
NOTE TO READERS:

This presentation was developed for an instructional onboarding for the first six Code for Canada fellows. A few folks found it useful, so I've posted it. If you're interested in the Code for Canada fellowship program, visit <https://codefor.ca>.

GOVERNMENT AND DATA

Code for Canada Fellowship Onboarding

October 25th, 2017

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TOPICS

- Frequent questions encouraged. If it's a rabbit-hole, we'll cover it in the "Parking Lot."
- Anything you'd like to add to the agenda?

Sources and Types of Government Data

The Policy and the Players

How to Get What You Need

Examples and Cases

Parking Lot

THE SPECTRUM OF PUBLIC SECTOR WORK

There are many types of organizations that are part of or interact with government, and the vast majority of roles are operational.

Jurisdiction	Sector	Organization	Function
<ul style="list-style-type: none">• Municipal• Regional• Provincial• Federal• Global• Multinational	<ul style="list-style-type: none">• Public• Broader Public• Private• Civil Society	<ul style="list-style-type: none">• Government• Agency• Not-for-profit• Political party• Service provider• Regulated entity	<ul style="list-style-type: none">• Operations (e.g., finance, HR)• Program Delivery• Policy / Strategy• Research• Transformation• Politics/Advocacy

How would *Government Relations for Uber* fit into your idea of public sector work?

What about *Analytics for Waste Diversion Ontario*?

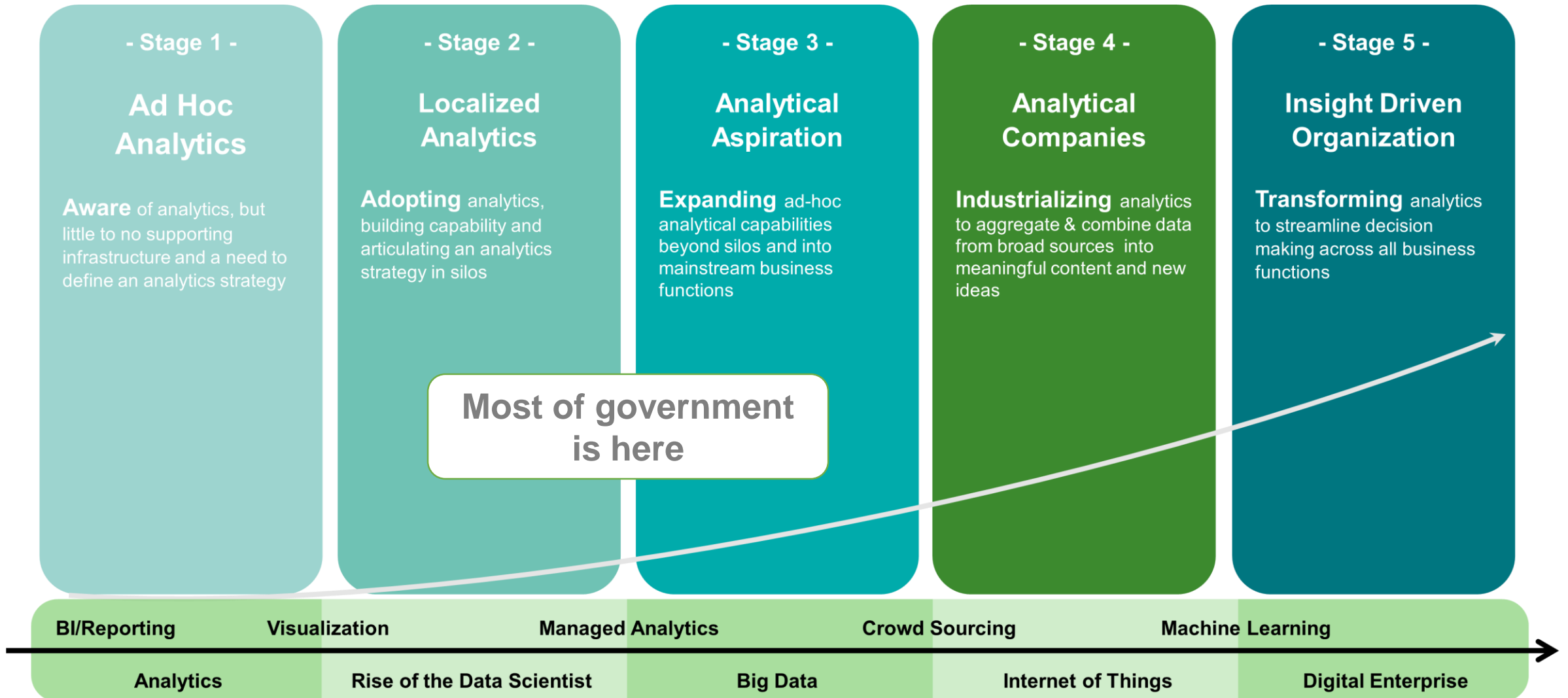
What is the most niche organization you have encountered that is part of or interacts with government?

SOME PRIMING QUESTIONS

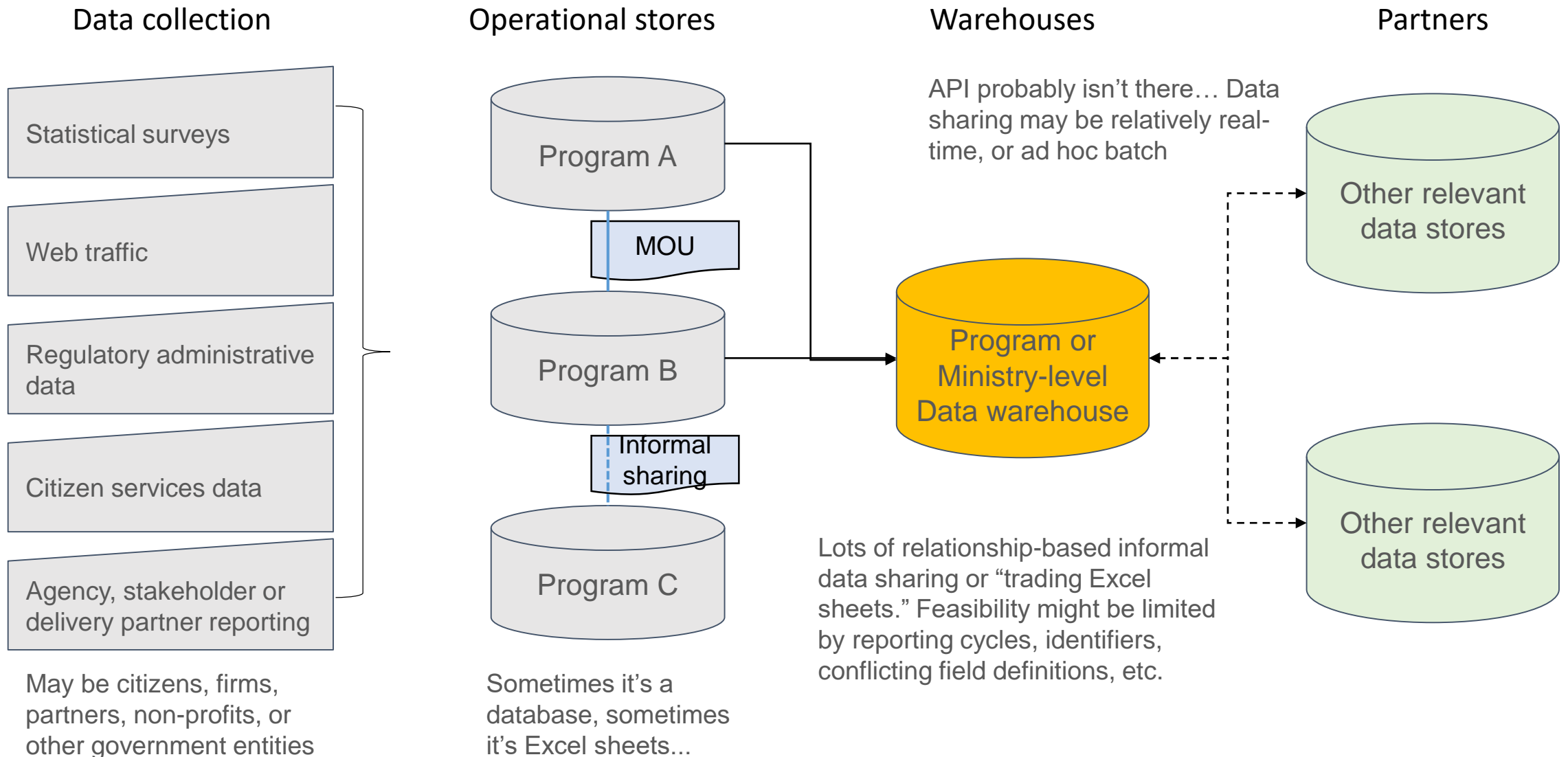
In 30 seconds or less per question... *(take your best guess)*

1. For what reasons does government collect data? Who do you think “owns” this data?
2. Do you have experience working with data in large (>500 employee) organizations? What was that like?
3. If you had to start a new government program to provide healthy school lunches, what data would you need? How would you get it?

DATA AND ANALYTICS MATURITY



MORE FRAGMENTED THAN YOU LIKELY KNEW



POLICY – GOVERNMENT COMMITMENTS

The Ontario government has publicly committed to Digital Government, Open Data, and evidence-based decision making – all of which will require a more digital bureaucracy.

“To fulfill Ontario’s vision of transforming the way that citizens interact and engage with their government through the power of digital technology, your specific priorities include:

- Empowering the next generation of digital talent through a digital talent strategy designed to attract and retain in-demand digital skills and nurture a digitally equipped organization.
- Removing barriers to, and enabling, wider digital adoption across the organization through the establishment of a modern, enterprise-wide digital standards framework for the public-facing digital channel, in partnership with the Treasury Board Secretariat and ServiceOntario.”

September 2016 Mandate Letter: [Digital Government](#)

“I also ask you to collaborate with the Minister Responsible for Digital Government to drive digital transformation across government and modernize public service delivery.”

“It is essential that we work collaboratively across every sector of government to support evidence-based decision-making to ensure programs and services are effective, efficient and sustainable, in order to balance the budget by 2017–18, maintain balance in 2018–19, and position the province for longer-term fiscal sustainability.”

September 2016 Mandate Letter: [MAESD](#)

“The Open Data initiative supports government efficiency, effectiveness and innovation. Faster and easier access to Government Data through a one-window data portal facilitates evidence-based policy, informs service delivery and promotes greater transparency and accountability.”

“This directive:

- Promotes a culture of openness and collaboration – both within the public service and externally with the people of Ontario.”

Ontario’s [Open Data Directive](#)

GOVERNMENT AND THE DATA TRENDS

Adoption of these technologies and policies is new to most of government.

- Machine learning
- Cloud storage and data services
- Open data

THE POLICY AND THE PLAYERS

Government's language is politics and relationships. Data and digital are not exempt from this.

- Central Government: Privacy Commissioner, Ontario/Canadian Digital Service, Open Data
- Central IT, and in Ontario, IT clusters
- Business side information management/strategy teams and program owners
- Stakeholders who may own or report data and have influence (e.g., hospitals, school boards, service providers, etc.)
- Data pipeline: different owners at each stage (i.e., collectors, custodians, consumers, etc.)

DATA ACCESS PROCESS

Where do you think you might fail when pursuing the process below? Why?

Typical process:

1. Identify what kind of data you might need, and start talking to people who can help you find it. Ask for data dictionaries, manuals, etc.
2. Map the data pipeline, from collection to operational databases to warehouses to the end use.
3. Ask the relevant data owners for appropriate access levels.
4. Jump through forms, approvals, conditions, and hoops to get your access.

What can go wrong:

- No process
- Process exists but slow
- Ask is ambiguous
- They don't trust you yet. Data could be highly sensitive and/or misused

HOW TO GET THE DATA YOU NEED

Be clear about what data you need, and how you're going to use it, including:

- Where the data is going: will some be used publicly? Where will it be hosted? Who's going to see it?
- Data fields and level of the data (i.e., elemental, aggregated by variable)
- Timeliness: batch, real-time
- Access method: Spreadsheet, API, SQL, or some BI web tool (e.g., Cognos)

Address privacy

- Does your use of the data meet privacy guidelines (Privacy Impact Assessment)?
- Are the intended systems and data processes secure (Threat Risk Assessment)? How secure do they need to be?

Get everything on the record

HOW TO GET THE DATA YOU NEED

Build relationships with data owners, and include them every step of the way:

- Understand their program, priorities, and concerns.
- They might not “really” get what digital means. Meet them where they are.
- Get to the top of their priority list by making the ask easy.
- Sometimes, this fails, and you need to lean on your Government Executive Sponsors.

There are a lot of perceived rules, but there’s usually a way around them.

Mind the “approval architecture”... bureaucrats sometimes seek approval when actions are unclear; rely on your government partners to help you force clarity on the approval path.

LET'S PRACTICE

I'm going to play some characters. You're trying to use MY data. Any characters you guys want to add? Or try playing?



Wilma the Wary Statistical Analyst

- Been with government for 15 years in different roles
- Working on this program for 5 years as she is very passionate about helping citizens in need – when duty calls!
- In the past she has seen data being misused, so is careful with who gets access to her sources
- *"We can just do the analysis for you"*



Yusuf the Unsure Policy Advisor

- Has been in the current role for about a year
- Uses the source data often, but doesn't have authority over its use
- Has heard of Open Data but isn't exactly sure how it impacts his role
- *"This sounds interesting. Let me talk to my manager"*













Steve the Stubborn Program Director

- Has been around for 10 years
- Values relationships with external stakeholders who provide data
- Believes that getting permission from stakeholders prior to any use is a good standard practice
- *"We aren't allowed to use their data for that"*


APPENDIX

COMMON BARRIERS

- **Analytics is more than technology**
Technology is an enabler, but without other capabilities, it's insufficient
- **Finding your purple people**
Build a team with the right balance of business and technical skills to deliver actionable business insights
- **Testing and Industrializing Analytics**
Start thinking early about internal capability building and sustainment. Develop a repeatable process to bring insights to the business
- **Changing the mindset**
Evolve a culture of asking crunchy questions and addressing cognitive bias
- **Demonstrating value early and often**
Get buy-in through quick wins and proofs-of-concept
- **Getting data**
Incorporate structured, unstructured, internal and external data for insights
- **Enabling platform**
Construct a technical capability which scales to your long term vision
- **The Art of Visualization**
Make use of the best graphical means to reinforce human cognition and facilitate understanding of insight
- **Stopping at Actionable Data**
Don't let concerns about data integrity slow you down – identify problems and fix as you go
- **Organizing for success**
Analytics initiatives should be led by the business with support from the IT cluster

WHAT WORKED FOR OTHERS (1/3)

I asked some of the most forward-thinking* people I know, of all levels, a few questions about public sector work. Here's what they said:



What are the most important factors you consider when hiring talent for public sector work?

- **Ability to adapt to government:** “Civil service ethic”, collaborative, can handle culture that can be hierarchal, gridlocked, and “hurry up and wait”
- **Motivation:** Joining out of a sense of purpose and mission, not stability
- **Analytical ability:** Ability to analyze and structure ambiguous problems
- **Communication:** Communicate the right findings to the right people in an accessible, succinct, visual, and even interactive way
- **Soft skills:** Ability to network, build relationships, sell ideas, and rally expertise around the organization to bear on a problem

WHAT WORKED FOR OTHERS – CONTINUED (2/3)

What is the biggest misconception you find potential/new employees have about public sector work?

- **Public sector work is always slow:** the public sector has wide a wide array of work environments and cultures
- **Analytical maturity:** generally less quantitatively sophisticated than academics might think/hope. Spreadsheets are typically the tool of choice, and literature reviews are the exception, not the norm
- **Evidence always wins:** evidence matters, but must also be “sold” to decision makers, stakeholders and politicians. *Losing hurts!*

In your dealings with social science grads, what strengths do you feel they bring? What weaknesses?

- **Strengths:** big-picture thinking, technical/mathematical ability, passion for public service
- **Weaknesses:** writing concisely for a business audience, presenting and visualizing information (e.g., making a good slide deck!), understanding of common business software/technology, understanding of management, organization, and business processes

WHAT WORKED FOR OTHERS – CONTINUED (3/3)

How did higher education (*all disciplines*) prepare you for your career? How could it have prepared you further?

Imagine you hired a candidate today, and you met them again in ten years. Why have they succeeded? Why have they failed?

- **The Good:** mentors from the public service, internships, and simulations of real public sector work (i.e., Cabinet submissions, negotiation support). Rigor in empirical thinking and structuring a problem.
- **The Bad:** more practical math and statistics, data visualization, more applied skills and exposure to what is used in industry
- **Succeeded:** Built relationships, found mentors, had the right expectations and motivations, seized opportunities for change, had “grit”, possessed a growth mindset, brought in new practices and technology
- **Failed:** Could not adapt to work environment, frustrated that “best advice” is ignored but political decisions are made, did not have adequate support and mentorship