



## PUBLIC SECTOR CHIEF INFORMATION OFFICER COUNCIL (PSCIOC) MEETING

September 26, 2019

Winnipeg, Manitoba

# RECORD OF DECISION v.2

### Attendance

#### PSCIOC CO-CHAIRS

Olivia Neal  
Tracy Wood

Treasury Board of Canada Secretariat  
Prince Edward Island

#### PSCIOC MEMBERS

Peter Watkins  
 Munna Zaman  
 Gerry Fairweather  
 Dave Heffernan  
 Rick Wind  
 Arlene Williams  
 Dafna Carr  
 Benoît Boivin  
 Sean McLeish  
 Kathryn Bulko  
 Rob Entwistle

British Columbia (for CJ Ritchie)  
 Manitoba  
 New Brunswick  
 Newfoundland and Labrador  
 Northwest Territories  
 Nova Scotia  
 Ontario  
 Quebec  
 Yukon  
 MISA Canada (City of Toronto)  
 MISA West (City of Kelowna)

#### OBSERVERS / SUB-COMMITTEE CO-CHAIRS

Hayden Lansdell  
 Dan Kerr  
 Kathy Kupfer  
 David Valentine  
 Mark Levene  
 Alexandre Bourque

British Columbia  
 Manitoba  
 Manitoba  
 Manitoba  
 Treasury Board of Canada Secretariat  
 Treasury Board of Canada Secretariat

**INSTITUTE FOR CITIZEN-CENTRED SERVICE**

Dan Batista  
 Maria Luisa Willan  
 Linda Robins

Item	Topic / Discussion	Decision / Action
1.	<p><b>Administrative Matters</b></p> <p><b>A) Approval of Record of Decision from February 28, 2019 in-person meeting in Ottawa.</b></p> <p>Record of Decision of PSCIOC meeting of February 28<sup>th</sup>, 2019 adopted without changes.</p> <p><b>B) Approval of the September 26<sup>th</sup>, 2019 PSCIOC meeting agenda.</b></p> <p>PSCIOC meeting agenda of September 26<sup>th</sup>, 2019 approved.</p>	<p><b><u>Decision #1:</u></b>          Record of Decision of February 28<sup>th</sup>, 2019, PSCIOC meeting in Ottawa approved without changes.</p> <p><b><u>Decision #2:</u></b>          Agenda of September 26<sup>th</sup>, 2019 PSCIOC meeting approved.</p>
2.	<p><b>Amazon Web Services (AWS) (TAB 2)</b></p> <p>Strategic discussion with Amazon Web Services on the value of investment in AWS and capabilities of the products that AWS offers. AWS representatives were David Lurie, AWS, Business Development, Rejean Bourgault, Leader, Public Sector, Canada, Nicole Foster, Head of Public Policy and Rob Samuel, Security &amp; Compliance.</p> <p>David Lurie thanked the members for the opportunity to speak about AWS services. Members were provided with a placemat and a binder on AWS' Cloud services. David noted that PSCIOC members had provided specific questions in advanced to discuss at this meeting. AWS reviewed the questions and developed a deck answering these questions. The deck has been circulated to members in advance of the meeting. David Lurie advised that they divided the 16 identified questions into three main buckets: 1) strategic value of AWS; 2) where AWS is going technically from an innovation standpoint: and 3) how we can establish a strategic relationship.</p> <p>David Lurie drew members attention to the definition of cloud computing. They talk about cloud computing as a secure online delivery on a contractual basis and it's pay as you go. The placemat illustrates the breadth and depth of the capability, what are the building blocks you could put together to solve your citizen's issues. AWS does this around the world, everything from infrastructure, software as a service, and have a software marketplace. You can buy the software you need on a pay as you go basis.</p> <p><b><u>Questions/Comments from members:</u></b></p> <ul style="list-style-type: none"> <li>David Valentine asked about data at rest/in transit residing in Canada. He asked if AWS has Canadian administrators.</li> </ul> <p>Rejean Bourgault advised that AWS recently got the PBM Award from the Federal government. The lion share of the work with the Federal government is at the Protected B level. The Government of Canada and the CSC</p>	<p><b><u>Action Item #1A:</u></b>          Members asked that the AWS placemat and binder be distributed in an electronic format. AWS to also share the paper on talent management prepared by the Public Policy Forum and Ryerson University.</p> <p><i>Note: ICCS shared electronic version of the documents with PSCIOC members on September 30<sup>th</sup>.</i></p> <p><b><u>Action Item #1B:</u></b>          ICCS to include topics identified by members for future discussion on the PSCIOC Bring Forward Agenda.</p>

established a set of controls they had to meet for Protected B. In August they got the contract so now any agency in the Crown corporation can procure cloud on AWS on Protected B level. Rob Samuel noted that he was a former government employee in Nova Scotia and was chair of NCSIP and has been with AWS for 7 months. He is leading security assurance in Canada. The common question is what you do to ensure the data is safe. There are two key components: one is to understand that AWS administers the underlying infrastructure. They have gone through Government of Canada's Protected B process. If you have physical access to AWS infrastructure you create a virtual private cloud where you control all identity and access, control users, etc. They also give a variety of services for encryption. David Lurie noted that they often have their security folks come in and work through their process and the 165 building blocks allow you to identify and protect.

- Dave Heffernan noted that he has a new role in Newfoundland and Labrador, and there it is about legacy legislative structure and applications, particularly mainframe. He noted that AWS had an emulated environment for mainframe and that there are vendors that AWS works with to convert this.

Rejean Bourgault explained that they have a dedicated team just to do mainframe. They can provide an assessment and determine the best route. On some older legacy technology, some customers are at capacity at their data centre and they are coming to AWS (Hydro Quebec) and they are using VMOR. On mainframe they work with large partners that can help. Rob Samuel gave the example of Immigration in Nova Scotia where there was an old application not easily ported into other areas with spikes in capacity. Their teams have experience in how to build a culture of innovation, citizen centric design. Rejean Bourgault explained that the journey to the cloud is different for everyone. They have an army of people working on security and can spend advance time helping, auditing, looking at best practices so everyone feels comfortable moving the workload. Ontario is a client, Ontario.ca runs on AWS. Some people are highly independent, and others may want a support team. They bring the right resources and provide lots of support.

Rejean Bourgault noted that AWS does a cloud simulation journey with everyone around the table. They are doing several things with government proactively. Following the leadership of a Cloud First Policy, they launched a pilot DigiGov, a two-day training session for management with the University of Ottawa. They launched DigiGov with the Canada School of Public Service and Laval University. They bring their instructors and train those at the university and once the school is able to provide the training, AWS leaves. They have launched the first, outside of the UK Government, Executive education programs in Canada. They have had discussions with Manitoba about bring their experts to what they call immersion days. This is a free service and they will train as many people in the room. At UBC they introduced a Cloud Innovation Centre. They launched AWS for the Federal government in August 2018 and they hosted an Ottawa Summit where 750 people attended. Another summit was held in May 2019, attendance grew by 96% at the Ottawa Summit. They will be doing another session in Quebec on October 8<sup>th</sup> and Victoria on November 5<sup>th</sup>.

- Tracy Wood commented that PEI is a small jurisdiction and asked how AWS could help small clients.

David Lurie noted that AWS would be happy to come to Prince Edward Island with the right resources to address the specific questions or issues. Rob Samuel commented that in Nova Scotia they knew that the budget is always shrinking but citizen demands are always increasing and had to keep the lights on and keep staff trained and a lot of staff were concerned about the cloud. Because AWS builds their services the same all over the world with stringent requirements for the customers, they build to a high security bar no matter

what the size of the organization. You inherit the expertise and security. The cloud lets you scale to leverage expertise, you can leverage machine learning. You can automate a number of commodity tasks. They have 24/7 coverage on SOC and 24-hour standby but there is so much automation in place that it remediates quickly. Those are some of the benefits, especially for smaller organizations of moving to the cloud. Nicole Foster commented that the tools and infrastructure are provided at a low cost with tremendous benefits. Rejean Bourgault explained that they have 14 types of databases. One of their fastest growing services is Amazon Aura. They have immigrated 160K databases on a world-wide basis. They also introduced Amazon SageMaker which puts machine learning and AI in the hands of the software developer rather than the data scientists.

- Rob Samuel gave an example of Nova Scotia that ran a shared services model. The Nova Scotia Health Authority came to them because of the budget constraints. They wanted statistics on how much compute and storage they were using as they wanted to pay only what they were using. A key value add in a shared services model is the pay as you go model in the cloud, setting up billing for each account so each entity knows what they are using. You only pay for what you use and turn off when you don't need it and have transparency with clients.
- Benoît Boivin asked them to comment on how they acquisition problem in Quebec. He explained that he presented on the SAAS approach. They have 200,000 mailboxes in the cloud. He asked AWS about OPEX vs CAPX.

Rejean Bourgault explained that in Quebec they created a VoR with zero-dollar contracts. They would buy from service catalogue. Rejean explained that AWS is working on the CAPX vs OPEX issue. Having an understanding that you are no longer going to purchase large numbers of items under CAPX, but you are buying smaller quantities through OPEX. It is a challenge especially for universities where they are only receiving CAPX dollars from government. It is a journey that we need to stay on top. CAPX is restrictive and does not allow you access to the research. Nicole Foster noted that this is a longer-term barrier and not something that you need to worry about today. This however may be an issue a few years down the road and you will need to look at how you're restructuring your IT budget. AWS is developing some white papers on this issue. David Lurie noted from an operational perspective, organizations are spending less time on building services and more time on education on costs and this shouldn't stop you from experimenting.

- Rick Wind asked Olivia Neal about government challenge around CAPX vs OPEX and whether there is a Controller General's forum similar to what is seen in the tech sector.

Olivia Neal explained that it is still early days. Dan Cooper is on the phone who is the TBS cloud lead and he can talk about this. Conversations have started in the CFO community. For the GOC it is a challenging discussion because of the way we have shared services running the technology and as cloud adoption is expanding across departments the roles and responsibilities are being dispersed into the departments. This leads to a challenge of how we can change from a CAPX vs OPEX, but which organizations have control of the budgets and how do you share those budgets. This is a multi-year journey; TBS is looking at impacts on the cost centres based on the pathfinders and the models they are developing will define the bar for it, but it is still early days.

David Lurie commented the pathfinder projects are important and explained a key success factor is to assign people, give them responsibility and a small budget and let them learn. For long term success we want public servants to have skills and capabilities.

- Dan Kerr noted that Manitoba's challenge was not only the cost but asked if AWS have an onboarding model that breaks through the barrier, engagement model to get involved in.

David Lurie noted that there is not one engagement model. Everyone on the AWS team has a relationship responsibility including an account manager and a solutions manager to look at issues with the jurisdictions. Rob Samuel noted that because they have so many customers, they collect best practices. There are two key factors to answer this question: 1) cloud adoption framework which AWS has developed with best practices and 2) the well architected framework which looks at the business and technology lens. They also have an executive simulation and a security simulation. Rejean Bourgault explained their SOA model (Stage of Adoption). Based on best practices they have developed some intellectual property call MRA (migration readiness assessment) and MRP. Some organizations think they are ready. AWS brings experts onsite to do an assessment of the organization. AWS comes back with a document that is green, yellow or red after which an MRP is developed. David Lurie noted that the building blocks can get you through the journey.

- Dafna Carr noted that Ontario is working with AWS. She asked AWS about their thoughts on attracting/convertting talent to understanding modern methods of infrastructure and solution development.

Nicole Foster advised that this is one of the issues that AWS is working on. They have worked on a Whitepaper with the Public Policy Forum and Ryerson University about closing the gap in the public sector workforce. She would be happy to share the paper that outlines specific strategies regarding talent management. They also took a gender and diversity lens on that paper. AWS is also investing in a variety of workforce training mechanisms. They have a lot of online tools and have over 70 universities registered with the AWS educate program. They are working with specific universities on cloud-based skills programs. As previously mentioned, they launched DigiGov, a two-day program for management levels in Canada and have a 4-day program with Exeter University in the UK. This is a huge business imperative for AWS, and we are working on it. Rejean Bourgault also explained that they have 150 digital video training programs, free online. They have been making some cool programs for software developers. They created DeepRacer which they launched in the United Kingdom in May. AWS **DeepRacer** is a 1/18th scale **race** car which gives you an interesting and fun way to get started with reinforcement learning (RL). RL is an advanced machine learning (ML) technique which takes a very different approach to training models than other machine learning methods. The car costs \$315 on Amazon. David Lurie commented that cloud is not rocket science, but it is new technology to be learned. They see university students using the cloud and if they look to where am I going to work in the future, if they can't use the same tools, they have been using that would be a disincentive to join an organization.

- Rob Entwistle spoke about the barriers for municipalities, particularly volume licensing and enterprise licensing. He asked AWS to comment on volume and enterprise licensing.

David Lurie explained that their pricing is public and transparent, and they try to keep it as low as possible. AWS offers pricing models and scale as needed. They do offer aggregate discounts. Rejean Bourgault talked about AWS Trusted Advisor which is an online tool that provides you real time guidance to help you provision

	<p>your resources following AWS best practices. From an enterprise standpoint, we do sign enterprise agreements but there is no charge if you opt out.</p> <ul style="list-style-type: none"> <li>• Dave Heffernan inquired about software as a service from AWS.</li> </ul> <p>David Lurie drew members' attention to the AWS marketplace (on the placemat). They have over 1,400 vendors offering software as a service. Rejean Bourgault commented that 57% of all Microsoft servers in the world run on AWS cloud. Rejean Bourgault explained they have AWS sessions on October 3<sup>rd</sup> in Toronto, October 8<sup>th</sup> in Quebec City and November 5<sup>th</sup> in Victoria; their large global conference is in the first week in December is in Las Vegas (this is a training conference). David Lurie noted there are 50 use cases in the binder and the answers to the questions are in the binder.</p> <p>Olivia Neal thanked the representatives from AWS for their participation at the meeting.</p> <p>**</p> <p>Following the AWS session, Olivia Neal asked members if they find this type of discussion with vendors helpful and whether they would like to see other vendors invited to the meeting.</p> <p>PSCIOC members agreed that presentations from other vendors would be useful. Olivia Neal suggested that if there are other companies that members would like to hear from to please submit the vendor names to the ICCS for future agendas.</p> <p><u>Topics proposed for future PSCIOC agendas:</u></p> <ul style="list-style-type: none"> <li>○ Gartner or Forrester to talk about trends.</li> <li>○ Discussions on ad hoc workloads and the business case around that, some of the tools you can tap in and out of when needed.</li> <li>○ Having a vendor partnered with one of us who can describe the actual journey and work with the partner about what we want to talk about. It will take us back to the implementation/practical part of the journey.</li> <li>○ Focusing on lessons learned around implementation.</li> <li>○ Artificial Intelligence and machine learning, issues we are all facing at different angles.</li> <li>○ Issues that jurisdictions are facing with Esri from a licensing and procurement perspective.</li> </ul>	
3	<p><b>Cloud Working Group (TAB 4)</b></p> <p>Dan Cooper, federal Cloud Working Group Co-Chair, provided an updated on the work of the Cloud Working Group including progress on its work plan. Dan noted that the membership has had good discussions regarding implementation of the Cloud. Over the summer the group worked on the annual Benefits Realization survey. The engagement at the working group level is good and the group has gone beyond its original mandate. Areas of discussion are raised by group members and cover any topic that relates to Cloud such as technology, change management, finances, etc. Dan Cooper asked the PSCIOC to consider the role of P/T co-chair or to help identify someone from their jurisdiction to take on this role. The P/T co-chair role has been vacant for a few months now. The federal and provincial co-chair work together in the planning of the group's workplan and meeting agendas.</p>	<p><b><u>Action Item #2A:</u></b> Dan Cooper, Cloud Working Group Co-Chair, to provide paper on the Canadian Cyber Centre for Security.</p> <p><b><u>Action Item #2B:</u></b> Cloud Working Group to provide the membership list to PSCIOC via the ICCS Secretariat. PSCIOC members</p>

<p>Dan noted that topics that members have articulated they wish a discussion on include:</p> <ul style="list-style-type: none"> <li>○ Potentially leveraging the GC cloud procurement vehicles</li> <li>○ Crypto / Secret Management in the cloud</li> <li>○ SaaS to SaaS integrations</li> <li>○ Multi-Cloud Service providers and integrations</li> </ul> <p>Dan gave an overview of the result of the Cloud Benefits Realization Survey.</p> <ul style="list-style-type: none"> <li>○ Overall there was good participation in the survey but not as high as expected</li> <li>○ General Cloud adoption experience is positive; in cases where this was not positive it was due to: <ul style="list-style-type: none"> <li>- service was not properly integrated with another service and the service broke itself</li> <li>- Cloud service providers are not perfect in their releases, but they are doing it much faster than we are doing it</li> <li>- Other issues identified were self-inflicted by our own organizations</li> <li>- legacy system that hinders adoption of the Cloud and the lack of coordination between legacy service lines in order to enable services in a timely and efficient manner and the overhead of legacy change management processes that restricted them from being as agile as they want</li> <li>- Need to do what we can to lift the restrictions on our IT professionals so they can move at scale and keep up with the services at their fingertips and find ways to tear down the legacy systems.</li> </ul> </li> </ul> <p>Dan noted the following top projects that jurisdictions are undertaking: Office 365, enterprise resource planning, drug claim system, G Suite implementation and digital platform.</p> <p><b><u>Comments:</u></b></p> <ul style="list-style-type: none"> <li>• Dafna Carr asked about the terms of reference for the Cloud Working Group and who participates in the group and whether there would be time to discuss the value of the group.</li> </ul> <p>Tracy Wood noted that the mandate of the Cloud Working Group is to provide a forum for discussion and advice among Canadian jurisdictions regarding approaches and best practices for the successful implementation and use of Cloud services and the benefits realized from Cloud. The Working Group looks at elements of an RFP regarding cloud services, develop some artifacts and report back to the table. They are a working group under the PSCIOC, and it is up to us to provide direction on what we want them to do next.</p> <ul style="list-style-type: none"> <li>• A question was about the availability of French language for software as a service and how you found that and is there significant gaps in services that you want to provide that are not available in French. In general, it is difficult to find software that have both languages and it is something that we struggle with.</li> <li>• Dafna Carr commented that from an Ontario's perspective, we want to understand what the journey is and are supportive of having a forum for people to discuss the challenges in a confidential environment. There are learnings and sharing that benefit us all. She suggested that use cases would be helpful. It would be helpful to know who is doing what, how do we describe a story of what is going on and hear from those that are executing strategic work and implementation.</li> <li>• Rick Wind agrees to formalize some case studies with lesson learned and making sure they are published across the community.</li> </ul>	<p>will review the list and determine participation in the group.</p> <p><b><u>Action Item #2C:</u></b></p> <p>Cloud Working Group to issue a call out to PSCIOC seeking a P/T Co-Chair.</p>
--	--

	<p>Tracy Wood noted that the artifacts created by the Cloud Working Group can be found on the ICCS members site.</p> <ul style="list-style-type: none"> <li>• Dan Cooper advised that Ontario does have a very active member on the Cloud Working Group. They have begun to put together accelerator packages and lessons learned packages, so it's like an open source community. Internally, in the Federal government they are having departments contribute to a code base which people can reuse and we distribute it to the membership so that they can co-create along with us.</li> <li>• In British Columbia, they are focused on a Cloud Native Foundation, cloud native apps. What they are looking for is a way to exploit any Cloud. With different services providers you can easily slip into their proprietary offerings. This is a counter movement that looks to commoditize all of that so you ensure that you can be portable across platforms.</li> <li>• Peter Watkins reminded members of their BC account on GitHub where they have 556 open source code repositories in motion. Many of the repositories are complete fulsome systems including the deployment templates. They are looking to publish solutions to allows others in the eco system to clone the code. We think this is a powerful move to generate micro services to share components more broadly as a community without having to custom engineer everything. We are beginning to train vendors and teams how to construct, deploy and manage this way and this helps to grow the community to take care of these solutions.</li> </ul> <p>Tracy Wood thanked Dan Cooper and the Cloud Working Group for their presentation and ongoing work.</p>	
4.	<p><b><u>Information-Sharing Roundtable</u></b></p> <p>Jurisdictions provided a brief summary of their key priorities and activities in their respective jurisdictions. Members can refer to the jurisdictional information sharing documents provided in the meeting binder for information. (TABS 5A to 5N)</p> <p><i>Please note that due to the sensitive nature of this discussion only action items arising from jurisdictional information sharing roundtable are included in the Record of Decision.</i></p> <ul style="list-style-type: none"> <li>• <u>Nova Scotia</u></li> <li>• <u>Northwest Territories</u></li> <li>• <u>MISA</u></li> <li>• <u>British Columbia</u></li> <li>• <u>Prince Edward Island</u></li> <li>• <u>Newfoundland and Labrador</u></li> <li>• <u>New Brunswick</u></li> <li>• <u>Treasury Board of Canada Secretariat</u></li> <li>• <u>Quebec</u></li> <li>• <u>Ontario</u></li> <li>• <u>Yukon</u></li> <li>• <u>Manitoba</u></li> </ul>	<p><b><u>Action Item #3:</u></b></p> <p>Olivia Neal offered tickets to the FWD50 conference being held November 5-7, 2019 in Ottawa. Details to follow.</p> <p><i>Note: an email was sent to PSCIOC members on behalf of Olivia Neal on October 3<sup>rd</sup> with the FWD50 Conference information.</i></p>



	<p><b><u>Action items arising from discussion or identified topics of interest for upcoming teleconferences and/or PSCIOC meetings:</u></b></p> <ul style="list-style-type: none"> <li>Olivia Neal offered to share information on the upcoming FWD50 conference being held on November 5-7, 2019, in Ottawa. TBS offered tickets for members to attend, details to follow by email.</li> <li>Information on Cloud Vendor of Record (VoR) including information on tools available for developers and infrastructure specialists without the need to procure every single element of the journey. Lessons learned on this kind of Cloud VoR including how jurisdictions have evaluated this and what to watch out for during implementation. <i>(Suggested by Ontario)</i></li> <li>Lessons learned on talent management and job classification at the right level. Lessons learned on shared services. <i>(Suggested by Newfoundland and Labrador)</i></li> </ul>	
5.	<p><b>PSCIOC Treasurer's Report (TABS 6A to 6Dii)</b></p> <p>Bonnie Schmidt, PSCIOC Treasurer (via teleconference) and Dan Batista, ICCS Executive Director, provided an update on the current financial position of the PSCIOC. Dan noted that the PSCIOC is in a healthy financial position as per the last financial statement of July 31<sup>st</sup>, 2019.</p> <p>Dan advised that in 2010, the Government of Ontario ceased to provide in-kind support (accommodation and IT and telecommunications costs valued at \$121K and part of the ICCS operating budget). Without the \$121K, the ICCS cannot provide support services to the Councils. Back in 2010, the PSCIOC agreed to cover their portion of the shortfall in the amount of \$60K a year from its reserves whereas the PSSDC opted to cover their portion by adjusting their members' contributions. Since 2010, the ICCS has done its best to manage rising costs related to accommodation, IT and telecommunications and continues to operate within this budget. The PSCIOC continues to use its reserves to cover the shortfall, this means that PSCIOC contributes only \$33,535 to its reserves on a yearly basis.</p> <p>Dan Batista discussed several options proposed by the PSCIOC Treasurer and noted that in order for the PSCIOC to maintain a healthy reserve fund for future projects and initiatives, the Treasurer recommends Option #3: PSCIOC to consider adjusting its contributions on a phase-in approach, which is an incremental increase of \$15K a year, over the next four years, to make up the \$60K and avoid depleting its reserves.</p> <p>Tracy Wood suggested for members to review the PSCIOC financial reports in the binder and requested a meeting to be scheduled in the next week or so to discuss this matter further in order to reach a decision.</p>	<p><b><u>Action Item #4:</u></b> The Secretariat to schedule a meeting with PSCIOC members to review and discuss the PSCIOC finances.</p> <p><i>Note: Following the meeting, federal PSCIOC Co-Chair requested a meeting of the PSCIOC Co-Chairs, PSCIOC Treasurer and ICCS to review the finances before scheduling a call with members. The meeting is scheduled for October 17<sup>th</sup>, 2019.</i></p>
6.	<p><b>Other Business:</b></p> <p><b>A)</b> Oliva Neal stated that as a result of the discussion at the September 25<sup>th</sup> Joint Councils on the future strategic direction of the Councils, the PSCIOC was asked to discuss the recommendation of moving the PSSDC's Service to Business Working Group and the Data Driven Intelligence Working Group under the Joint Councils. This means that S2B and DDI would report not to Joint Councils and not solely to PSSDC.</p>	<p><b><u>Action Item #5:</u></b> ICCS to add a discussion on the working groups of the Councils and the recommendation to move the PSSDC's S2B and DDI Working Groups under the Joint Councils to</p>

	<p>Olivia Neal suggested to defer this item to a future agenda for discussion. She also suggested for the ICCS to provide PSCIOC members with a list of all working groups of the Councils and their reporting structure as background for this discussion.</p> <p><b>B)</b> PSCIOC Action Items from previous meeting - There was no discussion on this item.</p> <p><b>C)</b> PSCIOC Bring Forward Agenda - There was no discussion on this item.</p> <p><b>D)</b> Update Reports from PSCIOC Working Groups - The working groups reports were included in the binder for information only. There was no discussion on the reports.</p> <p><b>E)</b> Next PSCIOC in-person meeting: February 25-27, 2020, Toronto, Ontario.</p> <p><b>F)</b> Next PSCIOC Teleconferences scheduled for Wednesday, November 13, 2019 and Friday, January 17, 2020.</p> <p>Tracy Wood thanked Sandra Cascadden, Nova Scotia, for her leadership and support as provincial co-chair of the PSCIOC.</p>	<p>an upcoming PSCIOC meeting agenda. ICCS to provide a list of all Councils' Working Groups and their reporting structure as background material for this discussion.</p>
	<p><i>The PSCIOC meeting adjourned at 12:15 p.m. CDT.</i></p>	
	<p><b>JOINT SESSION: JOINT COUNCILS (PSCIOC &amp; PSSDC) AND THE CIO STRATEGY COUNCIL (CIOSC)</b></p>	
8.	<p>Olivia Neal, PSCIOC Co-Chair, provided background information on the mandate and membership of the PSCIOC and PSSDC. She noted that while the federal government is in pre-election mode and federal members may not be able to participate or commit to any specific activity, there is room for discussion among members of both Joint Councils and the CIO Strategy Council on how we can collaborate in the areas of Responsible Internet of Things (IoT) and Responsible Data Sharing.</p> <p>Keith Jansa, CIO Strategy Council Executive Director, stated that the CIO Strategy Council is a national forum which brings together public and private sectors, when dealing with digital issues, bringing like minded and forward-thinking CIOs together to provide more strategic coordinated direction informing technology designs, accelerating technology and providing better service to customers. This forum works to transform the digital ecosystem, create and design standards that keep pace with innovation following agile processes, provide international benchmarking towards an open and transparent collaboration, and deploying responsible decisions.</p> <p><b><u>Responsible Internet of Things</u></b></p> <p><b>Panel Speakers:</b>  Keith Jansa, Executive Director, CIO Strategy Council (moderator)  Mike Monteith, CEO, Thoughtwire  Andy Best, Executive Director, Open City Network  Shelley Fraser, Director, Marketing, Communications and Community Engagement, Lixar</p>	<p><b><u>Action Item #6:</u></b>  A further discussion between the Joint Councils and the CIO Strategy Council on IoT and Data Sharing was encouraged. Joint Councils Co-chairs to advise on next steps.</p>

Lawrence Eta, CIO, City of Toronto  
Kurtis McBride, CEO, MioVision  
Jean-Noé Landry, Executive Director, Open North

**Key questions for discussion:**

1. What is the biggest challenge of IoT at the moment? How do we solve for it?
2. What are the CIOs and service delivery leaders facing when it comes to the introduction of new technologies like 5G, distributed ledgers, IoT and AI?
3. How are these technologies going to impact and be used to improve service delivery? Examples?

**Discussion:**

- The inherent value of data and data that traditionally has been trapped in the metal box has started to be standardized and is now available, how can we harvest it and use it commercially in other applications. Some of that value should be captured by the municipalities. Information has value, most companies in the world are information companies, before giving it away, they should think about the data.
- What people could use with the help of IoT, this is a higher conversation that should happen. They lose business when people are focused only on technology. It is very difficult moving data to different jurisdictions.
- The open standards will help the consumer of IoT, what are the benefits of doing this. There is need for standards and the need of updating those. What are the benefits of the standards and having the protocols?
- There is a national conversation that needs to happen, in few years there will be billions of connected devices. There is no industry, municipality or province that can do it on its own, it will affect everybody, there are numerous changes, the hackers never sleep, we have to be at the table to talk about innovation and protection as it relates to compliance, coordination and consent to all.
- There is a lot of overlap with levels of provincial and federal government, need trust in democratic institutions. At the city level there is more risk, it happens in the public policy and regulatory vacuum, with a huge imbalance between the actors. Small cities are going up against huge multinational companies, struggle to fund the modernization, with imbalance in budgets. They have a grasp of what the physical infrastructure deficit there is, but they don't have data in terms of asset replacement. Need to protect the value and use of public data with a strong public policy foundation. We will be inserting an ungovernable layer in the city operation. We must build and maintain the aspects of smart cities, from a public, private perspective and with NGO actors, to form a coalition and work together to tackle the problem. The current approach doesn't have systematic protocols, with a public policy foundation. The public sector cannot rely on themselves and the private sector cannot as well, that's why we encourage forming a coalition.
- Need to develop a set of values in opening smart cities, anchored from a perspective of ethical principles from an openness and accountability perspective and provide capacity building for free to communities. Use an applied research lab approach to address the issues they are facing today. As they are doing work from research,

it is difficult to compare different data governance models to inform the key decision makers and process. There is a lack of regulation. When you design methodology the interoperability component links to different levels of government. Align the standards in terms of language with in depth understanding of the systems and standard of care to enable us to look at these things. Focusing on the efficiencies and what technology could do in terms of deployments. There are challenges with different kinds of people who have different ways of understanding. Recommend involving politicians in this discussion and how to educate at different levels.

- In the private sector there are financial incentives to keep data secure. In the public sector, especially municipalities they have a huge amount of data, moreover the IoT increases the amount of data, and municipalities lack incentive and resources to secure this data. Whose responsibility is it to ensure that with low budgets that municipalities are securing data in a proper way?
- If you spend time doing a privacy assessment it would educate and inform you about privacy. The City of Toronto has four strong guiding principles, there is a need for the private sector to help municipalities with data. The strategy is to ensure that the data is not in silos, but in one place in order to be able to protect it. To work on a common platform where there is more interrelation, and with public and private collaboration. It is about transformation and rapid acceleration.
- There is a huge resource gap, we need to protect what is ours, and try to accomplish more collectively than we could individually. There is an opportunity for federal, provincial/territorial and municipalities to lead that and turn strategy into standards and work together. Standards help provide strategic direction and we will see change in the consumer world. Procurement and standards go side by side.
- Procurement people are not architects nor solution focused, they focus on the process, not decide what is the solution. We are digitally enabled, we need this at scale. Encourage federal, provincial/territorial and municipal level support. Tell the problem you are trying to solve to the private sector, and they will find a solution.

**Questions:**

- Guy Gordon asked the panel to elaborate on standards, what and where is this going in the area of IoT? We all aspire to national standards.

Keith Jansa responded that standard specifications are a set of rules that the products should meet. The process is critical and how the standards are achieved is important. The caveat, they created an agile consensus base process into the design of the standards. The CIOSC was accredited by the National Standards Council of Canada and they can develop standards for the country. They have a credible achievable standard to incorporate into their regulations. The cycle for regulations is long, we need to match this with the pace of innovation. There is a fundamental gap on how we inform this process, need to have this type of dialogue to influence the market place. The collective knowledge of both public and private sector members is needed to solve all of this. Being able to achieve a threshold of acceptability for users and adopters is difficult, in some cases consensus is good but not always, the drivers of adoption are critical, requires being thoughtful and understanding of the ecosystem. Who is going to maintain and sustain the standards? This is critical issue we are struggling to solve.

	<ul style="list-style-type: none"> <li>• Deb Bergey talked about: a) concept of measurement - measuring of standards, standard to influence the market. Interested to hear about the City of Toronto related to procurement, in her municipality they have rigorous procurement standards. b) municipalities struggle with the fact that they are a small influencer in that market, frequently when working with vendors, we have mandatory requirements on privacy but to the private sector this is not a large market, we are not “big enough”. c) liked the idea of using standards to influence.</li> <li>• Natasha Clarke noted the following to think about: the notion of standards and this community. What is the opportunity for the Joint Councils to grow a shared understanding of what the shared values are? The value for the public sector is the public good and trust. What is the opportunity for us in working together to get the same understanding? How we drive out the standards that help growing the economy but protect citizens’ trust and advance the work? Citizens have no idea what the risks are, they share information as they don’t understand what could go wrong. Agree to creating space for us to be able to do that together. Government may be perceived as late, slow, and bureaucratic but we are there in times of crisis for the public good. We need to create a space to collaborate and share understanding of driving the product together.</li> <li>• Peter Watkins inquired as to how the CIO Strategy Council thinks of approaching this, with the current level of complexity, the rate at which we attempt to intervene and begin to iterate the standards is slower than the rate of the technology and how it is advancing, how do you intend to close the gap? How do you think this could come together?</li> </ul> <p>Keith Jansa responded that standards play a great role, but we cannot write standards for everything. He added that development of process standards is consensus based. Numerous standards take time, they have developed an agile set of standards, more inclusive and more transparent. The type of model they have allows effective participation, that is why their national standard for ethical use of AI was developed quickly and is public now. It is an agile model, done in a strategic prioritized way, allowing global competitiveness, with national and international focus on the public good. He advised that the conversation with public sector should continue. Everything is interconnected and this is a global issue, we want to be leaders in this space, trust and transparency are at the center.</p> <p>A further discussion between the Joint Councils and the CIO Strategy Council on responsible IoT was encouraged. Joint Councils Co-chairs to advise on next steps.</p>	
	<p><b><u>Responsible Data Sharing</u></b></p> <p><b>Panel Speakers:</b></p> <p>Keith Jansa, Executive Director, CIO Strategy Council (moderator)</p> <p>Nandini Jolly, CEO, CryptoMill</p> <p>Mark Alexiuk, Founder &amp; CTO, Sightline Innovation</p> <p>Andre Loranger, Assistant Chief Statistician, Statistics Canada</p> <p>Paul Vallée, CEO, Tehama</p> <p>Neil Butters, Digital Identity, Innovations and New Ventures, Interac Corporation</p> <p>Wellington Holbrook, Chief Transformation Officer, ATB Financial</p> <p>Mike Cook, CEO, Identos</p>	

**Key questions for discussion:**

1. Why is data sharing an economic imperative and strategy for Canada? In what ways will it impact service delivery and why? Examples?
2. What are the critical factors that need to be addressed?
3. How can we best advance responsible data sharing?

**Discussion:**

- From a national statistics organization's perspective, our focus is to transform the organization to unlock the power of data and put it in the citizens' hands and provide insights to Canadians on how to unlock the strategic value of data. Our business is based on trust, we take this data and as mandated by law, respect and protect the privacy of this data. Effective data sharing comes to the data standards, we need strong partnerships and accountability, this needs to be governed with strong agreements on data sharing. It's about information security and how to protect data. Legal frameworks are very important.
- Trust sets us apart, we cannot operate without trust. We need zero trust models when it comes to protecting data. Need to have availability and ensure that from the IT security perspective. Availability to any sensitive data based on your role, that you have immediate access. Protect data and make it accessible, be dynamic on the sensitive data.
- CIOs need to identify that the stakeholder operates on a relationship of trust as they collect assets, they turn to policy assessments, one way to help is to automate the process, automate negotiation, blockchain based, executed and deployed.
- There is overlap between the identity and what is missing in identity management tools today. The work with the government of Alberta creating a simple ID, to start learning through a small pilot with what they can share. Stakeholders were keen to participate, putting people in control of their data. Data is encrypted and you can share the data with who you want, whenever you want.
- We take data usage very seriously. Digital ID will be the catalyst for such actions, underpinning and layering on other capabilities, you put citizens in control of all data, not only their financial status.
- Sharing data in the context of healthcare: there are challenges as healthcare data is stored in numerous places, healthcare is distributed locally. There is commonality, improving healthcare, mature model for custodianship. It is very dependent on Digital ID. Healthcare is sensitive, you must have good governance and conformance for it. In the future investment cycle, there is need to develop new tech across the world, as part of the research process, lots of commonality with other industries, we need to talk about trust frameworks, we need to talk about authorization and consent.

**Questions:**

	<ul style="list-style-type: none"> <li>• Cosanna Preston-Idedia stated that she works on the Digital ID file. She inquired if the request the CIO SC received to create a standard around Digital ID was the Pan-Canadian Trust Framework (PCTF)?</li> </ul> <p>Keith Jansa responded that request they have received is related to how internally we govern digital ID. The PCTF goes to roles and responsibilities and how to create a trusted ecosystem; this works supplements and complements the PCTF.</p> <ul style="list-style-type: none"> <li>• Cosanna Preston-Idedia asked about the My Alberta Digital ID, what is the relationship between Service Alberta and CIO SC?</li> </ul> <p>Wellington Holbrook responded that the individual is creating their own digital ID, through the ecosystem it gives them the access to My Alberta ID based on blockchain technology.</p> <ul style="list-style-type: none"> <li>• Neil Butters stated that he is a member of DIACC. The PCTF is a framework, layered beneath that is the conformance criteria. We need to go a layer deeper, define the credentials, their uses, what data based on LOA, what info that the credentials are capable of and what information could be shared and how that could be shared, if they don't do that, parties will take advantage and data will be shared without consent.</li> <li>• There is a plethora of standards out there but for data protection there are none, we need to be always ahead of the curve. It is relevant to utilize the efforts, hear what is there and listen. An ecosystem of public and private sector will enable having the strategic discussions required to move forward. You cannot operate if you cannot share data internally and internationally. We get heard as a community as we develop cutting edge technology, creating a guideline and amalgamating what we all know.</li> <li>• State of our ability of sharing data with each other. Technology is the winner takes all. Google, Facebook have all our profiles. How can we create a partnership to have control and access to our Google and Facebook data and feed it in the apps, utility to create that entrepreneurial opportunity for Canadians? Is our data personal to us, do we own the data that Facebook, or Google have?</li> <li>• Natasha Clarke stated that Councils members are passionate about data sharing. When she goes back to her jurisdiction, she will likely have a conversation about data sharing agreements between departments. There is an economic and political imperative as well. We need help on building this political imperative and having the right conversations with the right people. Digital ID is our ability to drive a better economy, investing in and identifying people will help us and have a huge reward, how can we tackle that, how can we start shifting the conversation on that?</li> <li>• Suggestion to include strong healthcare data standards as part of the conversation.</li> <li>• Keith Jansa advised that the CIO Strategy Council is developing two national standards: one on third party access to data and one on digital production of digital assets, venturing into the data governance space.</li> </ul>	
--	--	--

	<ul style="list-style-type: none"> <li>• We are learning such as putting people in control of their data, there are no established standards, provinces have standards, but there is a need for clear standards and clear objectives around standards, there are lots of lost opportunities because we don't have strong standards.</li> <li>• Natasha Clarke thanked the panel speakers and the CIO Strategy Council for a great opportunity to discuss responsible data sharing and the opportunity for public and private sector engagement in this discussion. We have an opportunity to further the conversation and learn from each other in this space. This is a complex space that requires different perspectives to tackle the complex issues. We are encouraged by the discussion and from learning more about the private sector's perspective in moving forward to improve citizens' services across the country.</li> </ul> <p>A further discussion between the Joint Councils and the CIO Strategy Council on Responsible Data Sharing was encouraged. Joint Councils Co-chairs to advise on next steps.</p>	
	The meeting adjourned at 4:00 pm CDT.	