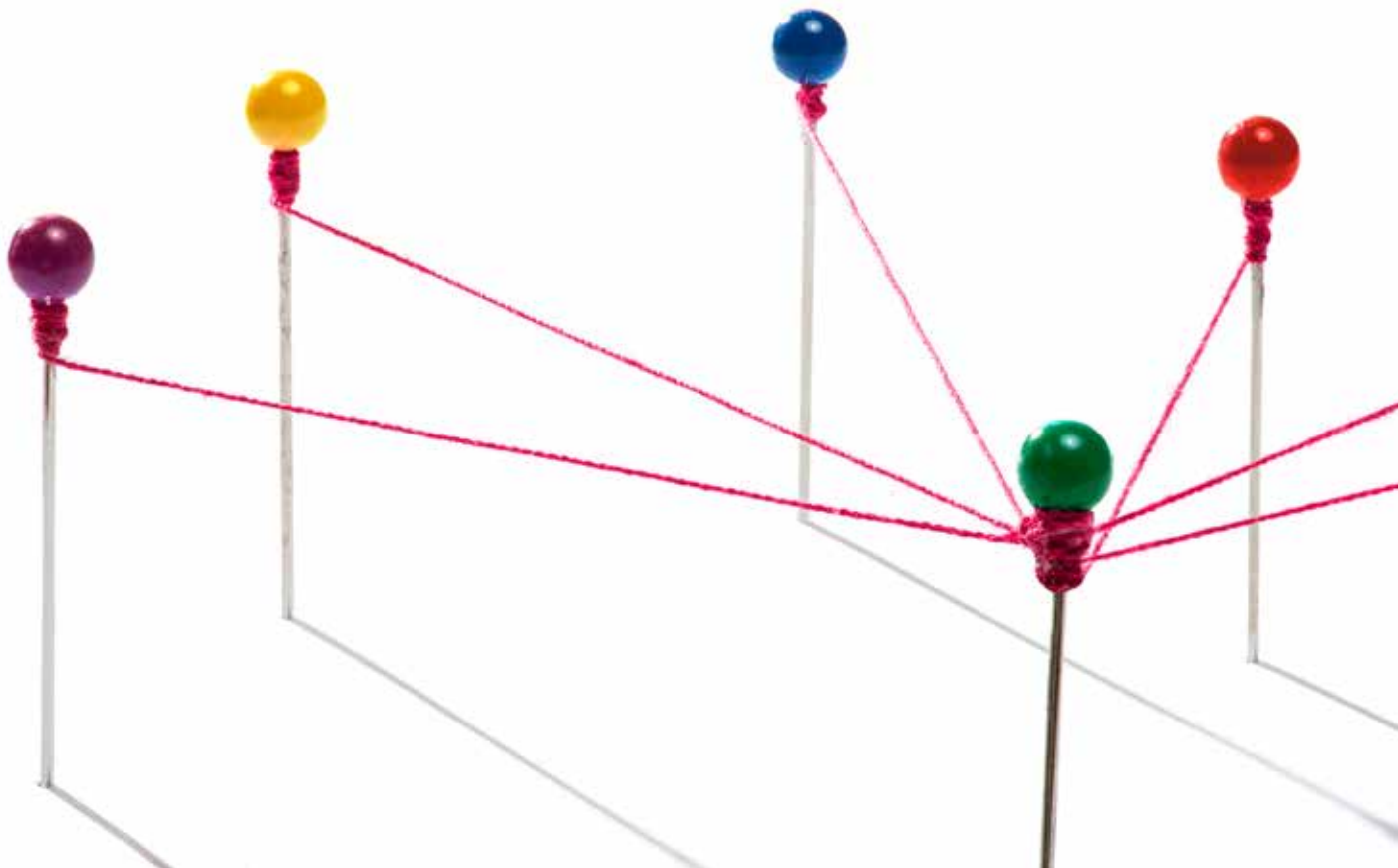


Thriving in the age of data

Why Canadian banks
need a central data authority



Content

Introduction: The age of data	1
Making the case for a central data authority	3
Data circulatory and immune systems	6
How to fast track a central data authority	8
Planning for the future	12

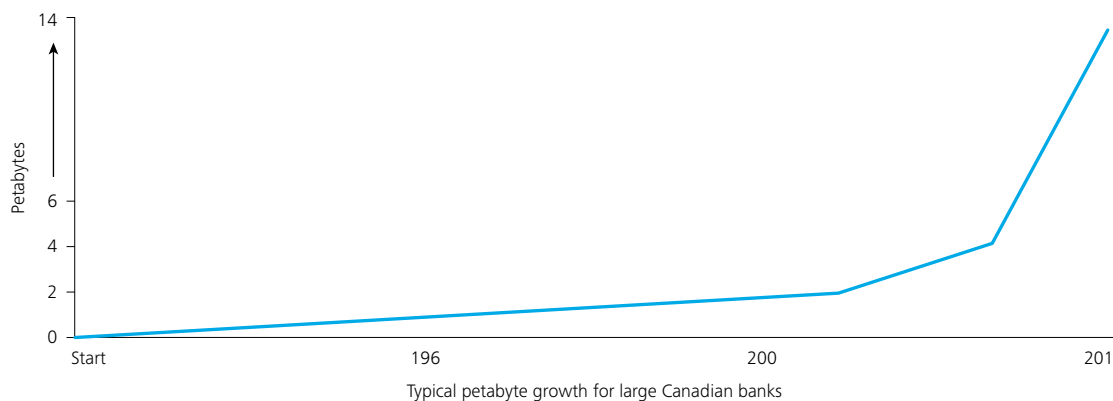
Introduction: The age of data

Just as blood is the life force of an organism, data is the life force of a bank. For a bank to flourish and grow, data must flow seamlessly through its products and lines of business (LOBs), not only to support growth strategies but also to meet ever-expanding regulatory and legal mandates.

Yet harnessing and maximizing the value of data gets harder as data volumes grow. In fact, over the past ten years, most financial service institutions (FSIs) have discovered that the data they use to run the bank, make decisions and deliver future strategies is not sufficient to meet either their profitability targets or their regulatory requirements.

This underperformance is partially caused by the uncontrolled sprawl of data. A Deloitte study in October 2012 showed that Canadian banks created more data in the past five years than in the previous 60. As social media, mobile applications and other advanced technologies and services continue to proliferate, those volumes will only grow exponentially.

Of course, data sprawl is not the only cause of data underperformance. Another cause is the silo approach banks adopted to deal with regulatory requirements. Rather than creating an integrated system for complying with regulations such as SOX, the Basel accord and privacy regulations, many banks have taken a haphazard approach, resulting in disconnected data repositories. As a result, Canadian banks find themselves playing catch-up with global leaders who have already evolved from traditional silo-based approaches to an integrated, enterprise-wide data system.



To improve information oversight, financial reporting and value generation, banks need to rethink their approaches to data. This requires them to ascertain the real value of their data assets.

By embarking on programs to leverage both internal and external information sources, some global banks are realizing measurable benefits. For example, using social media and text analytics from customer calls, some banks can now offer:

- Student loans to clients before their children begin attending college.
- Pre-approved car loans for new drivers.
- Target marketing which provides clients with easy-to-use instructions on opening an education savings account delivered in a pink or blue envelope (according to the new-born's gender) the moment the child is born.

By further supporting more 'art of the possible' mechanisms like the above, analytics also enables banks to effect major process transformations designed to improve financial performance, compliance and operational efficiencies.

Unfortunately, Canadian banks have yet to realize the full advantages of a data analytics strategy. In some cases, the lack of an analytics centre-of-excellence has prevented banks from meeting the expectations of regulators, stakeholders and customers. In others, promising business intelligence (BI) projects have failed to deliver true business insights. While these projects forced data out of the banks' "clogged arteries," massive data proliferation has resulted in systemic weakness.

Whatever the reason, banks are coming to understand that today's data and delivery systems are in poor health. In light of the rising costs associated with data management and regulatory compliance, both the board and senior executives expect better insights from data. To improve information oversight, financial reporting and value generation, banks need to rethink their approach to data. This requires them to ascertain the real value of their data assets. Just like a bank's hard assets, its data assets possess a monetary value that must be tracked and properly managed as data moves through the bank's systems.

Of course, these enhanced activities require an advanced level of governance such as a Central Data Authority (CDA) led by a C-level executive, the Chief Data Officer (CDO). The CDA would be a group of individuals capable of directly improving bottom line performance by materially raising the value of a bank's data assets. Rather than acting as a central owner of all data, the CDA's role would be to help ensure data flows through the organization in a transparent, timely and consistent way. By finding a new way to partner with IT, the CDA can also help improve data delivery and protection, ultimately developing a 'circulatory and immune system' that enhances data incubation and health.

Making the case for a central data authority

Data, like money, is difficult to manage. All too often, it is not as available, reliable, valid or consistent as the business needs it to be. With a CDA, however, banks gain the ability to govern, monitor, manage and control their data assets in a way that drives profitable growth.

By embedding analytics into its operations, a CDA can provide the bank with greater assurance regarding data quality, controls and governance. This positions the bank to better leverage its data to transform decision making, drive business strategy and improve performance.

At the same time, the CDA acts as a data 'circulatory and immune system' capable of combatting threats to its health and eradicating common value inhibitors, such as:

Silo behaviour

No collaboration across business lines compounded by systems that support the silo mentality.

Most banks know they have terabytes of data, but when they need a regulatory report, a 360° view of the customer or a dynamic financial analysis, they have to mine and scrub data to get the answers they need. At times, millions of dollars are spent only to find different results, inconsistent numbers and numerous reconciliation errors.

Unclear accountability for data

No authority in charge of resolving the data challenges.

Many banks lack either a decision maker or a central office in charge of managing the entire data cycle. It can, therefore, be difficult to get answers to key questions, such as who gets access, through which systems and with what level of quality?

Data assets not managed

Lack of enterprise process to govern, manage and materially increase the value of data assets.

The need to organize how data flows through the different business lines, from the operational levels to the tactical and strategic, is essentially to extract the full value for data assets. Unfortunately, banks often fail to leverage enterprise-level data communities and data experts (stewards) when designing these information flows. This can lead to processing errors, data inconsistencies and reporting missteps that interfere with a bank's ability to make rapid, informed and compliant business decisions.

The difficulty of controlling and governing data interferes with a bank's ability to make timely and insightful decisions



Overcoming inhibition

Notably, the concept of centralized data governance is not new; Jane Griffin, Deloitte Canada's leader of analytics, first noted the trend in an article back in 2005. Over the years, however, the concept has gained momentum and now encompasses a much broader and deeper consequence for banks: transformation of the decision-making and operating culture through advanced data technologies, management techniques and governance.

Thanks to this vision, the CDA concept promises to change the way banks interact with their data assets. In the past, data value was limited due to a lack of collaboration across business lines (value inhibitor #1). Banks struggled to take stock of all the data at an enterprise level: where it was, who controlled it, how good the quality was, how much it cost, where it was used and how important it was to the bank. Did the bank rely on it to run the business, make decisions and/or develop growth strategies? Who was accountable for ensuring its accuracy? What data projects were in progress or planned? By breaking down this silo behaviour, a CDA enables collaboration across business lines and builds a common understanding of the value data brings to the bank.

The second issue banks struggled to overcome was the lack of an authority capable of resolving data challenges (value inhibitor #2). This absence in particular came into play as banks attempted to comply with the increasingly stringent regulations introduced by SOX and the Basel directives. By treating compliance with these regulations as a cost, many banks initially adopted only the minimum regulatory requirements. Over time, however, it became clear that banks could only achieve appropriate regulatory compliance and better risk management by approaching compliance as an opportunity to create value – especially from a data perspective.

This realization paved the way towards the adoption of a broader and more strategic approach to data governance, ultimately giving birth to a more radical and direct model: the CDA led by a C-level executive, the Chief Data Officer (CDO). Currently, the five largest US banks by revenue have a CDA led by a CDO and Canadian Schedule I banks are following suit, with three actively recruiting for a CDO position.



This movement left only one challenge to address: the lack of an enterprise process to govern and manage data assets (value inhibitor #3). Even regulators have acknowledged the need to change the data value proposition by

improving data processes, monitoring and reporting. In September 2012, the Basel Committee on Banking Supervision published guidance for Risk Data Aggregation and Reporting which noted that:

Improving banks' ability to aggregate risk data will improve their resolvability. For global systemically important banks (G-SIBs) in particular, it is essential for resolution authorities to have access to aggregate risk data... For recovery, strong forward-looking data will help banks and supervisors anticipate problems ahead. It will also improve the prospects of finding alternative options to restore financial strength and viability when the firm comes under severe stress.¹

More than just installing a data authority figure, banks are realizing that this requires them to transform their behaviour and adopt a change mandate supported by appropriate organizational processes. The culture of information use needs to change to encourage greater collaboration, contribution, communication and co-creation of this valuable enterprise data.

To embed new behaviours and to break down silo behaviour the CDA needs to foster data governance as a collaborative way to ensure data performs for all business functions, not just the ones that originate it. Everyone

– from the producers and owners of the data to the executive decision makers – needs to understand their role and responsibilities in providing accurate, reliable, valid data to others in the bank when they need it and how they need it. This type of governance operating model is the key to eliminating the third value inhibitor.

By eliminating value inhibitors through collaboration, authority and governance, banks can build healthy data circulatory and immune systems, positioning them to better respond to regulatory guidance and make decisions that drive profitable growth.

By eliminating value inhibitors through collaboration, authority and governance, banks can build healthy data circulatory and immune systems, positioning them to better respond to regulatory guidance and make decisions that drive profitable growth.

¹ BCBS 239 Principles for Risk Data Aggregation, January 2013

Data circulatory and immune systems

If the “carrot” associated with building a CDA is the ability to enhance profitability, the “stick” is the possible risk exposure. Increasingly, failure to properly govern data leads to fees and penalties. By enhancing compliance, a CDA reduces this risk, improving relationships with both regulators and bank supervisors.

In many ways, this makes a CDA similar to the immune systems in our bodies. On the one hand, it enables the proper flow of data across the organization, unblocking previously clogged arteries. On the other, proper monitoring and control mechanisms allow it to continually sense and eradicate threats to the bank’s performance. As a result, data circulation improves across the entire enterprise.

To run effectively however, a CDA requires certain characteristics: data needs to be owned by the business, systems must be centralized, and users must have access to all information sources – including unstructured data.

Data ownership is a business role

To provide a healthy cycle for data, banks need to identify owners for each data domain, as well as for the community that originates and then consumes that data. Rather than relegating data management to the IT team, the business must take ownership of the data it generates and maintain accountability for how it treats data assets.

Once data owners are assigned, they should become accountable for the data throughout its entire lifecycle – from inputting it at its source, maintaining and updating it, determining how the information can be used, identifying its customers and retiring the data once it’s obsolete. In this way, data quality is maintained and the “blood” flowing through the system remains healthy.

Connecting data through system centralization

For data to deliver the insights needed to drive better business decisions and contribute results back to the enterprise, it must be consolidated across systems and accessible to users across the enterprise. Data sources must be centralized to provide consistent results and data ownership clarified to enhance its quality.

If banks manage only a sub-set of their enterprise data, they end up with only a partial view of customer behaviours, needs and patterns, which prevents them from providing a seamless service experience.

However, by connecting information about a customer’s entire family behaviour, banks can gain unprecedented insight. For instance, they might find that one spouse did not pay the latest mortgage bill, the other spouse recently asked for a new credit card and their child is applying for a student loan. Based on this family’s long-term loyalty and history, the bank can use this information to determine if it is time to offer a second mortgage to these customers so they can use the equity in their home to meet their new financial needs.

If banks manage only a sub-set of their enterprise data, they end up with only a partial view of customer behaviours, needs and patterns, which prevents them from providing a seamless service experience.

Hidden insights in unstructured data: The art of the possible

Beyond identifying data owners and consolidating existing data systems, a CDA can provide the bank with an opportunity to explore data usage models and improve the value of data through advanced analytics. For instance, unstructured data – such as e-mails, scanned documents, online conversations, customer interaction logs, video and audio files – can often provide a level of customer insight that banks are only beginning to mine.

For Banks, there is a wealth of data coming from different data domains that are now managed independently. If they were managed interdependently they would provide new predictive powers to read into the future. For example, while many banks have separated areas dedicated to risk, finance, customer and workforce analytics, the Banks that create a central intelligence unit to read all the signals that come from a combined data ecosystem learn how to read their business environment faster.

By properly analyzing this ever-growing amount of data, including unstructured content, the bank gains an opportunity to detect customer signals and anticipate product and service needs, even before the customer considers them. This type of proactive service can only help enhance customer loyalty and contribute to bottom line performance.

The benefits of a data circulatory system

All living entities require a system to carry nutrients and oxygen to the organs. The same can be said for banks. When data flows effectively, people are empowered to make the right decisions and act upon their insights. When data is governed and streamed as efficiently as a circulatory system, organizations can capture the insights they need to nurture the business. And when valid, accurate and consistent, it can provide key decision makers with relevant and timely interpretations, enhancing its organizational value in the same way proper nutrients and oxygen enhance blood circulation.

A central data authority provides a circulatory system for your bank, bringing nutritive data to the brain and limbs of your organization.

By creating processes and controls to govern and manage data through a CDA, the bank gains a data circulatory and immune system that functions as a data service centre – one that properly structures the entire data cycle and recognizes the different data needs of each business line and function. As a result, the data circulatory system approach enables the bank to:

- Meet regulatory burdens and the high cost of compliance.
- Improve the customer experience across lines of business to enhance revenue growth.
- Realize operating efficiencies and effectiveness by reducing the cost and risks associated with using and managing data.
- Enhance decision making by unlocking the hidden value of data and using data to predict future outcomes.
- Create an enterprise-wide sense of urgency and focus around the importance of data for every business line.
- Assume business ownership for controlling and managing data by moving it beyond IT's sole domain.
- Break down silos between business lines as each unit comes to understand how they all contribute to the data cycle.
- Reduce costs by increasing the efficiency of data creation, distribution, access and archiving.

How to fast-track a central data authority

In 2006, an Aberdeen study revealed that companies defining and implementing a data governance plan struggle most with the ineffective communication of policies and procedures.

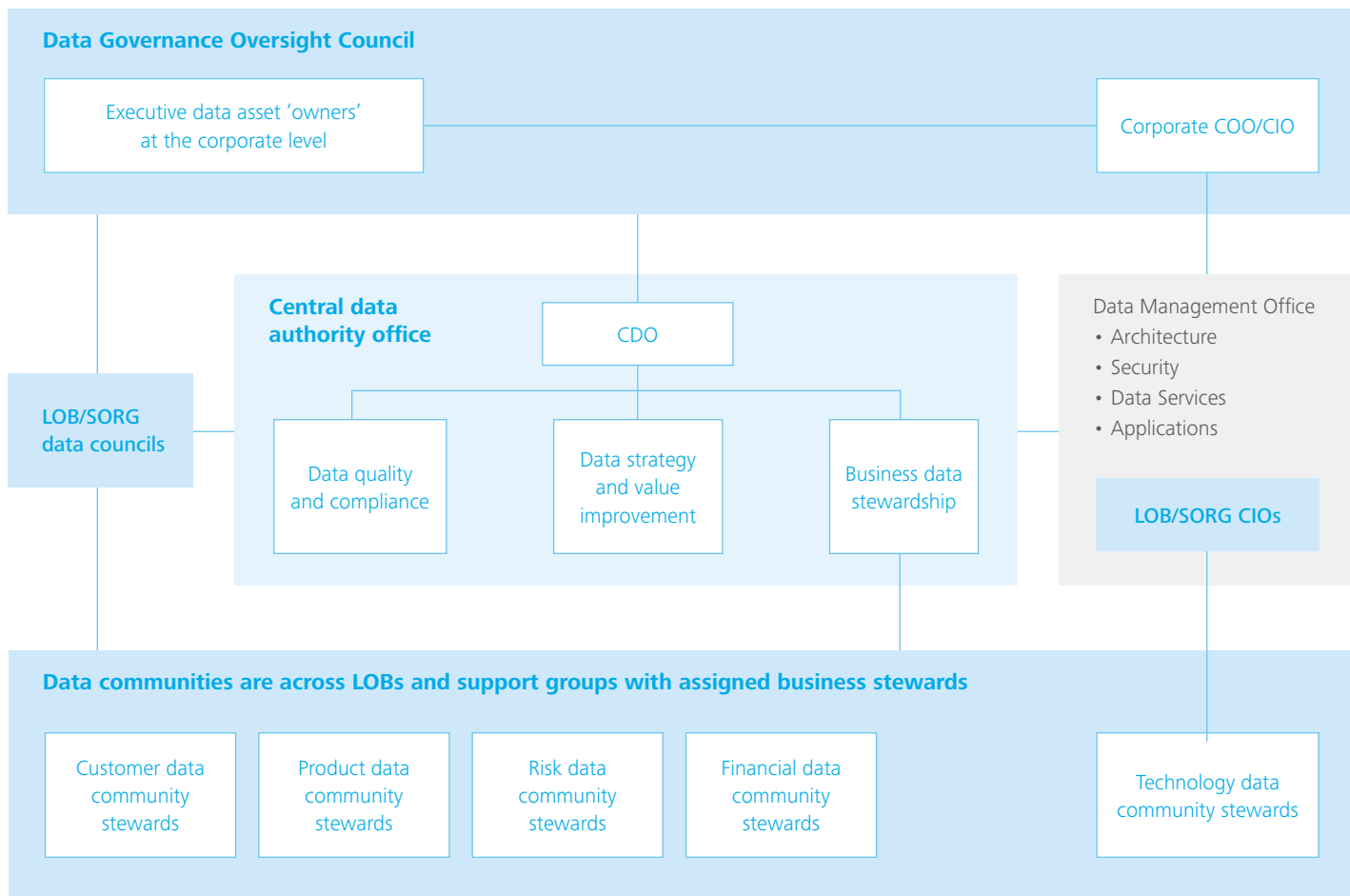
This simply proved the obvious: business is not just about process and technology. It is also about people. When it comes to data governance, the real challenges tend to be anticipated costs, lengthy integrations and difficulty in communicating the value of the initiative.²

In practical terms, this means companies are likely to face difficulty obtaining the requisite buy-in from business lines and functions to enforce any data governance plan, even if they have a streamlined data architecture and appropriate processes and policies in place. To succeed, this means a CDA must drive the stewardship, acceptance, adoption and connectivity of the data circulatory system before the bank can build an enterprise-level governance system. There are several critical steps banks must follow to achieve this goal:

- ✓ **Step 1: Uncover your data pain points.**
Before you can resolve critical data governance issues, you need to know what those issues are. Begin by identifying your data users across the organization, including within IT, to understand both the data demands they have and pain points they are experiencing.
- ✓ **Step 2: Customize the organizational design.**
The data governance structure you adopt needs to align to the way your organization uses, shares and streams information. To design the optimal solution, use your current general functional model as a baseline, including enterprise architecture and IT, to identify information gaps and determine how to consolidate data flows.
- ✓ **Step 3: Test.**
As with most major initiatives, the first model you select may not be the best. Take the time to test various organizational design models and compare the pros and cons of each, carefully gauging their capabilities to meet the demands of the enterprise.
- ✓ **Step 4: Design a transition plan.**
Once you settle on the optimal organizational design, you need to design a plan to guide your transition from your current organization to the new structure.



² Aberdeen Group, 2006. "The Information Governance Benchmark Report: A Needed Strategy for the Enterprise Backed by Viable Solutions."



By including a Data Governance Oversight Council, the CDA can connect the data needs of the organization to its various data communities and data stewards.

There is also a series of operational considerations you should take into account when building a CDA.

- Define how to handle the existing data situation and make significant and quick progress.
- Determine a business-focused enterprise data strategy, identify data ownership and stewardship, and plan for data asset value improvement and innovation.
- Identify how the CDA would work with the existing IT architecture, data management and application development environment.
- Select a strong internal sponsor as CDO to drive the stewardship and accountability required to build and sell the business case to the LOBs and functions.
- Use “art of the possible” thinking to design your CDA model for the future, taking cloud and big data considerations into account.
- Understand the organizational model your business must structure and ensure the CDA is aligned to the same model: central, federated or decentralized.
- Encompass a voice for every business line and function, either as data communities, users and stewards or as decision makers inside the data councils.
- Find change champions at all levels of the organization who support the CDA model and participate at a grassroots level, evangelizing the importance of data throughout the enterprise.
- Design an entry point to the CDA that listens to the voice of the different functions and understands each data domain: finance, risk, product, customer, workforce.
- Involve data management specialists who can share input about the data architecture, security, applications and services.
- Keep both IT and the business at the top in the Data Governance Oversight Council, so both sides remain liable for data governance risk and value.
- Write a comprehensive set of policies and procedures in business language, and communicate thoroughly at the enterprise level.
- Measure successes through tracking data quality improvements, valuing data efficiency benefits and gathering business feedback on their ability to deliver on business strategies through access to relevant information and insight.
- Approach all of the business lines and functions to include their needs in the CDA model; do not overlook any part of the company.



As all organs contribute to the circulatory system, all the bank's functions participate in the health of data. For example, the Human Resources function likely holds critical employee and workforce information that can be connected to customer information for valuable insights in terms of loyalty and fraud prevention.

Beyond these considerations, it is essential to also review existing group and line of business policies and processes as they relate to governance, risk management and business operations so they can be either aligned or changed to handle the emerging data agenda.

To get started, it makes sense to develop a strategy to establish the CDA, chart out quick wins and set the agenda for the senior executive team. Lay out the roadmap to institutionalize data governance, data management and advanced data analytic incubation, and then track data performance improvements towards profitable growth.

To get started, it makes sense to develop a strategy to establish the CDA, chart out quick wins and set the agenda for the senior executive team. Lay out the roadmap to institutionalize data governance, data management and advanced data analytic incubation, and then track data performance improvements towards profitable growth.



Planning for the future

When it comes to planning and deploying a CDA and CDO, timing is everything. The longer it takes Canada's banks to develop a CDA, the greater risk they face of not meeting growth targets, losing market share and engaging in costly regulatory compliance efforts.

Of course, changing culture, processes, infrastructure and data accumulated over decades is not something that can be accomplished overnight. A strategy is required under the direction and oversight of the board and senior executives, one focused on establishing the CDO role as a critical first step.

By assuming accountability for developing a data performance strategy, the CDO can inject the required urgency, risk appetite and priority into the data governance initiative. Structured effectively, this strategy should leverage the bank's lines of business, support organizations and IT data management capabilities to define a group policy and consolidate governance resources.

In addition, the strategy should explain how the bank's evolving approach to data will affect its operating model and growth strategies, how data governance will work in the short term and what goals need to be established and delivered by when.

As of October 2012, Gartner Research found that less than 2% of 300 organizations surveyed had a CDO.

However, over the next five years, enterprises with a high information element in their core value-creating activity will experience a rising need for a single corporate leader of information policy and strategy. The need will be more acute in those industries where the effect of regulation compels action on information transparency, both for compliance purposes and for e-discovery to defend against legal attacks.

Gartner concludes that boards and executive committees, weary of faddish C-title proliferation, will resist suggestions of a new appointment until the case is proven. Most CEOs will prefer a "wait and see" approach – hoping that the need for an information leader and the framing of that role will be clarified by others.

This likely means that, despite business news noise, the trend towards the establishment of a CDO will experience steady, not explosive, growth. Only a minority of firms will trail blaze the development of a C-level information leader over the next five years. For those firms, however, the opportunity seems obvious, as their CDOs will gain the ability to make a disproportionate contribution to organizational advancement.

In essence, a central data authority, led by a CDO, will ensure these companies know when, where and how to improve the performance of their data assets to drive and support business growth long into the future.

The emerging central data authority office is where existing and new data governance, quality and enterprise steward resources and capabilities are consolidated for concentrated impact.

Our team

Gord Kilarski

Director, Enterprise Risk Services
416-601-5677
gkilarski@deloitte.ca

Silvia Gonzalez Zamora

Senior Manager, Consulting
sigonzalezzamora@deloitte.ca
416-874-3437

Angie Ng

Senior Manager, Enterprise Risk Services
416-643-8299
angieng@deloitte.ca

Dave Brassor

Director, Consulting
dbrassor@deloitte.ca
416-874-3150

Christina Howitt

Senior Consultant, Enterprise Risk Services
chowitt@deloitte.ca
416-643-8906

www.deloitte.ca

Deloitte, one of Canada's leading professional services firms, provides audit, tax, consulting, and financial advisory services. Deloitte LLP, an Ontario limited liability partnership, is the Canadian member firm of Deloitte Touche Tohmatsu Limited. Deloitte operates in Quebec as Deloitte s.e.n.c.r.l., a Quebec limited liability partnership.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee, and its network of member firms, each of which is a legally separate and independent entity. Please see www.deloitte.com/about for a detailed description of the legal structure of Deloitte Touche Tohmatsu Limited and its member firms.

© Deloitte LLP and affiliated entities.
Designed and produced by the Deloitte Design Studio, Canada. 13-3516