Informatica

The Data Strategy Playbook

A CDO's practical guide to delivering business value

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Foreword

This is, without doubt, a very exciting time to be a chief data officer.

As the pace of industry disruption and company transformation accelerates, ad hoc initiatives and one-off projects around data and analytics aren't enough for sustainable success. You need a data strategy that will provide a foundation for the future, one that will democratize data and build a strong culture where every employee thinks about data as a strategic asset.

Creating a data strategy that is mapped to business goals, process, and outcomes is one of the most important activities you can do to improve business performance. It helps you manage not just regulatory risk but also supply-chain disruption and customer churn. It also helps control costs and improve operational efficiency. And it helps manage revenue, whether through increased customer wallet share or by capitalizing on new product and market opportunities.

A well thought-out data strategy is also one of the best ways to demonstrate the value that you as the CDO deliver to your organization. It helps you clearly articulate why what you do is important to the overall business, line-of-business functions, and individuals, which is critical to changing culture and behavior. With a strong data strategy, the office of the CDO is more likely to be recognized as a mission-critical function, comparable to sales and marketing, finance, HR, and operations.

At Informatica, we have been helping customers use their data to improve business outcomes for over 25 years. Partnering with companies across industries and around the world, we've learned a lot about what works and what doesn't. So, we created this playbook to help CDOs like you create data strategies that will deliver business value for their organizations.

Jitesh Ghai
SVP and GM, Data Management
Informatica

Creating a Data Strategy

Chapter 1 – Identifying Business Value Opportunities

What Is a Data Strategy?

We've seen a lot of documents with the words "Data Strategy" on the top. Only a few have actually reflected this simple definition:

A data strategy and operating model for execution defines how an organization achieves specific business goals through the strategic use of its data assets.

A data strategy supports the overall business strategy by mapping data to business processes used to run day-to-day operations; analytics used to support decision-making; the technology architecture supporting operations and analytics; and the people and teams accountable for governing and managing data. It's ultimately about understanding the relationships between data, processes, technology, and people, so your organization can maximize its ability to generate the greatest business impact from data.

Most companies talk about managing and leveraging data—treating it as an asset—to deliver more business value. The conversation is usually at a high level, such as:

- **Accelerate all digital transformations.**
  Making faster, better decisions that execute business strategy.
- **Improve business agility.**
  Allowing the business to pivot fast in response to change.
- **Become a customer-centric company.**
  Using data to better understand customers.
- **Seize new opportunities.**
  Deploying disruptive business models and exploiting new technologies.

→ **Focus resources on value creation.**
Streamlining and automating processes to free up talent.

→ **Earn continued commitment from business partners.**
Promoting the endgame while showing value every step of the way.

Most people will agree that better data can help drive the success of any one of these objectives. However, when it comes to getting resources and support for data governance and management activities to successfully execute your data strategy, you need to have conversations with business leaders that speak to their specific goals and initiatives. Some examples include:

Value Opportunities	Sales & Marketing	Finance	Procurement	Development & Operations	Human Resources
Revenue	Increase customer satisfaction and repeat business	Decrease sales outstanding	Decrease lead time and increase quality	Speed new product and services introduction	Decrease time to fill open positions
Cost	Decrease cost of customer acquisition	Increase return on assets	Increase spend under management	Increase overall equipment effectiveness	Increase training effectiveness and efficiency
Risk	Decrease customer churn	Increase forecast accuracy	Increase contract compliance	Decrease supply chain disruption	Decrease voluntary turnover of high-potential talent

As the CDO, it's your responsibility to translate the vision for the data strategy into unique messages that different teams and stakeholders will respond to. That's why it's critical to first understand line-of-business owners' perspectives, issues, goals, and initiatives, so you know how to map your data strategy to their business value opportunities. And it's important that you speak in their language and about their issues if you want to get resources for executing the data strategy.

While the messages must be tailored, the overarching vision must provide clarity on how the different organizational functions fit together to create and capture business value, as well as positioning stakeholders as joint leaders of the company's success. In this way companies can adopt a business-led and technology-enabled approach, where business and IT organizations are collaborative partners.

To influence day-to-day activities, the vision should be simple enough for leaders at every level of the organization to understand, communicate, and remember—and augment logical reasoning with an emotional reason to believe. That's how you get buy-in and shift the response from "I have to" to "I want to." What will you do when you aren't spending 80% of your time searching for data? How will you feel when your marketing campaign has the highest ROI in company history? What will the CFO say when you save the company millions of dollars in procurement costs?

"For us, data is capital. It enables us to be proactive in responding to market developments and optimize performance. However, getting complete, clean data on which to base business decisions requires an effective information-management strategy."

Andrea Furegon
Head of Digital Innovation
Coop Alleanza 3.0

Creating a Data Strategy

Chapter 2 – Mapping Business Outcomes to Processes, Analytics, and Data

Every person in an organization uses data at some point during the day to make decisions and complete tasks, but most people understand data value only in the context of their individual activities. The ability to use data to improve business performance requires transparency across the end-to-end value chain of data use. Consequently, mapping data to the analytics used to make decisions and the business processes that support the execution of activities that impact business outcomes is a critical step to data strategy development.

You need to understand what analytics are used to support decision-making related to the business goal. What data is used for analysis? What are the sources of the data? How is it consolidated, cleansed, and enriched? Which dashboards, reports, and machine-learning algorithms use the data?

You also need to understand what business process are related to the business goal. What data is used in the processes? What systems store the data? How does data flow between systems and processes? What are the dependencies and integrations? What parts of the process are manual? How can better data help automate the process?

For example, sustainable and ethical sourcing is becoming a brand differentiator and source of revenue growth. Capitalizing on this opportunity requires the ability to map the use of data to the processes and analytics that can provide transparency into the source of materials, the actions of suppliers, and how companies are governing their supply chain. Unilever's Sustainable Living Brands, for instance, are delivering 75% of the company's growth. Alan Jope, CEO of Unilever, commented, "Purposeful brands consistently outperform other brands; they are both faster growing and more profitable."[1]

This table provides examples of how to map the value chain of data, which you can use to demonstrate how data strategy will support business strategy and specific processes and analyses that are required by business initiatives:

"We need to correlate whether all the transactions are coming from the same customers. We can start to develop this comprehensive, 360-degree profile. If we understand the identity, then we can engage with the customer in a personalized way."

Vira Shanty
CDO
Lippo Digital

Business Goal	Processes	Analytics	Data
Increase liquidity and working capital	• Financial close • Accounts receivable • Accounts payable	• Cash flow & volatility • Invoice aging & disputes • Early payment discounts	Chart of accounts, cost and profit centers, customer, invoice, supplier, purchase order
Increase customer retention & loyalty	• Digital commerce • Order fulfillment	• Renewals & repeat business • On time and complete order rates • Average order size	Customer, product, inventory, delivery, returns, allowances, discounts, supplier
Increase marketing campaign ROI	• Contact to lead • Lead to opportunity	• Customer segmentation • Product affinity • Offer personalization	Prospect, location, demographic, intent, product, channel
Reduce procurement costs	• Source & contract • Requisition & buy	• Global spend by supplier • Off-contract spend	Material, supplier, plant, cost center, buyer purchase order, invoice
Increase overall equipment effectiveness	• Production scheduling • Maintenance & repair	• Availability & performance • Throughput & quality	Uptime, stops, defects, yield, failure rates, sensor, timestamp
Decrease time to fill	• Posting and recruitment • Hire and onboard	• Internal candidate identification • Time to onboard	Skills, performance, posting date, market, pay, hire date, payroll, employee, dependents

Creating a Data Strategy

Chapter 3 – Defining Metrics to Monitor and Measure the Impact of Data Strategy on Business Outcomes

An MIT Sloan Management Review article[2] concluded, "Your KPIs are your strategy; your strategy is your KPIs." By reorganizing people, processes, and technology around KPIs — both individually and collectively—they become central organizing principles for leadership investment in data and decision-making.

How will you measure the success of your data strategy? There is the business outcome itself. But how do you explicitly demonstrate that the execution of the data strategy is driving improvement in the desired business outcome?

Ask yourself, what factors impact the business outcome? Process efficiency? Employee productivity? Analytics accuracy?

And what data-centric metrics impact those previously listed factors? Data accessibility? Data completeness? Data accuracy?

You can think about a hierarchy of metrics that demonstrates the link between data metrics and strategic KPIs.

For example, if your CFO is concerned because the "days sales outstanding" (DSO) KPI has been increasing and it impacts earnings, market capitalization, and credit worthiness, you can show that

- **Accurate inventory data**
  Improves accuracy of delivery-date quotes
- **Accurate shipping data**
  Increases on-time delivery rates
- **Accurate contact data**
  Decreases invoice delivery time
- **Accurate tax data**
  Decreases invoice disputes

In addition to helping reduce DSO, this will also help:

- Increase customer satisfaction and repeat business
- Reduce returns, allowances, and discounts
- Reduce re-shipping and logistics costs
- Increase the productivity of order-entry, accounts receivable, pick-and-pack, and logistics processes

Creating a Data Strategy

Chapter 4 – Mapping Technical Capabilities to Processes and Analytics

Management consulting firm McKinsey and Company found the second-largest challenge companies face is designing data architecture and technology infrastructure[3] that effectively support data and analytics activities at scale. Once you've outlined your initial data strategy projects, you need to determine whether you've got the right technology capabilities to deliver the business outcomes. It's critical to evaluate the depth of functionality, breadth of capabilities, extent of integration, and modularity of deployment.

You may need to do some gap analysis. Do your current capabilities have enough functional depth for your requirements? Is there enough breadth to support multiple business value opportunities? Is there integration across capabilities that will help you reduce cost of ownership?

1. **Data Discovery and Cataloging**
   These capabilities help you find data sources, understand what's in them, and document and categorize data assets. Do you know what data you have across your on-premises and multi-cloud sources? Do you know if a field contains names, credit card numbers, or customer IDs? How easy is it for people to understand where the data in their report comes from?

2. **Data Governance**
   These capabilities help you define and document policies, rules, glossaries, processes, and people. Do you have policies and rules defined for data quality? Data access? Privacy and protection? Can you provide standard data definitions and terminology? How do people know who has ownership for specific data stores or applications? Are there standardized processes and workflow to remediate data issues?

3. **Data Quality and Enrichment**
   These capabilities help you cleanse, standardize, and enhance data to ensure it is fit for use in analytical and operational activities. Is it accurate? Is it complete? Is it consistent across sources? Are there additional fields or attributes that would help drive more value from the data?

4. **Data Integration and APIs**
   These capabilities help you move, combine, and syndicate data across sources, applications, and processes. What are your current data integration capabilities? Can they be used for cloud migrations? Do you need data streaming capabilities? Do you need APIs to exchange data between applications or support application development?

5. **Master Data Management**
   These capabilities help you ensure the quality of the core entities like materials, suppliers, products, customers, employees, and chart of accounts that are used in analytical and operational activities. Is your master data consistent across applications? Can you enforce validation checks at the point of data entry? Are you mastering data within multiple applications or centrally? Can you syndicate master data across commerce channels?

6. **Data Privacy and Protection**
   These capabilities help you implement policies to enforce controls and demonstrate compliance with regulations. Do you know what data you have that is subject to privacy regulations? Can you protect against unauthorized access and cross-border transfers? Can you mask and encrypt to minimize risk exposure? How will you handle data archiving and deletion? Can you fulfil subject-access requests in a timely manner?

7. **Business Intelligence and Reporting**
   These capabilities help you report what happened, analyze why, model what to do, and plan execution. What kind of BI capabilities do you need? Reporting? Dashboards? Excel? Visualization? Budgeting and planning applications? What technical skill level do people need to use the tools? Do reporting and analytics need to be embedded into transactional applications?

8. **Data Science and AI**
   These capabilities help create models of what is likely to happen and automate decision-making and business process workflow. What kind of AI capabilities do you need? Are you planning to use Hadoop or a data lake offering from a cloud provider? How will you operationalize your AI models? How do you demonstrate trustworthiness of output from algorithms and models?

9. **Data Warehousing and Lakes**
   These capabilities help consolidate and store data for use in reporting and analytics. Are you planning to modernize your data warehousing and data environment? Will your architecture be cloud, multicloud, intercloud, or a mix of on-premises and cloud? Will you replatform, rearchitect, or replace as you migrate to the cloud? How will you assess migration readiness and address gaps? Your data strategy should look at all these areas, making sure you're including specific actions to address end-to-end needs.

"Understanding every vehicle globally is core to what we do and to the concept of a connected fleet… To make this connected future a reality, we set out to build a next-generation platform and enterprise data hub."

Christopher Cerruto
VP of Global Enterprise Architecture and Analytics
Avis Budget Group

Creating a Data Strategy

Chapter 5 – Mapping Organizational and Program Capabilities to the Data Strategy

Overlooking the importance of organizational and program design is a common blind spot, yet 91 percent of firms cite people and process as the biggest barriers to success.[4] When strategy changes, roles, structures, and processes should be realigned with the new objectives. If organizational design is neglected, responsibilities can be overlooked, staffing can be inappropriate, and people—and even functions—can work against each other. In short, organizational and program design are critical to creating a data-driven culture and behavioral change management.

1. **Start with the Roles**
   It's important to realize that roles should be designed around desired outcomes, not around people. When companies select the seemingly obvious candidates for key positions before the roles are defined, they unintentionally define the roles based on whatever the person they think is right for the role can do. Define a role by the competencies someone in it would need to possess in order to deliver a set of defined metrics to the company at large. Only then should qualified talent be appointed to it.

2. **Recruit the Right Talent**
   Once you have clearly defined the technical skills and business-savvy required for a role, you can determine whether you have the right people in-house, can train people to fill those roles, or need to source them externally. This helps ensure that the people accountable for executing data strategy are capable of being successful. Recruiting talent using this approach also promotes both the perception and the reality of fairness.

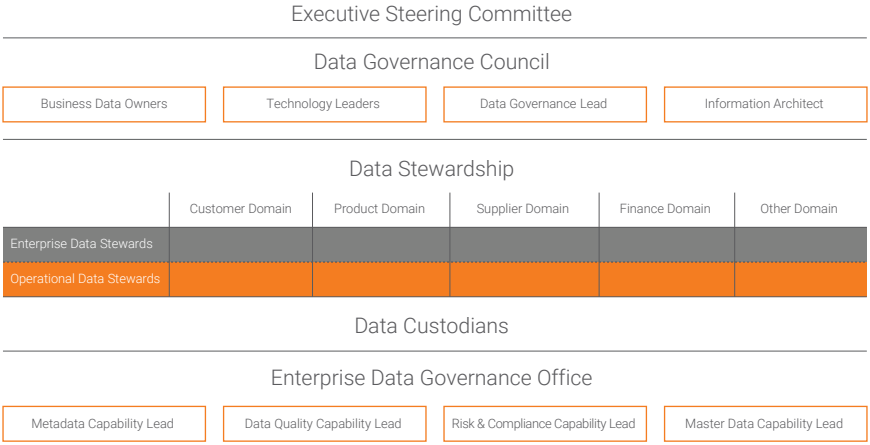
3. **Go Beyond Org Charts and Hierarchies**
   Structure dictates the relationship of roles in an organization and therefore how people behave and teams collaborate. One aspect to consider is what work should be designed around a centralized, structured functional organization, and what work can be distributed in a more team-oriented matrix design. Another aspect of design

is consideration of the type of work people are doing and the amount of coordination that work requires. This will help you find the right balance between centralized economy of scale and decentralized flexibility and agility.

4. **Design Processes to Facilitate Collaboration**
   Processes must be set up to govern the natural conflicts that arise around competing priorities and perspectives. Otherwise, those unaddressed conflicts will become dysfunctional. It's important that all stakeholders have an opportunity to weigh in on how *their priorities* fit into the company's larger plan. When there is a defined process for discussion and resolution, it's easier to manage the operational trade-offs by setting priorities for the long term and coordinating activities across functions.

5. **Develop a Communication Plan**
   In chapter one, we talked about the responsibility of the CDO to translate the vision for the data strategy into unique messages that different teams and stakeholders will respond to. This communication requires a thoughtful and intentional process that looks at what each audience needs to hear from you, how you are going to deliver it, and how often you will tell them. Your corporate communications and/or marketing teams can help with best practices for developing the plan.

What are the stakeholders' attitudes and behaviors that need to change to be successful? What are the barriers to them fully supporting and participating in the required work? What communications channels work best—face to face, email, corporate portal? What are the activities, events, and/or materials—to be used in your selected channels—that will most effectively carry your message to the intended audiences? What is the time frame for first sharing the message and how often will you reinforce your message?



"Defining strong data governance processes and establishing an enterprise approach is also imperative to deliver scale, including detailed roles and responsibilities, policies, standards, and issue resolution frameworks."

Rick Turnock
Global Head of Enterprise Data Services
Invesco

Creating a Data Strategy

Chapter 6 – Using a Framework to Develop and Communicate the Data Strategy

Using a framework for developing data strategy can help structure thinking and guide the approach for realizing business goals. It provides a means to align all the required components of strategy to a common business context, as well as a consistent way to communicate across business value opportunities.

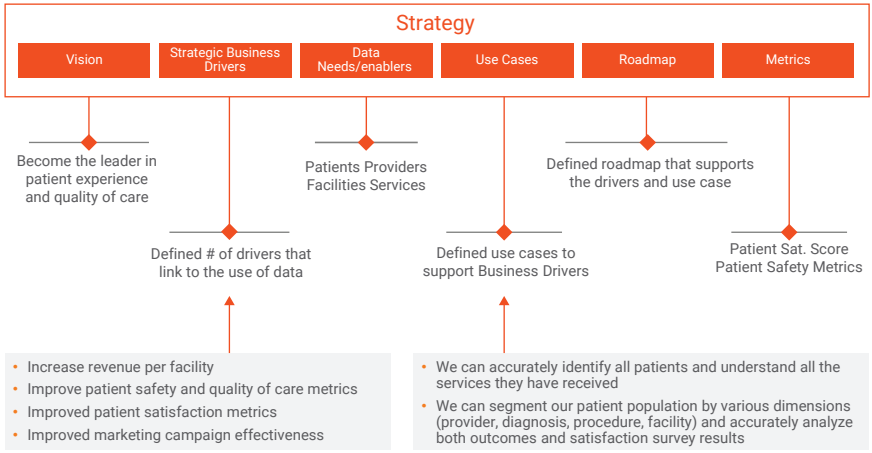
It also helps decrease implementation risk and improves transparency and productivity by creating a better understanding of the breadth and depth of change management and program management required for a successful implementation.

Based on our work with hundreds of customers across multiple industries, Informatica has developed a detailed data strategy methodology and framework that captures the required best practices and core building blocks.

Below is a simplified example based on work with one of our customers.

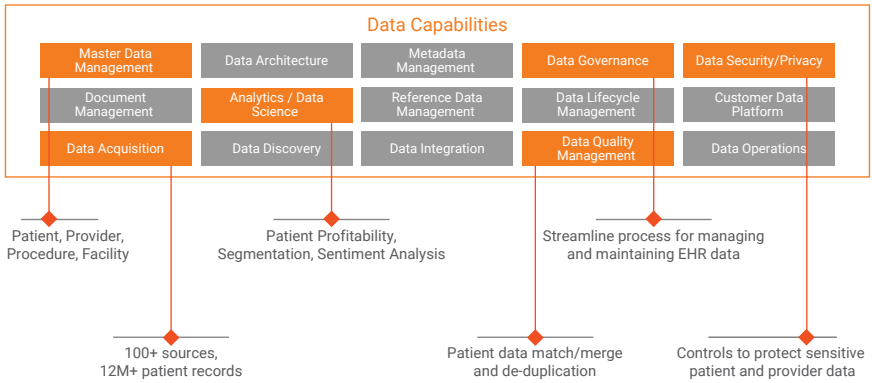
What are the fundamental drivers, enablers, and expected business outcomes of the data strategy? Why are we doing it and how are we measuring it?

Case Study Example: Healthcare Provider



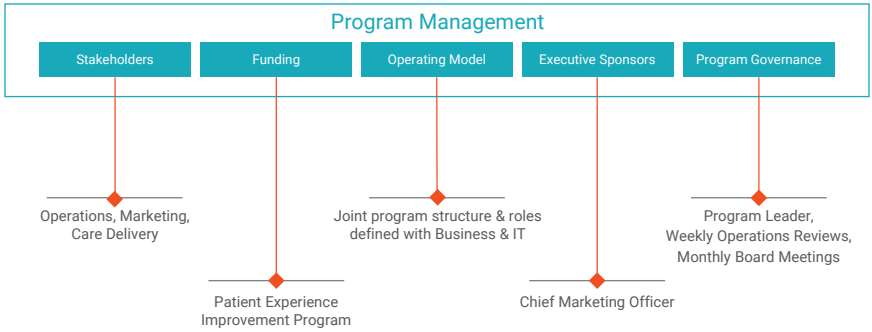
What are the data and analytics capabilities that are needed to support the strategy?

Case Study Example: Healthcare Provider



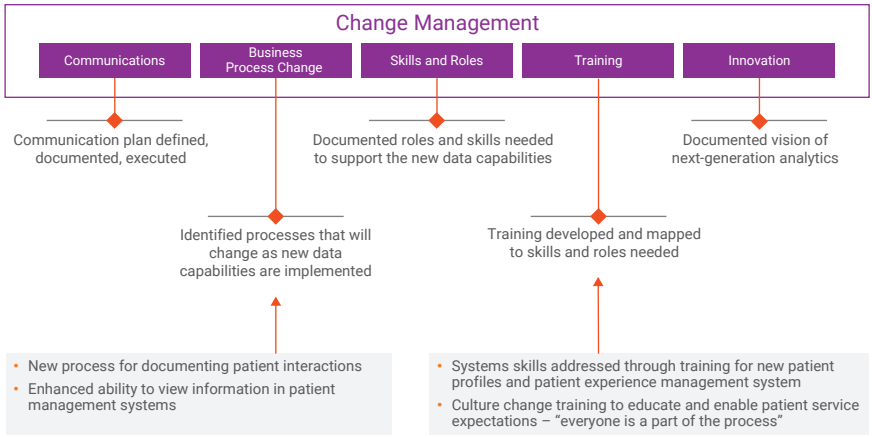
How will the strategy be managed and delivered? Define ownership, governance, planning, and execution.

Case Study Example: Healthcare Provider



How do we prepare and support individuals, teams and organizational functions for the change required to be successful? Ensure processes are documented, the right roles are created, skills are identified, and training is provided.

Case Study Example: Healthcare Provider



Whether you use Informatica's methodology or a different one, it's important to be able to establish consistency in how you develop and communicate your data strategy. Here is an example of how a customer created a framework for their data strategy.

Outcomes (Aspirational)	Reputation	↑ Odds of Success	Culture	↑ Value ↓ Cost	↑ Compliance	Innovation
Outcomes (Measurable)	Clear Accountability	Common Business Language	High Quality Data	Business Glossary & Catalog	Documented Controls	
Capabilities	Governance & Stewardship	Metadata Management	Data Quality Management	Master Data Management	Data Protection	
Levers	Leadership set the tone	Organization virtual, tiered, best practice	People experts, empowered	Business Process capture data right from the start	Technology enable good process	

Creating a Data Strategy

Conclusion

Creating a data strategy that is mapped to business goals, processes, and outcomes is one of the most important activities that you can perform as CDO. It helps you demonstrate the value of what you do to the broad array of stakeholders across organizational functions.

Your data strategy should provide a foundation for long-term business success by democratizing data and building a strong culture, where every employee thinks about data as a strategic asset. Based on our over 25 years of helping customers use data to improve business outcomes, we advise that your data strategy include:

- Identifying business value opportunities
- Mapping data to business processes and analytics that impact business outcomes
- Defining metrics to monitor and measure the impact of data strategy on business outcomes

"Our users are thrilled with our strategic focus. We have positioned ourselves as a transformational team, whereby we are not only enriching the accuracy of our reports, but we are also changing the conversation about engagement and fundraising outcomes."

Monique Dozier
Assistant Vice President of Advancement Information Systems and Donor Strategy,
Michigan State University,
Office of University Advancement

- Mapping technical capabilities to processes and analytics
- Mapping organizational and program capabilities to the data strategy
- Using a framework to develop and communicate the data strategy

This section is designed to help guide you in creating a data strategy. It provides key areas to consider in strategy development. However, each company's data strategy will be unique, depending on your corporate goals, your organizational readiness, and your technical debt. And while your data strategy should be designed for the long term, it should be flexible enough to help you and your organization stay competitive and quickly adapt to evolving business conditions.

Executing a Data Strategy

Chapter 1 – Prioritizing Business Value Opportunities and Investments

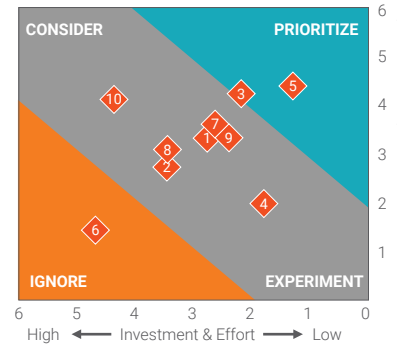
You Have a Data Strategy—Now What?

You've spoken with the business and identified business-value opportunities. You've mapped the business process and analytics that impact business outcomes. You've mapped technology and organizational capabilities required across processes and analytics. And you've defined the metrics you are going to use to measure success. Now it's time to execute, but you can't do everything at once. It's time to prioritize.

One simple way to do this is to map opportunities against business value and organizational readiness. What would a yearly savings of 2% to 5% of total procurement spend mean to the business? What impact would reducing customer churn rates 1% to 3% have? How would cash flow improve if you reduced days sales outstanding by five to seven days? McKinsey & Company's The Future of Personalization study[5] found leading organizations have driven 5% to 15% increases in revenue and 10% to 30% increases in marketing-spend efficiency by deploying product recommendations and triggered communications. Determining which stakeholders care about the opportunities and who has the organizational authority and influence to help drive success are also critical evaluation criteria.

Example of a Business Opportunity Heat Map

#	Business Opportunity Name
1	Reduce eDiscovery risk
2	Improve customer satisfaction scores
3	Improve call center efficiency
4	Improve financial reporting
5	Optimize supply chain
6	Reduce global data sync (GDSM) failures
7	Improve upsell/cross-sell
8	Introduce new mobile ecommerce channel
9	Accelerate acquisition integration
10	Improve sales territory alignment process



You can also use more formal financial analysis, where present value, rate of return, opportunity cost of capital, and risk are modelled. You can then use metrics like net present value and internal rate of return for comparison analysis between opportunities. While such rigor is more resource-intensive, it will help in building a strong business case to justify any required investments.

However, value realization will depend on your organization's ability to execute. Is there executive support? Do you already have the required technology capabilities? If not, which ones do you need? How long will they take to acquire and deploy? And how much will they cost? Do we have people with the right skill sets? Do we have policies and process to support the project/program? Since showing value as quickly as possible is a key to ongoing support, you should carefully consider organizational readiness.

While it might be tempting to start with an opportunity that may offer the most potential value, careful consideration must be given to whether it is highly complex or takes a great deal of effort. Usually it's better to start with a project that is less involved, even if the payoff may be smaller. Getting a few wins under your belt quickly will help build credibility for the program. Having that momentum is critical for the longer-term success of the initiative.

It is also important to create a project portfolio roadmap that communicates how individual projects are related to and build upon each other. It should reflect the realities of your organization at the enterprise level. Interdependencies between projects and other organizational milestones should be evident, such as the need to comply with a new regulation or other mandatory requirement with a fixed deadline. Identifying and managing all coordination points will help you focus activities when environments are fluid with frequently changing priorities.

"My advice would be to start with a project that is aligned to your organization's strategic objectives. The trick is that many of these large, strategic projects have lengthy timelines that are going to extend your time to value. To combat this, you have to find a way to accelerate your deliver, typically by narrowing your focus to a single data domain or subject."

Blake Andrews
Corporate Vice President of Data Governance Capabilities and Delivery
New York Life

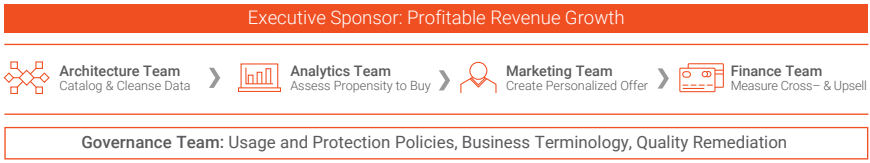
Executing a Data Strategy

Chapter 2 – Getting Stakeholder Commitment and Participation

Start With Why

Once you have decided which business-value opportunity you want to start with, it's time to get commitment and participation. An important part of the CDO's job is to translate the "why," using the language of the various people and organizational functions that will need to be involved. Let's look at a simple value chain of data to support profitable revenue growth through cross-sell and upsell.

The CDO Needs to Translate Across Functional Silos to Create a Shared Vision and Understanding



First, everyone involved needs to understand that data activities like cataloging and cleansing help ensure complete and accurate data, which impacts the accuracy of analytics activities like propensity-to-buy modeling. The accuracy of the insights generated from machine-learning algorithms—such as which customer segments are most likely to buy specific products—in turn impacts the response rates of personalized marketing offers. And the response rates to marketing activities in turn impact cross-sell and upsell revenue generation and marketing campaign return on investment.

What's In It for Me?

Once everyone has a shared vision and understanding, it's time to get specific about the value for individuals and teams. A one-size-fits-all approach won't work—how you communicate the value of the strategy will differ depending on the audience because different value propositions will appeal to different people. Here is how you can tailor your messaging with different individuals across your organization:

- **Executive Sponsor:**
  Prioritize investments and activities to accelerate business outcomes. In addition, it will help you ensure teams are aligned on the correct tasks and activities to drive business value. And it will provide visibility into the status of execution and help you know where to focus when things get off track.

- **Finance Team:**
  Better monitor and measure leads, conversion rates, and campaign costs. This in turn will help you more accurately forecast bookings, revenue, and profitability. In addition, over the long term it will provide visibility into product profitability, as well as customer lifetime value.

- **Marketing Team:**
  Build better customer profiles that increase response rates to marketing campaigns. In addition, it will help you better understand how to deliver personalized offers into touchpoints that span business processes and

"Our strategy is to leverage increasing mobile penetration in the Philippines and use digital as the cornerstone for reaching more customers and growing deposits and revenue. We had data quality challenges that we needed to solve first. Because if you go digital and you don't have good data governance, most of your efforts will go to waste."

Henry Aguda
Chief Technology and Operations Officer, and Chief Transformation Officer
Union Bank of the Philippines

interaction channels across customer journeys. And it will provide visibility into consent policies and opt-in status to ensure compliant engagement.

- **Analytics Team:**
  Reduce the amount of time spent searching for and preparing data. This in turn will enable you to spend more time analyzing the use case to accurately identify the problem characteristics and accurately design data science solutions. In addition, it will help increase the operationalization of models by providing a better understanding of where algorithms should be inserted into business-process flows to optimize value, as well as where data quality rules should be embedded into data flows to ensure input data meets the minimum standard for accurate AI output.

- **Architecture Team:**
  Prioritize what data to move into your cloud data lake or warehouse, and what data cleansing and enrichment to apply during migration. In addition, it will provide visibility into privacy and protection policies, so you understand masking, encryption, and cross-border transfer requirements. And it will help you more accurately predict workload requirements so you can reduce costs through better cloud-capacity planning.

- **Governance Team:**
  Understand the data and data attributes that have the biggest impact on business outcomes so you can focus governance activities on the things that matter most. In addition, it will help you monitor changes in quality as data flows through business processes and applications, so you identify problem areas and remediate quickly. And it provides visibility into subject matter experts that can help with the definition of policies, rules, business glossary terms, and metrics.

- **Privacy and Security Team:**
  Reduce the amount of time spent searching for and classifying sensitive and personal data, so you can focus on risk exposure and remediation. In addition, it will help you monitor data use, proliferation, and transfer internally and with third-party services. And it increases productivity in responding to subject access requests, record-of-processing activities, and auditor requests about sensitive data.

What You Need in Return

You've created the shared vision and understanding and articulated the value for individuals and teams. Now it's time to get commitment on resources and engagement models. To make this effort successful, you'll need help from all the teams listed below to establish a metrics baseline so you can monitor and measure success. Here are some other areas where you'll need their help:

- **Executive Sponsor:**
  Help communicate and champion the program, ensure organizational alignment, and resolve differences between teams and stakeholders. I also need you to help me get the required technical capabilities and organizational resources.

- **Finance Team:**
  Provide a resource that will be the finance subject matter expert. I need you to commit resources to help with stewardship of finance data. I also need you to commit to following the processes and procedures set up by the governance council.

- **Marketing Team:**
  Provide a resource that will be the marketing subject matter expert. I need you to commit resources to help with stewardship of marketing data. I also need you to commit to following the processes and procedures set up by the governance council.

- **Analytics Team:**
  Provide a resource that will be the analytics subject matter expert. I need you to commit resources to help with data stewardship in support of analytics. I also need you to commit to following the processes and procedures set up by the governance council.

- **Architecture Team:**
  Provide a resource that will be the enterprise architecture subject matter expert. I need you to commit resources to help map the end-to-end value chain of business use cases. I also need you to commit to following the processes and procedures set up by the governance council.

- **Governance Team:**
  Provide the data governance subject matter expertise. I need you to commit to working across functions to set up a governance council.

- **Privacy and Security Team:**
  Provide the legal and security subject matter expertise. I need you to help me get the required technical capabilities and organizational resources needed for compliance.

With stakeholder buy-in and commitment to resources, you're ready to get started.

"The key to success is making the business part of the program team. Every time we start a project, we ask for a lead from the business side. If the business team won't commit, we won't take on the project."

Kenneth Shek
Chief Data Officer
The Lane Crawford Joyce Group

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Chapter 3 – Setting Up a Data Governance Program

A data governance program is critical to effectively and efficiently executing your data strategy. As you work through setting up your data governance program, aligning the efforts of the data governance team to tangible business value is critical. Pick targets that make teams aware of what's in it for them and that demonstrate this new way of working. Focusing on solving specific problems will ground the team and reinforce the perception of them as enablers and accelerators of ongoing data projects, rather than having their work viewed as administrative process overhead.

Remember to Communicate

Keep sponsors updated and bring stakeholders in gradually—make sure they are comfortable with what you are doing and how you are representing the assets they own and care about. Show them the challenges, how you are addressing them, and where you are in the plan. Be prepared to receive feedback and iterate your approach as requirements evolve over time. Help them understand the processes and tooling being used and share early win stories.

Think Big, Start Small, and Scale Fast

Think big and have a vision of how you would like to scale enterprise-wide. But start small and focus on the data and data attributes that are critical for success. It's likely you won't have all the answers up front, so starting small allows you to continuously learn and improve and more easily curate the engagement. Using the opportunities that you've identified tied to business value, build a roadmap to show how your initial small initiatives fit into the longer-term vision at scale. By leveraging a series of small early successes, when enough learning has been acquired, the community experience and confidence gained during that time will enable you to scale fast.

Engagement and Adoption Above All Else

While some structure is required, don't make engagement complicated with lots of rules. Heavy governance inhibits participation and adoption. The goal is not to have the most comprehensive program but the most used. Make content engaging and easy to understand and tooling easy to use to keep people regularly involved and participating.

Be Guided by Practical Usage

Focus on what is being used by the community. Trying to be complete and exhaustive often hinders usage. What does the community engage with? Work to create more content like that and make it easy to consume. That helps keep the momentum going.

Breadth Over Depth

Remember you want to present things in a way that allows the most people to understand how their activities are connected to it. Work in conjunction with different teams to sketch the broad outlines that provide context and drive relevance. Focus on the needed details; too much precision impedes understanding and increases the burden of maintenance. With the right focus, you can unlock 80% of the value with 20% of the effort.

"I like to compare data governance to a mountain; we certainly aren't going to move it. But what we can do is build it, use case by use case. Think of each use case as a stone… They begin to pile up and interconnect and before you know it, you have quite an impressive momentum."

Alexis Suer
Leader, Global Big Data Governance
FIS

As you follow the steps outlined in this chapter, you'll start to work out more details about how best to run your data governance program. Many customers choose to capture these in some form of operating procedures document (the exact name varies), which may give useful guidance to the wider community. In keeping with the principles laid out above, however, base these on guidelines, not rigid adherence.

- Tread cautiously but move fast—with initial activities and reviews. We have observed that the first few weeks can be a learning process for all involved. The pressure to achieve too much can be counter-productive; it introduces unnecessary stress and may stop valuable reflection and iteration of content, which will lead to later issues. A small investment in time up front can pay massive dividends later.

- Once you've set the boundaries, stick to them. Scope creep is a risk for any project. One specific risk to data governance is that assets and their connections are recorded just because they were available, not because they have been specifically identified as relevant to program aims. Do not add content unless you know it is relevant.

- Less isn't just more. Less means that it's easier to manage the initial activities, understand their connections, and follow a plan. This can become harder to achieve when larger and more complex assets and connections are added.

Executing a Data Strategy

Chapter 4 – Automating and Scaling with Technology

As part of defining your data strategy, you should have defined specific capabilities, each of which can be made more efficient and effective through technology. The size, complexity, and distributed nature of data, combined with increasing requirements for continuous intelligence and speed of action, mean the manual data governance and management practices of the past can never keep up with the agile business needs of the future. The underlying technology foundation supporting execution of the data strategy requires AI-powered automation to scale.

McKinsey & Company's How Leaders in Data and Analytics Have Pulled Ahead[6] study found that automation is a critical success factor for managing data at scale and empowering employees to consistently use data as a basis for decision making. Yet more than half of respondents said key data management processes are at most somewhat automated.

Here are six areas where automation provides a significant advantage, along with real-world examples of how organizations have benefited from implementing new technology:

1. **Data Discovery and Cataloging**
   Automatically identify domains and associate business-glossary terms with technical metadata. Example: Railinc used AI capabilities for automated data discovery, cataloging, and association of business terms to technical metadata, which resulted in increased efficiency over manual processes.

2. **Data Governance**
   Automatically associate policies and rules with data elements. Example: L.A. Care Health Plan linked data policies and rules to PHI and PII data to improve compliance with HIPAA and other healthcare regulations.

3. **Data Quality and Enrichment**
   Automatically profile data and execute data quality rules. Example: DNV GL automated data quality rule execution across on-premises Cloudera Hadoop clusters and a Microsoft Azure cloud data lake, which helped them reduce the time to implement new data science projects from months to weeks.

4. **Data Integration and APIs**
   Automatically make data set and transformation recommendations. Example: AXA XL used automation and self-service to reduce the time required for actuaries to combine data sets for analysis. More time for analysis helped them better understand exposure and reduce loss frequency and severity.

5. **Master Data Management**
   Automatically standardize product descriptions, translate them into multiple languages, and syndicate them across commerce channels. Example: KLiNGEL Group creates accurate and complete product descriptions in every language for more than 3 million SKUs with a single click, which helps bring new products to market faster and increase online sales.

6. **Data Privacy and Protection**
   Automatically link structured and unstructured data to individuals and build a subject registry index, which helps automate risk exposure analysis, remediation, and data subject rights requests. Example: EMC Insurance automated sensitive and private data discovery, classification, risk scoring, and protection to improve compliance with privacy and industry regulations.

An Integrated, Modular Platform of Capabilities

As part of a companywide data strategy, you should look at capabilities in a holistic fashion. The most efficient way to do that is through an integrated platform that can be leveraged across the enterprise. Don't continue the status quo of implementing point solution after point solution—that just leads to increasing complexity and saddles you with managing the integrations with heterogeneous technologies and heterogeneous data and data definitions. This kind of technical debt[7] will require significant support and upkeep, leaving you with little time or resources to innovate.

Weighing Options – Status Quo or New Approach?

Status Quo – Continue Tactical Point Solutions

- Save license costs…
- Build on existing architecture…
- Keep what works…
- Sustain internal technology and resources…
- Implement project by project
- Manage current project load
- Rely on developers

New Approach – Invest In an Enterprise Platform

- **Deliver** more projects faster
- **Lower** project risk
- **Save** maintenance and support costs
- **Ensure** reuse
- **Establish a new,** future-ready foundation
- **Build a** competency center
- **Rely on** standards and process

An integrated, modular platform means that you can start where you need and grow into more capabilities as your organization matures. It helps you increase your return on investment, reduces total cost of ownership, and minimizes delivery risk. Using an AI-enabled solution to intelligently automate governance and data management activities will give you a scalable, extensible, agile platform that will sustain you for the life of your program. Organizations leveraging an integrated, modular platform achieve their goals faster with lower costs because they don't have to spend budget on products from multiple vendors that they have to stitch together with suboptimal integration tools.

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Chapter 5 – Keeping the Momentum and Funding Going

You've worked hard to get create your strategy, get buy in from stakeholders, and demonstrate some quick wins. But executing a data strategy is a marathon, not a sprint, and the last thing you want to do is lose momentum. Regaining lost momentum is difficult and may even require a reboot of your program, so don't lose sight of the need to constantly communicate and engage with stakeholders.

1. **Baseline and Continually Measure Each Metric**
   The baseline measurement is necessary to establish the starting point for each metric. If you don't establish the baseline up front, you will never be able to demonstrate that the data strategy is delivering the intended outcomes. It's important to measure each metric in the hierarchy in order to map the cause-and-effect relationships that will help you understand gaps in your strategy, see how different areas are performing, and quickly pinpoint improvement actions when higher-level measures aren't achieving targets.

"Maintaining momentum is a function of the value you are bringing to the business and transitioning ownership of success to the business… What this means is that you are always truing back to what matters most to the business, AKA the business and data strategies."

Christopher Corrigan
Data Governance Leader
Genworth Financial

2. **Communicate Early and Often**
   Culture and behavior are your two biggest challenges. Repetition regarding the strategy, value, and accountability are going to be needed. Work with your communications team to incorporate best practices like keeping messages clear, concise, and credible. Use images and videos because engaging multiple senses helps people retain the message. Be creative, tell stories, and use humor and other tactics that influence feelings and create emotional connection.

3. **Train Early and Often**
   New processes and tools will make new demands on people. Help them get up to speed fast. And don't expect that one training is going to make people productive. In order for people to bring about change effectively and learn adaptable and buildable skills, they should receive timely and appropriate training. If we are going to treat data as an asset, training requirements should be based not just on the skills and knowledge necessary to implement the change but also the cultural expectations—and we need to make it clear what those expectations are from the standpoint of values and behavior.

   It's everyone's job (not just the CDO's) to help ensure the organization's data is timely and accurate, and the training content needs to reinforce these cultural norms. For example, how do you get an order-entry person to care about whether they incorrectly entered an address or a last name? It won't happen on its own. Provide a variety of training options and make them easily accessible. By offering training programs that can be accessed any time of the day, employees can participate without having to worry about accumulated or delayed work.

4. **Monitor and Report Continuously**
   It's important to hold reviews on a regular basis so that everyone knows the status of execution and issues can be remediated quickly. This requires tracking activities and interdependencies, evaluating cause-and-effect relationships, and aligning teams on action items and responsibility. Invite individuals or heads of each department to ensure the perspectives at the table are diverse and cross-represented. Make the meeting mandatory—no exceptions. Holding the meeting at the same time and day of the week every month helps attendees work their schedules around it. Collect strategic issues from your team ahead of time or revisit those that rolled over from the previous review meeting. Pre-prep the agenda in order to facilitate a more productive conversation.

5. **Deliver Quick Wins and Celebrate**
   Nothing keeps people more engaged than some quick, clear data strategy wins. Better prediction of customer churn. Reducing product returns. Accelerating the financial-close process. These are the kinds of wins that get attention and earn support for more investment in data strategy. And it's important to take time to celebrate and reflect on what's been achieved. It's a vital opportunity to recognize the team's effort and inspire more engagement and success. It also strengthens your leadership personal brand—the way others perceive, think, and feel about you as a leader—which impacts your relationships, performance, and success.

"We balanced our long-term strategic initiatives with quick wins, such as tackling existing data inefficiencies or quality issues, that could be delivered to demonstrate value and generate traction."

Rick Turnock
Global Head of Enterprise Data Services
Invesco

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Conclusion

While a well thought out data strategy is one of the best ways to articulate the value that you as the CDO can deliver to your organization, without execution it's just documentation. You must be able to drive tangible business results like increasing customer retention and share of wallet, reducing procurement costs and supply chain disruption risk, increasing operational productivity and efficiency, and improving financial reporting, analysis, and planning.

Based on our experience with customers across industries, and in every region of the world, the following are some best practices to help you successfully execute your data strategy:

- Map opportunities against business value and organizational readiness
- Get stakeholder commitment and participation
- Set up a data governance program
- Automate and scale with technology
- Keep the momentum and funding going

This section is designed to help guide you in executing a data strategy. It provides key areas to consider in where to start, how to scale, and how to maintain support and participation from stakeholders. However, each company's culture, organizational, and technical capabilities are unique. Therefore, you should view the content as guidelines rather than prescriptive requirements.

This is, without doubt, a very exciting time to be a chief data officer. Those that can create and articulate a compelling data strategy tied to business strategy and execute on that strategy are more likely to be recognized as mission-critical leaders and earn a seat at the C-suite table. At Informatica, we want to be your trusted partner, which is why we're sharing what we've learned from over 25 years of helping customers use their data to improve business outcomes. We hope you found the content useful. We would welcome the opportunity to discuss your individual goals and challenges.

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7 "Reduce Technical Debt for Modernization," Gartner Research, March 16, 2020.

Further Reading (and Watching)

The CDO's Guide to Intelligent Data Lake Management
Nine principles for delivering accurate and consistent insights

A CDO's Guide to Customer Intelligence
Unleash the full value of your data to fuel next best experiences for your customers

Data Empowerment Experts Webinar Series
Data governance and privacy leaders share real-world advice and lessons learned

Informatica Professional Services
Talk to our experts in enterprise data management. Reach us at **ips@informatica.com**

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