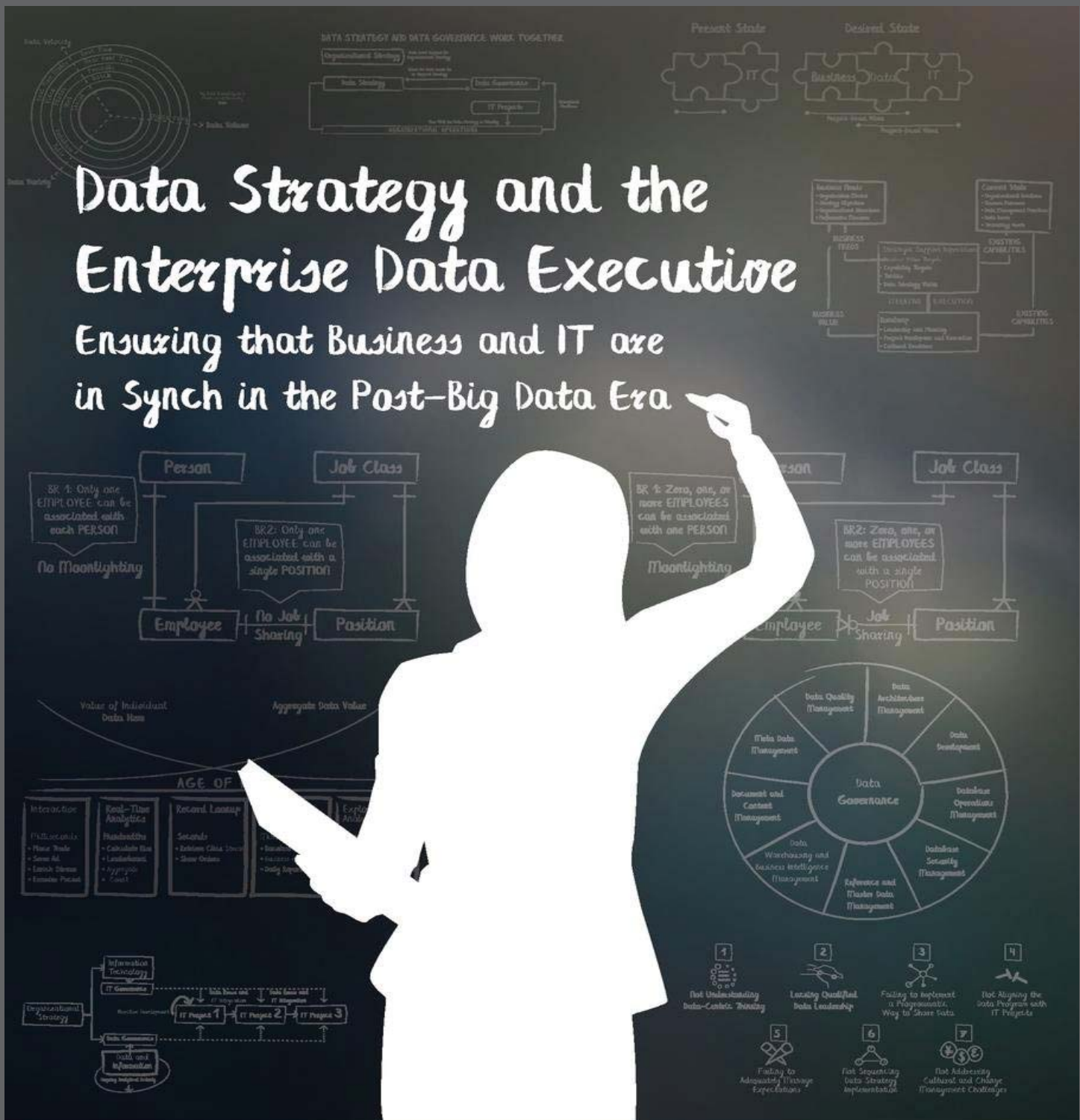# Data Strategy and the Enterprise Data Executive

Ensuring that Business and IT are in Synch in the Post-Big Data Era

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Data Literacy Series

Foreword by Micheline Casey

Chapter 1
Data Strategy Supports Organizational Strategy

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It is important that organizations obtain specific, quantifiable value at various points on the path to realizing their data strategies. These take the form of value statements, which must be explicitly enumerated and shared across the organization. Otherwise, the entire effort could easily lose resources and attention to other, more visible initiatives. Before organizations can begin developing data strategies, it is necessary to understand data strategy's role relative to the organization's business strategy. To that end, this chapter answers three basic questions.

1. What is strategy?

2. What is a data strategy?

3. How do they work together?

WHAT IS STRATEGY?

Strategy is the art and science of informed action to achieve a specific vision, an overarching objective or a higher purpose for a business enterprise (Daniell, 2007). At its core, strategy is about creating a default pattern in organizational decision-making at all levels. Whether the strategy is to win at sports or choose an option that results in the lowest organizational cost, the goal of any strategy is to make it easy for everyone involved to make the *right* decision. To that end, *strategy is a literal pattern in a stream of decisions*. For the strategy to be effective, however, it must complement and enhance the organizational

strategy. To develop an effective strategy, organizations must perform an analysis of existing capabilities, choose from competing alternatives and develop an effective way to implement it.

A strategy represents the fundamental *why* of an organization's existence—its mission! If an organization's mission is not well-defined, it will be difficult to determine the proper role for the organization's data strategy.

Strategy embraces many different disciplines and areas of business activity including competition, human resources, technology, structural organization, leadership, process and communication. It is a continuous effort which organizations need to perform as part of their daily activities to ensure that organizations continually evolve in response to a constantly changing business environment.

To understand *what* a strategy is, it is first important to understand *why* organizations need strategy. Let's take a closer look.

STRATEGY IS ABOUT WHY

…it's not what you do, it's why you do it…

Among many great TED Talks, Simon Sinek's "How Great Leaders Inspire Action" is a favorite. Recorded in 2009, Sinek's talk has enjoyed more than 25 million views. His point is quite simple: most of us are very good at describing *what* we do, and some of us are good at describing *how* we do things. Not many of us are good at describing *why* we do things. And we can get better at it.

Organizations are like people in this respect—most organizational communication focuses on the *how*. However, focusing on *why* provides motivational insight and several

distinct advantages. For instance, notice the not-so-obvious advantage that comes from working in a top-down manner. According to Sinek, by concentrating communications, messaging and resources on motivation (the *why*), organizations can improve quality of communication and benefit from clarity of intent as others design the processes (the *how*) to implement the organizational mission. Similarly, when organizations focus strategically, they can generate well-designed business processes to effectively and efficiently produce the organization's desired outcomes (the *what*).

In the military, the goal of strategy was summed up by General George S. Patton and has been referenced many times.

> *No bastard ever won a war by dying for his country. You won it by making the other poor dumb bastard die for his country (*Wallace, 2000*).*

In the military, strategy is about defeating the enemy. In the private sector, businesses do not kill their enemies—instead, they defeat them in economic terms. Where the military fights on the battlefield, business organizations compete in markets. While there is no literal fighting, maintaining focus on the primary objective is still paramount. In business, there are two recognized approaches to winning the competitive marketplace: (1) being more effective and efficient than the competition and (2) capitalizing on "out innovating" than competition. Some recognize successful hybrids (Magretta, 2011). The public sector applies these criteria in a similar manner.

DEFINING STRATEGY: CONSISTENT GUIDANCE IN A STREAM OF DECISIONS

To the surprise of many, strategy is a relatively new business term. Prior to the 1950s, people assumed that, if you were talking about strategy, you were using it in a military context.

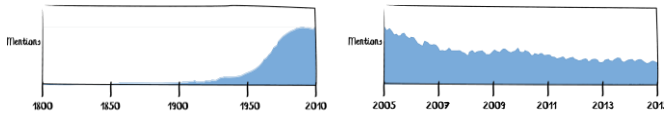It was not until after the Second World War that strategy emerged in the business world (see Figure 1.1).

Figure 1.1 Use of term "strategy" has increased in recent times as it is used in non-military contexts

Interestingly, use of the term *strategy* peaked around 2004 (according to Google Trends) and has steadily fallen in recent times. It is not entirely evident why the term's use declined, but it is likely a result of inaccurate usage, overuse and lack of general understanding. If the current trend continues, the term will probably fade away like other ill-defined terms and phrases such as *secret sauce*, *walk it back*, *break the Internet* and *uberize*. (As an aside, Lake Superior State University (2016) banned the use of all these terms.) Even if incorrectly or overly used, the term *strategy* is still useful to our discussion. Liddell and Scott (1999) offer an immediately useful thought.

> *Strategy is a high-level plan to achieve one or more goals under conditions of uncertainty.*

Strategy represents the best and most compelling case for providing guidance to the organization as to how it should achieve its objectives. Henry Mintzberg (1978) offers another definition, one which provides a bit more context for the term *strategy*: *a pattern in a stream of decisions.*

Mintzberg's definition is particularly useful as it suggests that a plan is action-oriented and actionable versus being something people simply commit to memory to recite without having fundamental understanding of what the strategy is and what it

requires. The following statement combines these two perspectives.

Strategy is the highest-level guidance available to an organization, focusing activities on articulated goal achievement and providing direction and specific guidance when faced with a stream of decisions or uncertainties.

This definition allows individuals and groups at all organizational levels to easily learn and understand what decision patterns are and to use them to guide specific individual, lower-level decisions. The following three examples illustrate this concept.

STRATEGY IN ACTION

WAYNE GRETZKY: SKATING TO WHERE THE PUCK WILL BE

Wayne Gretzky, nicknamed "The Great One," is widely considered the greatest hockey player of all time (Sports Illustrated, 2012). Gretzky is also credited for developing one of the simplest yet most often cited strategies in the world. Gretzky perfectly illustrates his strategic approach to hockey as a pattern in a stream of decisions. A clear example of this is evident in a discussion Gretzky had with his father (Gretzky & Reilly, 1990).

Father: *Where's the last place a guy looks before he passes it?*

Gretzky: *The guy he's passing to.*

Father: *Which means…*

Gretzky: *Get over there and intercept it.*

Father: *Where do you skate?*

Gretzky: *To where the puck is going, not where it's been.*

Father: *If you get cut off, what are you gonna do?*

Gretzky: *Peel.*

Father: *Which way?*

Gretzky: *Away from the guy, not towards him.*

Gretzky's strategy is easy to communicate and easy to understand. "What do you do when you get cut off?" a reporter asked Gretzky. "Move away from the person who cut you off and skate to where you think the puck will be!" Talk about an actionable strategy.

Gretzky's goal: score.
Guidance: skate to where the puck with be.
Cost of strategy failure: game loss.

Strategy can be just that simple and easy to share with others.

NAPOLEON BONAPARTE AT WATERLOO: DIVIDING AND CONQUERING

Here is another example. Consider this question: how does one defeat the competition when their forces are bigger than yours? Military general and first emperor of France, Napoleon Bonaparte, faced many challenges. One gives a classic illustration of *strategy*. The question posed above was precisely what Napoleon asked himself in 1813 as he faced a larger, better resourced and more powerful army of Prussian and British forces at Waterloo (Dodge, 2014).

Napoleon's Waterloo strategy was based on his understanding that armies, when attacked, would retreat toward their supply lines. Knowing this, Napoleon positioned his troops so his army could attack the point where the two armies converged, expecting them to retreat along their supply lines and split their battle line. Based on this military knowledge, Napoleon

developed an easily understood, clear and unambiguous message for his army.

Hit both the British and Prussian armies where they join, and hit them hard, or die!

Napoleon told his generals that once the French had defeated the Prussian army, his troops should then turn their focus to the British army. These may not be the instructions you would give to a teenager faced with fending off two bullies on the school yard, but you can see the analogy. Though Napoleon's strategies did not ultimately win victory on the battlefield, the strategy remained functional.

> **Napoleon's goal**: live to fight another day.
> **Guidance**: hit both armies hard, then beat the Prussians, then beat the British.
> **Cost of strategy failure**: defeat, capture, loss of empire, death.

However, strategy itself is insufficient to ensure success. Napoleon abdicated four days after losing the battle.

WALMART: OFFERING EVERY DAY LOW PRICES

The final example is a business slogan that many readers may already know. It is no secret that for many years, Walmart's organizational strategy could be distilled into four effective words: *Every day, low prices*. Walmart's strategy provided continuous guidance to the organization. Walmart realized that, if the company wanted its customers, suppliers and partners to understand that Walmart was the low-price leader, achieving the lowest prices must be how all decisions are evaluated inside and outside the organization. As history has shown, Walmart's strategy proved successful over time. It is a strategy that everyone—including corporate leaders, managers,

employees, vendors and customers—understands. The strategy took root in nearly every aspect of the company, wherein each organizational component did its part to lower costs and deliver superior pricing to Walmart customers worldwide. Walmart's corporate culture embodies this credo, with new employees quickly learning it and customers being bombarded with this singular message across all forms of advertising.

As a strategy, it is easy to see how this produces a pattern in a stream of Walmart operational decisions. As Walmart continues its attempt to become the first $1 trillion organization, it is hard to argue with the financial success that its strategy has brought to the organization.

Walmart's goal: achieve sales growth.
Guidance: provide low prices to customers every day.
Cost of strategy failure: another retailer gets those sales and customers.

WHAT IS STRATEGY?

Recall our definition.

> *Strategy is the highest-level guidance available to an organization, focusing activities on articulated goal achievement and providing direction and specific guidance when faced with a stream of decisions or uncertainties.*

In any sector, for a strategy to be effective, it tends to satisfy four specific criteria (Roberts, 2004). A strategy:

- expresses specific goals;

- delineates a specific scope;

- describes the advantage sought after; and

- articulates why the strategy is achievable.

A specific strategy is then an expression of organizational objectives that identifies specific goals within a confined scope of operations to attain a specified advantage. Specific strategy articulation should also describe why the organization believes it can successfully implement this strategy and how that strategy will benefit the organization. Many have said:

> *Strategy is the organization, and the organization is the strategy.*

This indicates the depth of integration desirable—and most often required—to achieve results.

Because the environment is not static, organizations cannot expect to be successful doing things the way they have always done them. To achieve new business outcomes, organizations must make incremental adjustments over time and evolve in response to a fluid, changing business environment. Consequently, organizations must learn how to do things differently. They must discover new and innovative ways to manage change both inside and outside the organizations, and they must operate in a way that keeps pace with a rapidly changing business climate. If they do not do this, they will fail to maintain their current (relative) position.

WHAT IS DATA STRATEGY?

So far, we have discussed what strategy is and why it is important. We have also described strategy as an impetus for establishing organizational momentum and how strategy must embody the organization and *vice versa*. Let us now put these concepts together and describe the role played by a data strategy.

A data strategy is about supplying motivation centered around use of organizational data assets in support of organizational strategy. Specifically:

> *[d]ata strategy is the highest level [of] guidance available to an organization, focusing data-related activities on articulated data goal achievements and providing directional and specific guidance when faced with a stream of decisions or uncertainties about organizational data assets and their application toward business objectives.*

Developing and maintaining an organizational data strategy should be a **primary** function for an enterprise data executive (EDE). Recall the criteria for a strategy: a strategy includes scope and achievable goals while targeting improvement of the organization's data. Most organizations do not treat data as the organizational asset it is. However, data is every organization's single, non-depletable, non-degrading, durable strategic asset. Consider for a moment the above characteristics of organizational assets.

- **Data assets cannot be depleted.** Data is uniquely different from other assets in that its greatest value comes not from being *used* but from being *reused*.

- **Data assets do not degrade over time.** Digital assets, when properly maintained, do not degrade over time as other organizational assets do.

- **Data assets are durable.** They can generate flows of goods and services over time (Rust, 1985).

- **Data assets are strategic.** Data assets must be maintained by an organization to achieve future outcomes. Without strategic assets, the future of the organization is jeopardized.

Combined, these four properties make data unique among organizational assets. We regularly observe organizations managing data assets with no degree of professionalism and using inadequate methods or appropriate technology. Without this foundation, organizations have no framework (policy) to leverage data usage. They fail to move data assets per any repeatable and documented process, thereby losing productivity (process). They spend far too much on information technology (IT) investments, but they do not properly implement a data-centric means of enabling their knowledge workers (people) to use and exploit data assets.

A primary lesson is that the solution to these problems is not fundamentally a technology-based solution. No organization has been identified that would not benefit from a balance of people, process, policy and technology (P3T) within their solution set. Organizations must focus data strategy on business outcomes that help exploit data across the digital landscape to create value in the form of innovation, customer engagement and growth. Putting it another way: your data strategy needs to be:

- concise and consume less bandwidth to absorb than the organizational strategy;

- actionable and support a valid and useable organizational strategy; and

- easily understood by everyone in the organization, including business and IT.

These three characteristics combine to guide the organization's data governance program.

FOCUSING DATA GOVERNANCE WITH DATA STRATEGY

A primary benefit of a data strategy is the introduction of focus for data governance efforts. Data governance currently has many different definitions, including the following from John Ladley (2012).

> *Data governance is the organization and implementation of policies, procedures, structure, roles and responsibilities which outline and enforce rules of engagement, decision rights and accountabilities for the effective management of information assets.*

Data governance is best defined as *managing data with guidance*. It is best because it enables the following question.

> *Do you prefer that your sole, non-depletable, non-degrading durable strategic asset be managed without guidance?*

To date, no one has been found who is willing to answer "yes" to this question. Once organizations recognize that they must have data governance, the conversation can address *how* data assets are governed. The answer to this question includes developing a data strategy. Figure 1.2 illustrates how organizational data strategies help shape data governance efforts, ensuring that organizational data assets are optimized so as to derive the most value in support of the organizational strategy. As a further refinement of this concept, it is suggested that organizations use business goals as the means to shape data governance and ensure that governance is aligned with the data strategy. This is accomplished by using the language of data governance—metadata.
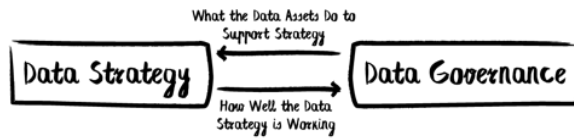
What the Data Assets Do to
Support Strategy

Data Strategy

Data Governance

How Well the Data
Strategy is Working

Figure 1.2 Data strategy works hand in hand with data governance

It has repeatedly been found that organizations attempt to implement governance as a top-down edict without fully understanding the foundational concepts. For example, consider the role, data steward. Organizations have differing understandings of and operational expectations for this role. In fact, the same title is used for different roles across the organization. The net result of doing this is confusion. So instead of using overly complex roles and titles, keep it simple and initially avoid confusing titles such as those listed below (Plotkin, 2014).

- **business data steward**: manage from the perspective of business elements (i.e. business definitions and data quality).

- **technical data steward**: focus on the use of data by systems and models (i.e. code operation).

- **project data steward**: gather definitions, data quality rules and project issues for referral to business and technical data stewards.

- **domain data steward**: manage data required across multiple business areas (i.e. customer data) and metadata documentation.

- **operational data steward**: directly input data or instruct those who do; aid business data stewards in spotting data issues and identifying their root causes.

- **data quality stewards**: focus specifically on resolving data quality issues.

Keep the message simple. For example, identify a steward who will own certain kinds of decisions—instead of attempting to define all types of decision in advance where you have the least knowledge.

Listed below are other benefits of data strategy-governance combinations. The following list was postulated by Adelman, Moss & Abai (2005). Although articulated in 2005, these phrases still hold true. The list included the following benefits.

- revenue enhancement
- cash flow acceleration
- analyst productivity
- cost containment
- demand chain management
- fraud reduction
- competitive effectiveness
- better and faster decision making
- better customer service
- employee empowerment
- increased marketing effectiveness
- improved supplier and customer relationships

Other detailed benefits include customer conversion, attrition and retention improvements and better public relations, reputation and shareholder impact. While we are certain this list is not exhaustive, it does represent an excellent starting point for making a variety of business cases to invest more in data assets.

THREE ELEMENTS OF STRATEGY

Most organizations are constantly busy working toward the next deadline. They are focused, single-minded and motivated. This is a good thing…or is it? Being driven by short-term goals should not preclude thinking about the future, and good managers always find time to reflect on where the organization is heading and questioning whether its strategy is still valid.

As part of this process, organizations must understand their markets and carefully balance what they can offer to satisfy needs. When they do this, organizations begin making sense of the complex forces with which they interact. Once complete, organizations can leverage that knowledge and use it to create successful strategies. This is not an optional task; it is an essential function if organizations are to survive (Williams, 2009).

Experience suggests that many organizational strategies are not as effective as they could be. They are often overly complex, difficult to understand, lofty and difficult to translate into practical terms. If that's not enough, strategies are often mired in details that mask the direction the organization desires to travel. As a result, such strategies quickly become difficult to describe and generally ineffective for guiding real-world operations. Strategy documentation ends up sitting on a shelf, unused.

Let's explore three core strategic characteristics that animate and motivate strategy: analysis, choice and implementation.

ANALYSIS

As has been suggested, complex strategies can be very difficult to communicate to associates, partners and subordinates. When communication breaks down, implementation of the strategy is

nearly impossible. Wayne Gretzky realized the futility of chasing the faster hockey puck around the rink and decided to, instead, put himself in a position where he would more likely be able to receive a pass from a teammate and score. Skate to where you think the puck will be. So how do you determine where the puck will be?

One technique is *Porter's Market Positioning Framework*. Analyzing the environment in which you operate is the first step to creating a strategy, and, to understand the environment, you must dedicate time to collect data. For example, to be a successful car dealer, one must buy the right cars, at the right prices, at the right time, under the right conditions. To do this, one must spend time analyzing the market, watching and listening for information about which cars are—and are not—selling well and which cars are increasing in price or decreasing in value. This requires careful observations. But, it also requires real data, such as week-to-week recording and analysis of car price data, customer numbers and stock levels.

A tool like Porter's can help one assess appropriate factors. In some instances, it has prevented organizations from competing against themselves. Some internal factors may include marketing, management, operations and production, accounting and finance, computer information systems and research and development capabilities. Some external factors may include politics, government, law, economy, technology, society, demographics, culture and competition. Armed with this kind of information, organizations can begin developing strategies that directly reflect the environment and its forces.

Using Porter's model, Figure 1.3 shows different strategies that organizations use.
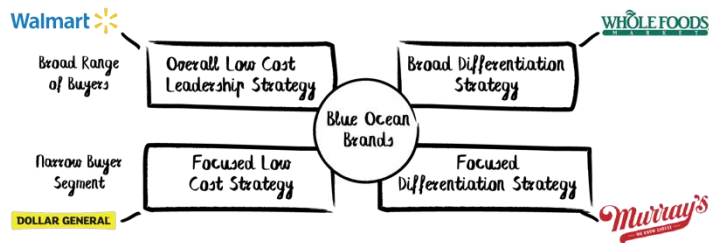
Figure 1.3 Porter's Market Positioning Framework

- Walmart strives to provide the lowest cost to the broadest range of customers.

- Whole Foods offers a variety of items to a range of buyers.

- Dollar General tries to capture a narrow segment of Walmart's customers.

- Murray's Cheese pursues a small segment of cheese connoisseurs.

- Trader Joe's uses what Porter called a "Blue Ocean" strategy which tries to be several things to a range of customers.

This sort of strategic analysis leads to discussion about why the organization exists. What is the organization's purpose and mission? These types of discussions occur well after organizations are formed, and they are often accompanied by statements such as, "We are now refocusing on our core competencies." This behavior is good and reflects the reality that organizations, and their strategies, need to evolve over time, adapt to changing conditions and exploit internal competencies.

Organizations have many data assets. Most have so many they become obstacles by increasing the complexity of the operational environment. An organizational data asset inventory capability is a necessary but insufficient prerequisite to implementing a successful data strategy. Analysis of the organizational data asset inventory will help to assess the utility of individual data collections, thereby permitting the organization to prioritize the order in which they should be improved and employed. Note: The authors have never seen a completed data inventory, so never let yourself get pinned down as to a data when yours will be complete!

CHOICE

Strategy must convey choice, which, in and of itself, necessitates organizational trade-offs. Napoleon understood this and realized he could not defeat a large enemy using a smaller army, so he devised a plan to literally divide and conquer.:

> *First, we hit them both where their forces join, causing them to retreat away from each other. Second, we turn and defeat the Prussians, then defeat the British.*

After analyzing the environment, organizations have enough information to be able to identify the basic, business-level strategy choices organizations need to make. Collectively, these basic choices are sometimes called "generic business-level strategy." Grünig & Kühn, 2015).

Organizations that pursue a standardized or segmentation strategy recognize that they must adjust behaviors depending on the specific environment or target. Organizations pursuing a segmentation strategy recognize different segments and tailor behavior appropriately. Organizations pursuing a standardization strategy focus on a cheaper approach, such as serving the consumer as a single type.

Organizations that target a broad environment can concentrate on reducing costs to the lowest levels while still making a profit. When this happens, it typically is said that the organization is pursuing a broad low-cost strategy. Alternatively, if an organization differentiates its product in some way, the organization is pursuing a broad differentiation strategy.

Organizations that decide to recognize different segments and offer different products to each segment pursue a broad differentiation strategy. It is possible, however, to pursue a differentiation strategy while not recognizing different segments, as Coca-Cola did prior to the 1980s. Walmart is pursuing a broad low-cost strategy, whereas Toyota and Coca-Cola are both pursuing a broad differentiation strategy.

Companies that target a few segments, or more typically just one, are pursuing a focus or niche strategy. These companies can either try to be the low-cost player in that niche, as Walmart has done by pursuing a focused low-cost strategy, or they can try to customize their offering to the needs of that particular segment through the addition of features and functions, in which case they are pursuing a focused differentiation strategy.

Furthermore, strategy must convey choice involving trade-offs. In business terms, a logical next step would be to determine the various strategic choices facing an organization. Using Porter's Market Positioning Framework (see Figure 1.4), organizations can assess and codify factors such as market position.
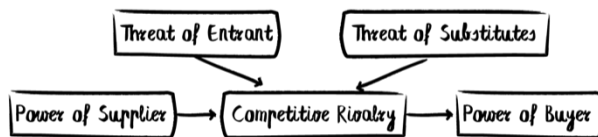
Figure 1.4 The Competitive Advantage Framework

Other strategic choices can be articulated to gain insight to market competition.

- ***bargaining power of buyers***: the degree of leverage customers have over your company

- ***bargaining power of suppliers***: the degree of leverage suppliers have over your company

- ***threat of new entrants***: the likelihood of new competition entering the market.

- ***threat of substitute products***: the likelihood of customers switching to alternative products

Assuming organizations are largely aware of their data holdings and their relative value, the choice function is concerned with determining the relative ability of the data collections to support the organizational strategy. While it should go without saying, experience demands the explicit statement that it is impossible to use all an organization's data assets all at once. Therefore, the choice function is key to developing and maintaining a specific focus for subsequent cycles.

IMPLEMENTATION

As has been suggested, if organizations develop an overly complex strategy, it can be enormously difficult to share with employees, associates and partners, and it can be even more difficult to implement. Recall Gretzky's realization of the futility of chasing the faster hockey puck around the rink and, instead, determining to put himself in a position where he would be more likely to receive a pass from a teammate and score.

While this approach may have worked for Gretzky, it is important to note he did not work alone. As part of a team, his

specific actions needed to be incorporated in the larger team plan. Additionally, Gretzky had to be able to share his ideas and strategies with others on the team so they could operate as a single, cohesive unit on the ice.

Strategy must be something all organizational members can articulate, understand, internalize and repeat. More specifically, this means that everyone must understand their roles and responsibilities relative to the entire strategy. (This condition is often referred to as *swim lanes*.) Unless everyone understands the context of the plan, members will not be able to function in an orchestrated and coordinated manner and, thus, realize the strategic intent.

CONVERSATIONS & LANGUAGE OF DATA STRATEGY

It is important to note that organizations should not wait until things are settled, stable or finished before starting to implement these concepts. For those organizations that do not develop data strategies and learn to manage their data, they will painfully learn there will always be a good reason for not making changes to their organization and its behavior. This lack of organizational fortitude, commitment and action will have detrimental effects on the organization and its ability to continue meeting the demands of an ever-evolving, competitive environment.

In today's digital world, the business becomes data and data becomes the business, and the information derived from that data becomes the most important corporate asset. To that end, what truly matters the most is an organization's ability to evolve, create, capture and leverage value from data. However, we should note that data is not static. It is not finite. Instead,

data grows larger, more diverse and more distributed 24/7, increasingly being generated and residing outside the enterprise and its immediate control. At the same time, the environment is quickly becoming interconnected by devices and equipment to people in both home and work environments.

Taken together, the environment is quickly becoming an ecosystem of networks and connections through which today's data flows. With this as the backdrop, an important question arises: how do organizations capture and use the data that follows individuals? Organizations must focus their data strategy on those business outcomes that help the organization exploit data across the digital landscape, creating value in the form of innovation, customer engagement and growth.

Furthermore, it is incumbent upon data professionals to ensure that organizational conversations about data are framed as much as possible as *business* conversations. Technical experts need to talk about data in a different way. They must discuss data form and function to provide the business with technical solutions to business problems. However, while a valid conversation, technical discussion cannot happen in a vacuum. Technical conversations must relate to the business and, ultimately, align to the data strategy.

When reviewing a data strategy, ask yourself: what business outcome am I seeking? Although it is an obvious question, when posed to clients, 80 percent have no answer, a vague answer or the wrong answer. Of the total sample, only 5 percent understand the relationship between specific, component-level IT work and the organization's overarching organizational strategy.

Additionally, answering this question changes the conversation from one about systems and data to one about business and outcomes. Turn data conversations into business conversations

(*why* instead of *how*). If you cannot answer the question, you should not be doing what you are doing. It is never too late to stop projects that are not supporting business outcomes.

As well as changing the subject of data conversations, data professionals must also change the language used. Language is one of the most important tools with which to engage people and inspire them to participate. If the wrong words are used, the audience is lost. If the right words are used, people get excited about what information can do for them and for the business. Use words that express *value* and *opportunity* but that are not boring or scary. Being a master of information management competencies, technology and business value is not enough—you must become a great communicator to illustrate the interdependent business and systems complexities to budget authorities.

DATA STRATEGY SUPPORTS ORGANIZATIONAL STRATEGY

While oft-repeated that strategy is the organization and *vice versa*, data assets are not the only asset employed by organizations to achieve strategic objectives. The data strategy must be subordinate to the organizational strategy. Figure 1.5 illustrates this, showing the symbiotic relationship between data strategy and data governance.
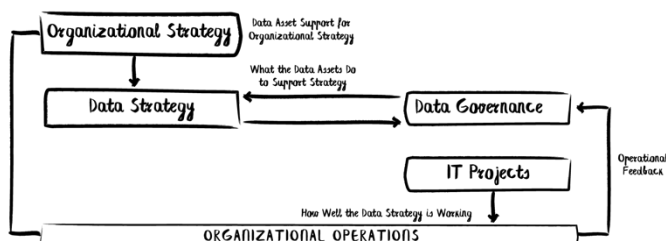
Figure 1.5 Data strategy and data governance work together to ensure data assets fully support strategy

Organizational strategy provides guidance to and context for the data strategy. Data governance, in turn, implements data strategy through its influence over aspects of IT projects, which exist to deliver data to organizational knowledge workers and partner organizations.

After many years of helping organizations with data strategy one extremely important realization has floated to the top: If the organizational strategy is not good, a well-articulated data strategy can help harden and reinforce an improved version of the organizational strategy.

A final note: all agree that the data strategy should be the sum of organizational data governance strategy, organizational data quality strategy, organizational metadata strategy, organizational BI/Analytics strategy, organizational data architecture strategy, etc. We prefer the following focused approach as opposed to the massive overplanning that results from attempting to coordinate multiple strategies for relatively immature subdisciplines.

DATA SECURITY COLLABORATION

Supported by research and experience, one position has become very clear. EDEs should be responsible for leveraging organizational data assets and having the same entity be responsible for safeguarding them is a conflict of interest. Instead, EDEs should work with business operations to determine the appropriate data classifications and controls for data while insisting that IT and authorized users follow the rules assigned by business operations. That said, the EDE and data security lead should work closely with one another across

the entire data lifecycle, as organizations develop data strategies and data security solutions. Areas of collaboration, for example, include data prioritization and, access. Organizations failing to take advantage of such a relationship risk being disconnected from IT security, having to rework solutions and generally misunderstanding one another.

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