Joint Councils Executive Report on Trends this Month

There was a wide variety of top stories throughout October from Canada, the US and across the globe. This month legal issues and government portals/ identity were reoccurring themes of interest to subscribers.

Top Stories

» On October 16 2018, the Honorable Scott Brison, President of the Treasury Board and Minister of Digital Government, announced the creation of Canada's Digital Academy to ensure Canada's world-class public service is prepared for the digital age. Hosted at the Canada School of Public Service, the academy will build on international best practices with a made-in-Canada approach. Specifically, the curriculum will aim to build key digital competencies in data analysis, design, development and automation, disruptive technology and artificial intelligence, and machine learning.

» Here's the average statewide technology budget breakdown (finding of a survey the Center for Digital Government conducted recently, combining responses from 48 United State governments) :

- IT Staff (internal): 33%.
- Telecommunications: 11%.
- Hardware: 9%.
- Software: 13%.
- IT services (cloud and infrastructure services). 9%.
- IT services (solutions): 16%.
- Other: 9%.

» In an interview with Dr. Tanya Filer, head of the Digital State project at the Bennett Institute of Public Policy, Dr. Filer cites three examples of how government technology is shaped by local issues. First, Israel has prioritised building local innovation. Second, Argentina has used tech to better engage citizens. Third, Britain is using tech to tackle economic challenges through the Government Technology Catalyst.

» "Gartner's 10 technology trends for 2019: The Good, the Obvious and the Missing" was recently published by Forbes.

Key Insights – Legal

Technology will continue to change the work of law enforcement, and staying ahead will mean not just adopting the latest tools but radical shifts in the status quo. A recently published article focused on Accenture's new research report on reimagining the traditional police workforce.

As Congress considers whether to make new U.S. laws governing how AI systems function in society, a congressional committee report has highlighted concerns around the types of AI algorithms that perform specific tasks.

China's central government has drafted a new regulation that would strip blockchains of their anonymity, requiring users to provide their real names and national ID card numbers when registering for a blockchain service. Read more here.

Key Insights – Government Portals, Transactions & Identity

Singapore released the Singpass mobile app this month which allows citizens to conduct secure digital government transactions using biometrics for authentication rather than passwords. "SingPass Mobile is another step towards our vision for citizens to access government and private sector digital services securely with a single, trusted National Digital Identity." explained Mr Kok Ping Soon, CEO of GovTech.

There will be a repeat of the failed attempt to roll out the Australia Card threatens to follow Coalition efforts to create digital IDs for web-users, unless the government makes changes protecting privacy, a defence think tank warns in a new report. Read more here.

Arizona CIO Morgan Reed discusses in a video how his agency is developing single sign-on to protect against cyberattacks and make government easier to use.

In Australia, the Queensland Department of Child Safety, Youth and Women has warned that the myGov portal can be used by abusive partners to track down victims. Parents fleeing domestic violence are being urged to deactivate their children's myGov accounts, amid concerns abusive partners can use the portal to discover where spouses and children are living. Read more about these concerns here.

IT World Canada published a recent noteworthy article on identity management trends at the annual SecTor conference in Toronto: SecTor 2018: Four identity management trends to prepare for.

Noteworthy Articles in the ICCS Research Repository:

Take the time to explore some great reports from the past few months in the ICCS Research Repository. Recent articles include:

Government transformations to embrace innovation
Embracing Innovation in Government: Global Trends February 2017

Digitization in the UK government
Improving the management of digital government

The next-generation operating model for the digital age
Rethinking customer journeys with the next-generation operating model

Other Noteworthy Articles this month:

How a Data-Driven Government Tackles Privacy, by Government Technology

20 years of government going digital, by FCW

Mapping the impact of dockless vehicles, by Smart Cities Dive

What's New in Civic Tech: New Directory Maps the Top Civic Innovation Labs, by Government Technology

Johns Creek, GA gives residents easy data access with Amazon's Alexa, by Smart Cities Dive

A blockchain-based governance model for public services in smart cities, by Open Access Government

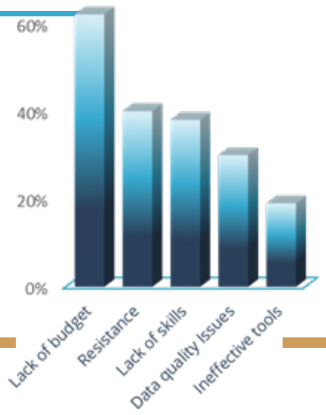
This Month's Feature: Data Governance

In our last Executive Report, we highlighted the strategic value of data in todays world and the importance of data in driving a citizen-centred approach. But we know that there are also challenges in working with big data. Here are three facts from a survey of 200 professionals across the United States in pictures to demonstrate:

2018 State of Data

87% of agencies consider data to be one of their greatest strategic assets

62% the biggest challenges agencies face in regard to data modernization



93% of agencies believe data plays a key role in achieving their citizen mandate

https://www.edq.com/blog/the-state-of-data-management-in-the-public-sector-in-2018/

Governments across the world are focused on not only harnessing big data but recognise the importance of good governance of that data to deliver value. In this executive report we explore how experts from private and public sectors have defined data governance and data governance policies, the key organizational roles required to harness the power of big data, and ideas on how to improve data quality.

What is data governance? At its core, according to Mitesh Shah at MapR, "data governance is about formally managing important data throughout the enterprise and thus ensuring value is derived from it. Although maturity levels will vary by organization, data governance

is generally achieved through a combination of people and process, with technology used to simplify and automate aspects of the process."[1]

Data governance in the era of big data focuses on the "Three Vs:

Volume: The volume of data housed in big data systems can reach into the petabytes and beyond.

Variety: Data is no longer only in simple relational format; it can be structured, semi-structured, or even unstructured; data repositories span files, NoSQL tables, and streams.

Velocity: Data needs to be ingested quickly from devices around the globe, including IoT sources. Data must be analyzed in real time."[2]

What are data governance policies?

At a more granular level, data governance defines who has authority to make data management decisions, as well as who is accountable. This is critical for several reasons. Data governance policies ensure data is up-to-date, secure, consistent and standardized. After all, if data cannot be trusted, it cannot be used. Data governance policies also define the flow of data throughout an organization and the models that create repeatable and scalable management processes. In short, data governance is the framework that connects information across an organization."[3]

Melissa Woods at 4Tell says *"at its most basic level, data governance refers to the process an organization follows to ensure the production of high-quality, impactful data. This can include both external and internal data."*

Data governance policies in the public sector can allow for standardizing of data; use of common data definitions; improving data quality, collection and security; creating a data platform across overlapping teams and managing the information platform and technology. Good data governance can result in better service delivery and better management of strategic capital plans, among others benefits.[4]

What roles are needed on a big data team?

In many instances, there is a need to work effectively with data, but in private industry, companies can overlook two critical

1 https://tdwi.org/articles/2017/09/15/diq-all-data-governance-in-big-data-world.aspx
2 https://tdwi.org/articles/2017/09/15/diq-all-data-governance-in-big-data-world.aspx
3 https://www.4tellsolutions.com/blog/data-governance-policies-critical-public-sector/
4 https://www.4tellsolutions.com/blog/data-governance-policies-critical-public-sector/

items: 1) Identifying the roles they really need and 2) building a "customer-service" mentality in their advanced analytics bureau.[5, 6] The Harvard Business Review and BIGDATA have identified these roles as:

Software engineers play a key role in a Big Data team by creating the software that collects the actual data. They work to put together both the back and front end of systems responsible for collecting and processing data.

Statisticians keep the Big Data team running by using math to collect, analyze and interpret the data other team members have acquired during the course of their duty. They also identify the right methods to use to collect data for a specific purpose.

Data hygienists ensure that data coming into the system is clean and accurate, and stays that way over the entire data lifecycle.

Data explorers examine large amounts of date to discover the data that is actually useful or needed. This can be very resource intensive, as much data was captured for means that are different that it is being used for.

Data architects focus on taking the data and transforming it into sets that can be easily worked with by the organization.

Visualizers ensure the data can be understood by those who need to see it. A visualizer is skilled at taking raw data and changing its format into something easier to understand. This could be graphs, lists, tables, infographics, slides and even short animated videos.

How do you raise data quality? In a recent Experian survey of 200 professionals in the United States[7],

Overall, public sector agencies tend to have higher levels of accurate data than agencies in the private sector. When asked about their constituent data, public sector agencies estimated that only 18 percent is inaccurate. In the private sector, organizations in the United States estimated that 33 percent of their customer and prospect data is inaccurate—15 percent higher than the public sector.

Despite the higher level of accuracy in Public Sector data, Jorge Ruiz at WinShuttle says "data quality issues … [are] heavily exacerbated in the public sector. This is primarily caused by siloed departments and agencies functioning independently, and reporting spread across

5 https://hbr.org/2013/07/five-roles-you-need-on-your-bi
6 https://insidebigdata.com/2018/02/16/7-key-members-every-big-data-team/
7 https://www.edq.com/blog/the-state-of-data-management-in-the-public-sector-in-2018/

local, regional, and national boundaries, (not to mention heterogeneous systems, non-integrated processes, and fragmented data). As data continues to grow exponentially, data quality can become compromised, requiring additional staff to fix, update, match, and share data across the organization. The public sector space has different segments that present unique challenges, however the common theme seems to be the need for efficiency, visibility, and transparency. With shrinking public budgets and ever changing government regulations, all segments are constantly looking for ways to stretch their limited resources.[8]

5 Ways that data quality can be increased, according to Sandip Sharma, include:

1. Building in multiple data checkpoints, so that data quality can be assessed and corrected during collection, delivery, integration, recovery, and during analysis.
2. Work on overall system integrity and ICT process architecture, tackling data quality problems by integrating new checkpoints, reinforcing existing checkpoints, refining the range of data, and eliminating technological flaws and limitations in hardware and software.
3. Combining an improved architecture with a retrospective approach of data cleaning and error detection, by applying analysis of data quality and accuracy, measuring the consistency of data elements, quantifying system errors, and measuring the success of completed processes.
4. Use a "whole of organization" approach to data quality, with departments and partners working together to improve overall data quality.
5. Integrate data into a centralized system that improves overall collaboration and interoperability of organizations and departments. e-Gov systems are designed to facilitate the management and analysis of large and unstructured data sets, improving data quality and creating meaningful analysis that can be used to further improve processes and service quality.[9]

We would love to hear from you!

Send your questions to Info@iccs-isac.org.

8 https://www.winshuttle.com/blog/driving-high-quality-data-important-public-sector/
9 https://www.linkedin.com/pulse/data-quality-key-public-sector-success-sandip-sharma/

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