



Learning to drive your Ferrari

The Data Agenda empowers
your most valuable asset

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Do you need a Data Agenda?

Like a Ferrari, data should be treated as a valuable asset – and it can be powerful if used appropriately. This paper examines the unique challenges government organizations face when it comes to data governance. It then suggests a three-phased process for implementing the Data Agenda within your organization to better control, secure and leverage your information while complying with data-related regulations.

Consider the following questions:

- How do we manage and make sense of an exponentially growing amount of data?
- How can we demonstrate achievement of our mandate and priorities?
- In times of austerity, how do we do less with more?
- How can we make fact-based decisions that stand up to scrutiny?
- Why does creating dashboards take so long and then produce unreliable results?
- Is my organization's data secured?

If these are familiar questions – and you're not getting the answers you want – it's time to start thinking about the **Data Agenda** and treating data as a valuable asset that requires strong, effective governance to realize its potential.

For federal government organizations challenged to reduce costs and at the same time deliver on strategic plans and priorities, implementing data governance through the Data Agenda offers a powerful, practical solution. It not only sets the foundation for increasing efficiencies, it also allows organizations to optimize evidence-based decision-making, increase public responsiveness and transparency, and improve compliance, including privacy and security.

The federal government is "data rich" already, and the amount of data continues to grow exponentially; however, harnessing this data into meaningful information has been difficult. The risks and expense related to data collection are often emphasized as barriers; for example, the costs related to data storage and the controls required to ensure appropriate data privacy and security. This is like focusing on your Ferrari's maintenance and insurance costs while ignoring the driving experience. The Data Agenda lets you focus on the essential power your data possesses – its transformative value, not its relatively trivial costs.



Data governance

- Refers to the policies and processes by which an organization manages the definition, use, quality, consistency, usability, security, privacy and availability of its data.
- Ensures appropriate resources are involved in defining data requirements and that, collectively, they set data standards, definitions, and usage parameters and monitor integration across projects and subject areas. While data requirements and definitions will influence IT strategies and technologies, they must be driven by organizational needs and not by IT. IT should play a supporting role, assessing needs and providing technical solutions, options and plans.
- Establishes data-centric processes and standardization of shared concepts, such as consistent and sustainable definition of terms across systems and applications.

Why the Data Agenda now?

Addressing data governance challenges can directly lower data management cost, enhance the ways proactive and predictive analytics inform critical business decisions, increase accuracy and efficiency in reporting to key stakeholders and reduce reputational risks associated with managing sensitive information.

The Government of Canada (GC) is a complex and geographically dispersed organization comprised of departments, agencies, crown corporations, special operating agencies and various affiliated organizations, each with its own objectives, structure, resources and culture. Unlike private enterprises, the federal government is not a profit-driven organization and is responsible to its stakeholders for much more than sustained growth. The federal government context is unlike that of any private enterprise and has correspondingly unique challenges and requirements when it comes to data governance.

Recordkeeping goes hand in hand with data governance

It has been recognized throughout the GC that gaps in information management (IM) practices currently exist in the majority of departments. This is at odds with the GC's current IM vision where information is safeguarded as a public trust and managed as a strategic asset to maximize its value in the service of Canadians.

To better realize this vision, the Treasury Board Secretariat (TBS) has developed a Policy on Information Management plus related directives. Their objective is achieving efficient and effective information management to support program and service delivery; foster informed

decision-making; facilitate accountability, transparency, and collaboration; and preserve and ensure access to information and records for the benefit of present and future generations of Canadians. As all departments must specifically be compliant with the requirements of the *TBS Directive on Recordkeeping* by April 2015, internal focus on records management practices has been ramping up.

Given IM resource challenges within departments, implementation plans for meeting the directive's requirements have so far involved engaging individual branches and program areas to identify and assess their information repositories. Unfortunately, IM efforts are typically conducted within siloed environments and without a unified organization-wide view. The same will be true of efforts under the *Directive on Recordkeeping* unless an organization-wide perspective is maintained. As departments begin to assess and better understand their information repositories, they have the perfect opportunity to begin considering data governance – that is, considering not just the records in each repository, but the data elements that are in each repository and common to different repositories. Given the clear synergies, the communication and monitoring efforts currently underway as part of *Directive on Recordkeeping* compliance should be leveraged as a key part of the Data Agenda.



TBS directive on recordkeeping

The requirements of this directive relate to the identification and management of information resources of business value, including how the department has implemented methodologies, mechanisms and tools to support appropriate recordkeeping practices throughout the information life cycle. This includes the identification of repositories in which information of business value will be retained, and the classification and management of the records within these repositories.

Defining data ownership and accountability

Ownership and accountability are foundational elements of the Data Agenda. Federal government departments accumulate and create vast amounts of data that they are mandated to safeguard and leverage as an asset. The *TBS Information Management Policy* and the *TBS Directive on Information Management Roles and Responsibilities* speak to a subset of issues under the larger data governance umbrella. The roles and responsibilities assigned within these directives are high-level, allowing federal government departments the flexibility to design and implement structures and accountability systems that are appropriate for their organizations. This, combined with the complex nature of departmental governance and various shared data accountability issues, means departments need to acquire deep knowledge and experience in developing data governance ownership and accountability structures if they are to effectively meet their data mandate.

Improving data-reliant processes

The diversity and evolution of federal government functions and programs has created numerous siloed environments where programs and systems – and their underlying policies, procedures, standards and IT platforms – have been developed and continue to be managed in isolation. This has resulted in a wealth of data that is difficult to share and use outside its discrete management environment.

Data governance, however, provides the foundation for achieving meaningful analysis across these data silos, allowing departments, for example, to demonstrate and track the fulfillment of program mandates using efficiently produced scorecards and other metrics on which senior management can rely. Departments can also make fact-based decisions that stakeholders are less likely to challenge.

We suggest that *now* is the perfect time to start building the data governance structure that will facilitate a smooth transition to the systems of the future.

Despite this extant capability, the federal government has recognized data issues in a number of modernization projects targeted to transform finance, HR, and pay systems across federal government departments and within Shared Services Canada. Senior executives have expressed confusion and frustration with the many interconnected projects and have indicated that they are waiting until the “dust settles” before moving ahead with further initiatives – including the implementation of a data governance framework. We suggest that *now* is the perfect time to start building the data governance structure that will facilitate a smooth transition to the systems of the future. This will, in fact, address many current issues and enable the strategic integration of many siloed data sources – not only within but also across federal government departments – in a way that manages ongoing costs, reduces risk and increases the ability to analyze diverse data in support of critical decisions.

Furthermore, data governance sets the foundation for advanced analytics, enabling the linkage of diverse data sets within a department and eventually between departments to obtain a complete picture of, for example, a single recipient of multiple grants and/or contributions across the GC.

The importance of better results and clear compliance

Facing a number of accountability measures and generally increased scrutiny, government departments have plenty of skin in the game when it comes to improving data management and compliance practices. These challenges include:

■ Management Accountability Framework (MAF)

TBS carries out assessments of management performance annually. Organizations are assessed against various Areas of Management and are rated based on an assessment scale. Implementing the Data Agenda will not only make it easier for departments to provide required MAF information, it will also lay the foundation for better results – not only in Area of Management 12 (Information Management), but in other areas such as Area of Management 7 (Financial Management and Control), which is related to forecasting, budgeting and reporting.

■ Internal audit

Internal audit within the federal government has become more formalized, including the establishment of independent audit committees and the requirement to have internal audit results posted publicly. Departments are required to develop management action plans to address the recommendations provided within audit reports. Following a review of the 11 program- and operations-related internal audits conducted by a large federal government department from the years 2010/11 – 2012/13, it was determined that just under half (23 out of 49) of all report recommendations had a component that would be best addressed by increasing the department's data value capabilities.

■ Security and privacy

Departments are under increasing scrutiny to ensure data is appropriately safeguarded and managed in accordance with legislative and policy requirements. Understanding your data holdings and classifying data in a consistent manner allows appropriate security and privacy controls to be assigned.

■ Access to Information (ATI)

There has been an increased focus on the poor performance of many departments in meeting their requirements under the Access to Information Act. This is often a symptom of poor information and data management processes within the department.

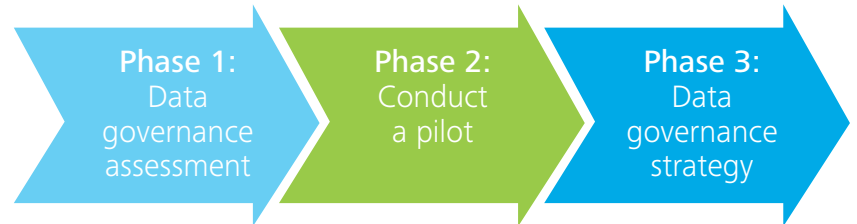
TBS carries out assessments of management performance annually. Organizations are assessed against various Areas of Management and are rated based on an assessment scale.

The Data Agenda – 3 phases to governance

Like any enterprise-wide initiative, the approach for implementing the Data Agenda must be carefully considered. Starting small and demonstrating value early is critical. Successes should be showcased to the rest of the organization to generate excitement about the possibilities. Once they see the Ferrari, everybody wants a ride.

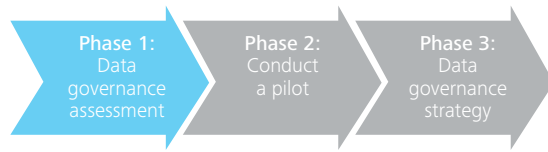
There are many activities, competencies and capabilities required to successfully extract maximum value from your data. Many of these cross multiple streams and are inherently interrelated, making navigation difficult and stressing the need for governance and a carefully conceived strategy.

Implementing the Data Agenda is a three-phase process that allows for flexible resource commitments and demonstrates incremental value to the department.



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Phase 1 – Data governance assessment

The data governance assessment is made up of a capabilities assessment and inventory of data problems that need to be solved. To move the Data Agenda forward, it's important to understand the department's data challenges and articulate them clearly to stakeholders. The key steps of the data governance assessment phase are outlined below.

■ Identify data domains

A data domain is set of related data that may be managed across various departmental programs and/or branches. For example, a department's grants and contributions (G&C) client may deal with multiple program areas while G&C client data may represent a specific data domain for the department. Understanding data domains helps you begin to break down the data silos that exist within a department. For example, how many different groups and different versions of contact information currently exist for one particular G&C client?

■ Identify data pain points

Through a limited number of targeted interviews, you can begin to identify and prioritize data pain points for your department, which will help stakeholders understand the need for the Data Agenda. Prioritization should be based on the risk of leaving the pain point as-is versus the value of addressing it. Risk and value measures can be tied to specific departmental needs and based on such elements as the department's corporate risk profile, Report on Plans and Priorities (RPP), and Management Accountability Framework (MAF) results.

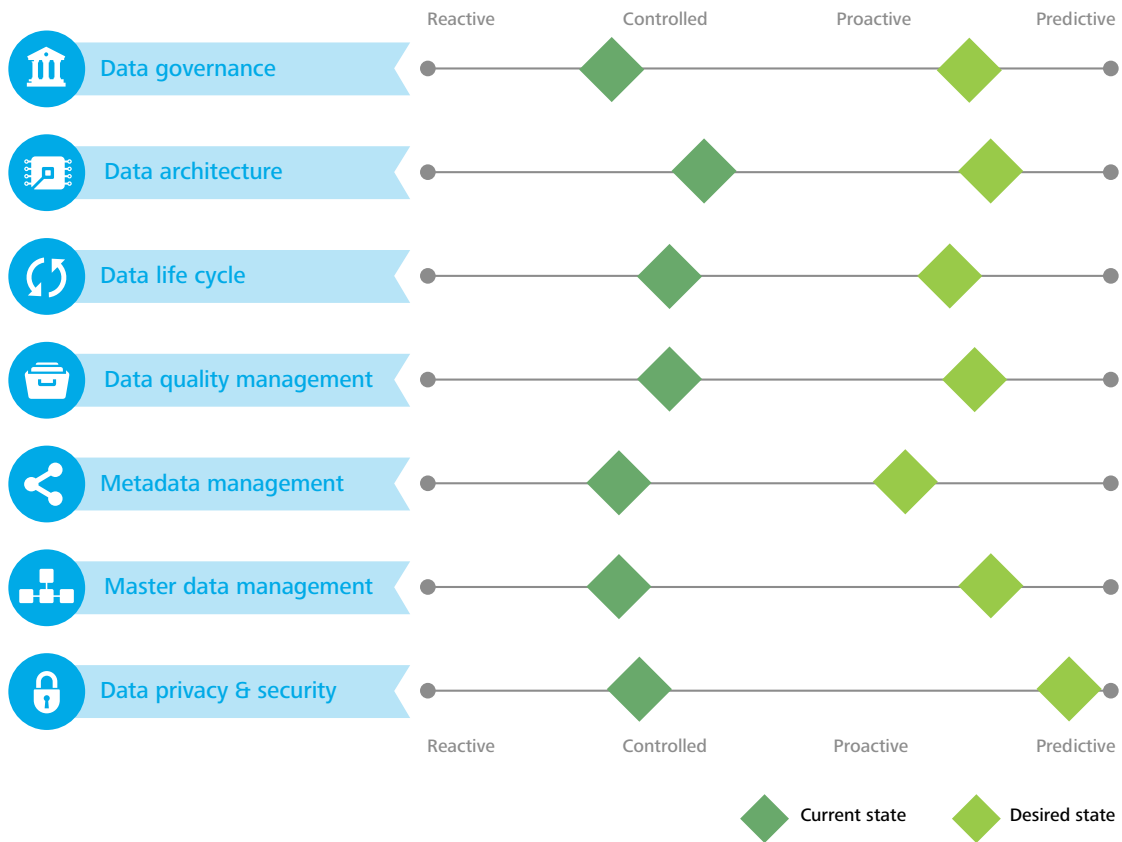
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Maturity of data value capabilities

Data value capabilities are a set of disciplines that depend on data governance to ensure their value is realized. Each discipline is related to the others, with governance binding them all to required departmental accountabilities.

In addition to a departmental maturity assessment, maturity can also be measured for each data domain. This process will track progress as individual domains are addressed through either the pilot or the strategy (see following sections).

A current state assessment of the maturity of the department's data value capability provides a baseline for measuring the Data Agenda's progress over time.





Phase 2 – Conduct a pilot

Data governance touches all aspects of the organization and is a new concept for most departments. As such, it requires a strong change management agenda. It's important, however, to start small and not try to "boil the ocean." At the same time, you must ensure that value can be shown early and tangibly. Based on the data governance assessment in Phase 1, one data domain should be selected for the pilot. The pilot will include the execution of data governance activities (key roles and responsibilities as defined below), which will allow for the further refining of future state targets and the data governance strategy.

A data governance operating model, although it evolves and formalizes over time, is composed of two key principles:

- **The data governance lead/office facilitates data governance in the department**

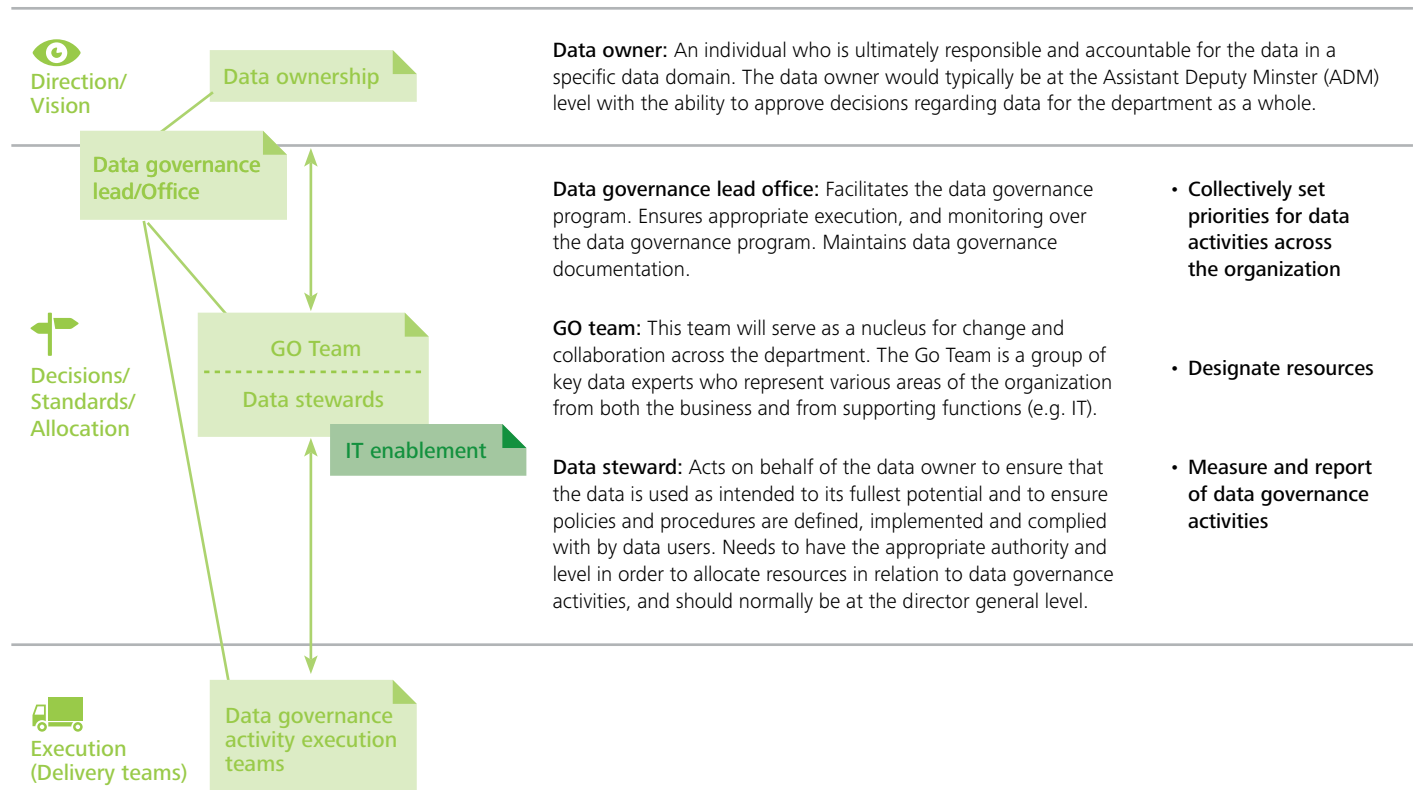
The office facilitates data governance activities but does not "own" or make decisions on the data. Initially, the office is likely to be one individual who will act as project manager for the pilot and throughout development of the data governance strategy. The data governance lead should have significant authority and be independent of any particular data domain. Likely candidates may be found in the department's current enterprise reporting or data quality offices.

- **All data is an asset owned by the business**

Data ownership, in the context of data governance, confers responsibility and accountability for that data. Ownership enables resources to enact standards, guidelines and processes (e.g., change control) and to make and implement important data-related decisions. Ownership, in its basic form, involves data owners, data stewards and a data governance operating team (GO Team), composed of data stewards and other key advisors.

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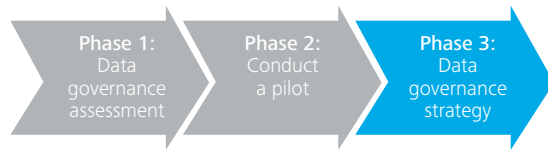
Data governance – Conceptual operating model



The “GO Team” is the initial mechanism for launching and driving the Data Agenda. Given its critical role, it’s important to get the team right by understanding the departmental environment and culture. As members of the GO Team must have the authority to make decisions and approve data governance activities, it’s recommended that they be at the director general level. Given the large size of many departments and the extent of different data types, the GO Team only needs representatives from some of the most important data domains, as determined during the data governance assessment. At this point, it’s important to keep the team small and agile, maintaining the ability to make tangible progress – particularly on the pilot domain’s

identified data pain points. Working through the pilot will help to validate the GO Team’s makeup and allow any changes to be made before the data governance strategy is developed.

The pilot is also the time to determine what level of responsibility should be delegated from data owners to data stewards. If the balance is not right, Data Agenda implementation may stall. Given the authority levels in the federal government environment, it is expected that responsibility for many data decisions will be delegated from data owners to data stewards – that is, to the director general level.



Phase 3 – Data governance strategy

Employing a data governance framework and instilling diligence requires significant and sustained sponsorship from the departmental leader, strong business collaboration and effective culture change management. Additionally, key processes around data issue management and monitoring are required to support execution.

Once an initial pilot has been completed, a data governance strategy should be developed to guide data governance evolution. Assistant Deputy Minister (ADM) level approval to go ahead should be required at this stage, but if phases 1 and 2 have been done right, value will already be demonstrable. Approval for making data governance a permanent component of departmental governance should not be a major barrier, thereby establishing that the organization is committed to the Data Agenda. The following are the key components of a governance strategy and framework:

■ Data governance guiding principles

The concept of data governance is not going to be obvious to everyone in the organization, so defining clear guiding principles upfront will help ensure activities are aligned with common goals. It's important to keep these principles at a high enough level to ensure they are relevant to all stakeholders across the enterprise.

■ Data governance operating model

The data governance operating model refers to how data governance actually works. It should include an organizational structure, roles and responsibilities, an interaction model, standards and processes. The operating model should be reviewed for efficiency and effectiveness on a periodic basis: it will be the ongoing mechanism for operationalizing data governance. Typically, there are short-, mid- and long-term data governance operating models, and each evolves as the governance culture matures.

■ Data governance reporting and compliance

This is essential for monitoring data governance performance and continually improving enterprise data quality. Metrics should be clearly defined, and they should provide consistent, periodic measurement standards for data quality, compliance with data governance policies and standards, and the overall performance of the data governance organization.

■ Data governance tools

Various tools may be required to support the data governance strategy. These may be designed for data profiling, data quality monitoring, workflow, data integration and more.

Employing a data governance framework and instilling diligence requires significant and sustained sponsorship from the departmental leader, strong business collaboration and effective culture change management.

Data governance processes

These processes direct how data governance policies and procedures are created, modified and implemented. They will become part of the go-forward data governance “playbook” and may include processes for change requests, compliance and exception reporting, issue resolution, etc. These need to be clearly defined, established and tested across the enterprise. Areas where business processes conflict with data governance processes should be identified and suitable recommendations made to address and mitigate any impacts.

Change management and communications

The implementation of a data governance strategy will change employee behaviour and will require a cultural shift. It’s therefore important to fully understand the culture you hope to change. A communications plan will be required to enable and drive the culture shift, one that takes employee issues into account while creating excitement and “buzz” around what data – as a valued, governed asset – can accomplish across the organization.



Executing the governance strategy for long-term data governance success

Once the governance strategy is developed, it's time to implement the Data Agenda as a long-term data governance solution. In a sense, much of the work has been done. If phases 1-3 have been successfully executed, data governance should already be largely embedded – or ready to be embedded – in your policies, systems and corporate culture, and the effectiveness of the solution has been clearly shown.

At this point, the main challenge is staying on track and on target. Big Data isn't going away, and the sheer scope of government data stores, both those that exist and those that are multiplying every day, make managing data – and leveraging it to the public good – one of the Canadian government's most pressing concerns. By implementing the Data Agenda, your organization can take the lead in that long-term process while solving the data issues plaguing so many government departments today.

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Designed and produced by the Deloitte Design Studio, Canada. 13-3516