technology.

The way we're doing business now in our municipalities is the new norm. It's moving forward instead of being reactive. Maybe not Mississauga, but other older municipalities throughout the country have been very reactive in trying to catch up with infrastructure demands. We're trying to be proactive to in fact create plans, strategy, and vision, and to therefore move forward with that dialogue. We'll have questions, yes, but more dialogue. This is not going to be the last time we're going to see each other, by the way.

That said, we also want to recognize at the federal level that it's going to be up to the municipalities to create their community improvement and growth plans. Attached to that is going to be asset management, and then attached to that is going to be the financing of same, to satisfy those recommendations that you're otherwise planning for. Of course, that's the participation we are expected to then enter into with respect to being an enabler for those recommendations and satisfying those recommendations, especially in relation to financing.

I have to say that part of the overall strategy, therefore, is also the funding strategy. It's to ensure that in the future we put in place a sustainable funding program very similar to the gas tax. I'm hoping that a lot of that is going to be recognized as we dialogue, and hopefully we can participate in that at the federal level.

I have to say as well, Madam Chair, when we look at this, that I take the comments from Mr. Andrishak very seriously when it comes to community planning and land use planning, and from you folks as well, especially from the municipal side, when it comes to land use planning, transit, integrated transit, infrastructure investments, asset management and the budgeting of same, and communications, IT, and things of that nature.

That now leads me to my question for all three of you.

When you take into consideration all of the above-mentioned points, who actually takes on the prioritization? Who facilitates it? Who leads this process with respect to prioritization? When applications from one of the partners are being made, most times they're from either a hydro utility, a fibre network—which is usually part of a hydro utility—or a municipality. Who prioritizes the applications that would otherwise come to the federal government or the provincial governments and then takes into consideration the funding for the ultimate plan, the bigger picture? What we often see up here, as I'm sure you do, is that those applications compete against each other locally.

Who prioritizes, especially between municipalities and hydro, for the same municipality? Who prioritizes that, makes the application, and therefore moves forward with satisfying those recommendations under an overall community improvement growth plan?

Mr. Shawn Slack: I'll attempt to answer that question.

Prioritization is done at many levels, and it is challenging, but I can give you the example of our private fibre network.

We prioritize with six municipalities at the table. We have created a consortium. We prioritize investment around creating and building fibre. When I build around a fibre, I consider my partners and add dark fibre to that asset for them. That includes hospitals and schools.

You have to think more broadly than, in my case, the City of Mississauga, and you have to think about the city proper. What other agencies are there? There are the conservation authorities, the schools, the hospitals, the police, fire—

Mr. Vance Badawey: Who takes that lead? Who takes the lead with the MUSH sector, with all those different partners? Who takes the lead so that ultimately you create that municipal or area plan? With that is the asset management part of it. Then with that is the actual financing strategy that satisfies the plan. When those applications are coming to the federal government, who facilitates that and therefore eliminates the competition between different agencies?

Mr. Shawn Slack: I think ultimately the cities have to facilitate that and work with partners. If you think about a local emergency, in the end the city runs the emergency. I think if you put it within that context, the citizens, the build forum, and the residents look to the city first, regardless of the service they are consuming. It's that first point of contact.

●(1255)

Mr. Vance Badawey: I really want to emphasize that, because as one member of this committee, my desire is to move in that direction; hence the reason I'm very excited about this process. It's to ultimately be proactive, not reactive, and to ensure that as municipalities throughout the country are putting forward their desires with respect to funding, that triple-bottom-line return is evident, which means economy, social, and environment, and to ensure therefore that they're not competing against each other within that process. It's to ensure that this community improvement growth plan is put in place, is disciplined, and is looking ahead to the new norm, and as well that when they're applying, it's based on those priorities that are established by that certain area of the country.

The Chair: I think Mr. Andrishak has something he wanted to comment on, Vance, if I could interrupt you there.

Mr. Gary Andrishak: My take on this is a bit different. I work sort of half in Canada and half in the U.S., at least until Mr. Trump tells me otherwise, and I find that the big message is with the transit agencies. They have the bigger budgets and they have a finite role. They want to get a line built from north to south, and increasingly they want to influence land use patterns. They want their stations not only to contribute to ridership but actually to become bona fide transit villages where people can walk and bike and shop even if they're not taking transit.

Therefore I find that the transit—

The Chair: I'm sorry, Mr. Andrishak; I have to interrupt. Maybe you can continue for the last few minutes with one of our other questioners.

Sorry, Mr. Badawey.

We'll go to Ms. Block.

Mrs. Kelly Block (Carlton Trail—Eagle Creek, CPC): Thank you very much, Madam Chair.

To our witnesses, I join my colleagues in welcoming you here.

I want to follow up on the question that my colleague Mr. Hardie asked, because for me that's really the link to why it's perhaps reasonable that this committee should be looking at smart communities and the role that the federal government plays.

I recognize that you didn't have very much time to answer the question, Mr. Andrishak, and that you actually made a commitment to have more of a conversation off-line. However, I would prefer that the conversation take place at this committee. I think it speaks to the role of the federal government, especially in light of the PBO report that was released this morning. What we're reading in the news from that report is that the federal government is well behind not only on spending infrastructure dollars but also on identifying which projects they will spend those dollars on.

It's also being reported that the government is being taken to task for its lack of transparency on spending and that it has not provided any performance measurement framework to make sure that the dollars being spent are meeting their intended goals. I think that speaks directly to what Mr. Hardie has identified.

I am very interested in any comments from our witnesses in terms of what needs to be put in place to ensure that the federal government is identifying the goals and then ensuring that those goals are being met when they provide funding to a municipality.

The Chair: Is that directed at Mr. Andrishak?

Mrs. Kelly Block: For sure it's to Mr. Andrishak, because I think he made the commitment to have the conversation off-line.

Mr. Gary Andrishak: Well, I'm interested that you mentioned performance metrics, because that really is becoming a big portion of what we do in our work. We've found over the years that it's easier to design visionary cities than it is to get them implemented. We're running on the theory that what gets measured gets valued.

A big part of anything we're talking about here with regard to smart cities and the integration of transit is that we could simply and easily have an equivalent public hearing on performance metrics, on how you value and what you measure. I think it's absolutely a big portion of what has to be done so that we move beyond just the big-picture thinking and get into actually implementing what needs to be done.

Thank you.

• (1300)

Mrs. Kelly Block: I am sharing my time with Mr. Rayes.

The Chair: Just so you know, it is one o'clock. I'm kind of stretching it to give you sufficient time.

Mrs. Kelly Block: I'm sorry about that.

The Chair: That's okay.

Mr. Rayes, go ahead.

[*Translation*]

Mr. Alain Rayes: Thank you, Madam Chair. If I have done the math correctly, I still have two minutes left.

I would like to get back to you, Mr. Slack, and I'm going to clarify the question I asked previously.

Could you cite one program from the government's latest budget that gave you access to funds to help you realize your smart city projects? How can the federal government help you today, with the tools that are in place, to develop your smart city or any other city in that regard? Since you work directly in that field, can you mention one program?

[*English*]

Mr. Shawn Slack: I would say that it would be more indirect. A lot of the funding programs have been geared more toward the community centres. With the infrastructure stimulus fund, we did redevelopment of the community centres, and as part of that you can

introduce new technologies. When you rebuild a building, you can put Wi-Fi in it.

Most of the funding has been targeted toward transit improvements and recreation improvements. Funding programs specifically for smart cities, technology, and more technical-type initiatives just have not.... Canada 150 is the first time we've had an opportunity to really submit something around broadband.

[*Translation*]

Mr. Alain Rayes: Thank you.

Mr. Andrishak, in your first comment, you referred to the importance of the private sector. In most of the actions that are taken, either municipally—where I came from—federally or provincially, the importance of the private sector in the development of smart cities and new technologies is hardly ever mentioned.

Not too long ago, I met one of the executives from Uber. He spoke to me about everything he could do to improve traffic management if his company, whenever it arrives in a municipality, were not perceived as an enemy—as we saw in Montreal—but rather as an ally of the government.

I would like to hear what you think about that.

[*English*]

Mr. Gary Andrishak: I certainly do. I mentioned on-demand transit. I use Uber a lot when I'm working in California. We've had conversations with Uber and their competitors to come up with strategies that take away the responsibility for transit agencies and suburban communities to run a big bus once an hour. You're never quite sure when the bus is coming by, but with Uber, you can sit in your home, dial Uber up, and they pick you up. They take you to the transit station, your ticket is blended with your transit ticket, and away you go.

They're interested and willing to do that. In other words, they have algorithms that can pick six people up on a snowy street in Laval and get them to the transit station, where the heavy lifting is done. They can do it more efficiently, and they're interested in and wanting to pursue those strategies. I think we have to bite the bullet and understand when the public sector dollars serve the problem and when the private sector does.

The Chair: Thank you very much, Mr. Andrishak.

Mr. Rayes, you had seven minutes and two seconds.

At any rate, thank you very much to our witnesses. Thank you for kicking off our study. You can see that we're all very interested in it.

The meeting is adjourned.

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