CHAPTER 1

Business and IT in Turbulent Times

Chapter 1 introduces the basic challenges facing business and IT management. These range from business and technology turbulence and uncertainty to the critical need for transformed relationships and management processes between business and IT. Mutual trust and partnership establishes the foundation for the transformation, and applying strategic management principles to the business–IT relationship and processes provides the means.

However, in addition to these factors, every enterprise must also overcome a number of existing challenges successfully. First, the relationship between business and IT organizations has not been functioning well. Second, business managers do not understand their responsibilities for their part of the relationship with IT. Third, IT managers and professionals do not have the needed competencies for successful delivery of business transformations based on developing and maintaining trust and partnership relationships. These three challenges combine to create inadequate governance and IT management processes that do not deliver a closer linkage between IT and the business. Without significant changes and improvements, neither party will achieve its aims.

Our goals are simple: superior business value from the use of information and IT, and superior business responses to turbulence and uncertainty.

Turbulence and Uncertainty Challenge Enterprises

We write this book at a time when turbulence appears rampant and is increasing throughout the world. It affects all domains: government, economics, society, individuals, and of course the ways in which information technology plays a compelling and leading role in business and government. To be fair, IT is both causing some of the turbulence (e.g., social media, big data, the ubiquitous Internet) and enabling enterprises to craft practical responses to the turbulence (i.e., enabling stronger and more adaptable enterprises). Perhaps it
is this duality that adds a degree of tension to the mix. Inarguably, IT is the only enabling function that serves the business by facilitating its current goals and strategic ambitions, while at the same time acting as a disruptive force that challenges existing business models and enlarges the plate of future opportunities. In 1942, Joseph Schumpeter\(^1\) coined the term “creative destruction” to describe the “process of industrial mutation . . . that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one.” The rapid advances in information technology continuously force successful business leaders to reexamine business models and the basis for competition. They also serve as an epitaph for those businesses, no longer relevant, that failed to stay current.

Turbulence affects everything and compels effective, continuous, adaptive, and swift responses from both business and IT management. But achieving this goal is difficult, in that the trust and partnership gap that separates IT and business prevents the necessary effective and continuing responses; they simply are not adequate to the challenge. “Best practices” must evolve into forms that build trust and partnership (in our terminology, bridging the gap between IT and business) while also enabling businesses and government to adapt rapidly to the turbulence and change that surrounds them.

We have revisited hundreds of books, numerous professional articles, and countless research reports, adding this knowledge to our many industry contacts and direct hands-on experiences. In the process, we have found that it is easy to be overwhelmed by the volume and noise of the recurring theme; we are in a period of intense turbulence—represented by concepts like dynamic capability, rapid innovation, “outside-the-company” sources of value, nimbleness, and implications of dispersion and networking of enterprises. Uncertainty due to government actions and regulatory changes only adds new spice to the turbulence. One only has to have a subscription to popular business journals (e.g., *Bloomberg*) and professional journals (e.g., *HBR*, *Sloan*), and even such outliers as *Foreign Affairs* to increase that sense of being overwhelmed.

And then there is the turbulence present in technology itself. From a relatively stately sense of regular process to lurching and breathtaking leaps, every year technology offers us the promise of bigger, faster, cheaper versions of essentially the same stuff. However, it also provides a sense that a whole new dimension is coming at us, and a lot of it is already here. One only has to look at the web sources reporting on the Gartner Hype Cycle\(^2\) for just a taste of this.

All this puts great pressure on enterprises to find ways in which to cope with the turbulence. It also puts great pressure on them to deploy IT effectively, a task made considerably harder when there is a lack of trust and partnership between IT and business/governmental enterprises. Many of these challenges have been with us for a long time (e.g., “alignment,” effective planning and deployment, etc.). But—and this is fundamental premise of this
book—turbulence and resulting requirements for change and adaptability have the potential to render much of the current “best practices” ineffective and perhaps dangerous to the enterprise. Equally compelling are the historic gaps between business and IT, which have in the best of times made it difficult to perform and now, under conditions of turbulence, degrade the ability of enterprises to respond effectively.

This Is Not about Alignment (Entirely)

IT has grown up in a context that emphasized the need for supporting business objectives. The tools and methods for doing so have been bundled under the term “alignment.” Alignment has proved a satisfying way to think about and deal with many of the business and IT relationship problems successfully.

Alignment, however assumes the enterprise management knows what it is doing. Surely it does, with respect to its strategies and operational activities that carry them out.

The problem, though, is that enterprise management may not have a clear view of the business opportunities afforded at a strategic and an operational level. Exactly how would business strategy and/or business operations change, if the possible IT innovations were fully understood and expressed in business terms?

Exhibit 1.1 has done well over the years as a vehicle for explaining the relationship between these two factors: one of alignment and one of innovation/transformation. The diagram itself began life as an explanation of enterprise-wide information management, developed through a joint-study research project between the IBM Los Angeles Scientific Center and Washington University’s Center for the Study of Data Processing. The diagram has been

Exhibit 1.1 Business and IT Cause-and-Effect Connections
modified and adopted by others, including Henderson and colleagues, as a way to express strategic IT and business relationships. Over the years, the terminology has changed slightly (e.g., “Transformation” started out as “Impact” and then became “Innovation”) but the meaning did not. The two factors of alignment and transformation do state exactly what is needed: to have a common view of the manner in which IT supports the business strategy and operations, and at the same time to provide a clear path to finding transformational opportunities. Turbulence and uncertainty, as we will see, make this even more important.

Unfortunately, one side effect has been to emphasize the separation of business and IT. For a long time we described the gap between them as being overcome through the processes of alignment and of transformation (e.g., strategic planning.) This represents part of the objectives of Strategic IT Management, to eliminate more directly the gap through trust and partnership relationships.

We will refer back to this two-factor relationship in subsequent chapters, particularly highlighting the responsibilities of CIOs and CEOs to fully understand and communicate the transformational potentials provided by IT. And certainly (as we will show in Chapter 5), those potentials have been often realized as contributors to business turbulence, namely big data, the Internet, the collapse of supply chains, and so forth.

The Problem of Business and IT Relationships

In most enterprises, the business–IT relationship is not functioning well. This has been the case for a very long time, all the way back to the origins of data processing. Every enterprise of any size has a history of establishing IT as a separate organization and then trying many different processes of governance, planning, and performance management to bridge the gaps between business and IT. Every so often, new organizational approaches are tried (e.g., centralization, decentralization, federation), new forms of governance attempted (e.g., prioritization, planning, service management), new technologies and methods adopted (e.g., green screens, Internet, thick or thin PCs, agile development, enterprise architecture). Despite these interventions, the relationship continues to function poorly, as we will describe in Chapter 2.

Everyone has anecdotal examples of the relationship problems. When we do group exercises with IT managers, typical concerns they express include 1) we’re always asked to corral increasing IT costs; 2) business executives are dismayed with IT performance; 3) they don’t believe we can get projects done on time on budget, and when we do, business does not use the result or does not like the result; 4) there’s no strategic direction; 5) we need modernization but
there’s no support for it; and 6) we’re simply not at the table. When we do group exercises with business managers, their typical concerns include 1) IT does not speak our language; 2) IT does not understand the business; 3) IT cannot produce good business outcomes; and 4) each business unit has distinct requirements.

Clearly, these perspectives describe a union that will be hard-pressed to create successful business outcomes and perhaps achieve successes in spite of itself, which is the functional equivalent of the adage that even a blind squirrel can find an acorn. This does not factor in the effect of turbulence and uncertainty, which creates even greater need for strong, effective, and trusting relationships.

If the problem has been recognized for so long, why haven’t we solved it? Based on our observations and experience, buttressed by comments in the press, books, and articles, we can conclude that neither IT nor business is ready to address the problem successfully.5

**IT Is Not Ready**

In most enterprises IT (as an organization) typically just is not ready to do what needs to be done, at three levels. As the issues are discussed with business and IT managers, we emphasize necessary behaviors (for both business and IT):

- Think strategically about the business and how technology change can be exploited to enhance business outcomes
- Nurture a partnership and trusting relationship between business and IT
- Build the ability to respond quickly (“Dynamic Capabilities”) and build flexibility

**Think Strategically**

Mention the term “strategic” to IT professionals and the conversation may turn to the latest developments in cloud, data visualization, business intelligence, or various platform and network developments. Alternatively, IT leaders may respond with structural responses inherent in the mantra to run “IT as a service business.” The importance of IT to the business underlies the conversation, particularly as it relates to providing flexibility, enhancing the user experience, improving competitiveness, and the like. However, these same IT leaders are typically unable to answer fundamental questions about the business that can guide the strategic use of technology, such as:

- What are the most profitable and least profitable products or services and why?
8 THE CHALLENGES

- Who are the most profitable customers and least profitable and why?
- Why do customers buy our products or services?
- When we lose a customer, why?
- When we lose in a proposal competition, why?

The truth is that much of this “strategic” conversation will be limited to issues of IT Supply—how the IT organization will effectively develop and provide leading-edge capabilities and the “strategic” means for supplying them to the business. This Supply view is largely inward-looking—inward to the IT organization and the technologies, services, and management processes it embraces. This inward view does not account for the general business performance or turbulence facing every business, not-for-profit, and government organization.

The IT Supply view includes external organizational factors like the cloud, outsourcing, and so forth; these represent alternatives to more traditional means of providing IT services to the business. It is all inward-to-IT focused. The typical IT manager or professional rarely “thinks strategically” from the business perspective.

Nurture the Partnership
The IT culture tends to look inward to the technology and seeks stability and control over unanticipated change. Most IT professionals do not have a firm grasp of the business, other than at the transactional level. These blinders do not make a partnership easy.

Respond Quickly to Turbulence
In most enterprises, the perception of IT processes, including governance, is that of bureaucracy. Whether true or not, the tendency for IT to resist unanticipated change can be high (unless of course it comes in the form of interesting new technologies). Even IT areas like new development processes or “efficient” architectures can be a barrier. Much of IT has been built on engineering concepts and the goal of stable results, which does not make rapid response a natural outcome.

However, there is also a more fundamental problem that highlights the message of this book. The essential conflict is between well-defined methodologies and processes, which attempt to produce well-engineered IT solutions and well-structured governance (read “bureaucracy”) on the one hand, and the requirement for rapid innovation, quick response, and learning-while-doing (e.g., the use of agile in development) on the other. This conflict between structure and certainty (which has typically characterized IT management from the beginning) and innovation, speed, and flexibility is the inherent challenge we
face. It is not that engineered/structured approaches are incompatible with innovation, turbulence, and change. And we realize not everything can be done quickly (e.g., enterprise resource planning, or ERP, deployments). Indeed, our message is that we need to have both; this is defined in the enterprise IT capabilities, and it takes trust, partnership, and leadership to attain them.

Business Is Not Ready Either

In most enterprises, business management is only loosely engaged with IT. Governance processes are not strong, and managers at all levels are not clear on their responsibilities for developing a trusted relationship with IT. The problems range from difficulties in establishing measurable business cases and requirements for projects to overall governance of the total IT spend. As turbulence increases and new technologies become available in new ways, business management is not clear on the consequences of ignoring or bypassing the more traditional IT organization and, IT processes.

The outcome becomes silos of thinking and practice. Breaking down the walls between business and IT is a fundamental goal and critical to “transforming business in turbulent times.”

Current Practices, Architectures, and Organizations Get in the Way

The 50 years of IT growth in business has produced much process and many organizational structures. In spite of them, problems persist. Certainly the details of management and governance processes are important but they are just one component of a two-part problem. The other part is the organizational milieu, culture, and behaviors in which management processes operate. This context sets the stage for the degree of partnership and trust that will result. These attributes may allow processes to work well in periods of relative stability but unless they evolve will prove to compromise the enterprise during times of significant business turbulence and change. Our case for this is based on history and observation, applying the thoughts and experience of a great many leaders in business and IT management and organizational design and development. The key point is to think of these problems in terms of organizations and people, and not solely management and governance processes.

Through the years IT has always been challenged by perceived failures in business partnerships and trust, and IT has always been challenged to respond quickly and nimbly to turbulence and change. One only has to review the books and journals of the last 50 years to see the consistent and recurring concerns about these challenges. The current heightened economic turbulence and transformational technology changes significantly exacerbate this 50-year pattern of failure and disappointment.
Business brings its own myopia to the stage. While it is an easy target to focus on the IT side of trust, business has its own culture, processes, and barriers to the partnership. This is an equal opportunity discussion.

Overcoming the barriers, really “breaking down the walls,” means establishing the partnership, the close relationships between IT and business. It means opening up the silos between and among business and IT. This will allow the business and IT to overcome turbulence and change with effective management and governance processes. In this way, IT and the business, working together, can successfully pursue the opportunities this affords the business.

**Business and IT: A Complex Relationship**

In its most simple form, the IT organization and an individual business unit have a complex relationship within the enterprise. For example, at one level, the IT organization provides IT services and capabilities to the business unit. This is a service relationship, with IT providing IT services and business consuming them. At another level, the IT organization and business unit must work together to create business value for the enterprise. This is a partnership relationship, in which business and IT work together on common goals. The multiple aspects of the relationship range from planning through operation. Exhibit 1.2 shows seven of those aspects (such as Planning & Innovation) that are the subject of Strategic IT Management.

Reality brings complexity to this simple model. While we may speak of “the IT organization” and “IT service providers” (and, of course, the “business

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Exhibit 1.2  Strategic IT Management
unit”), in fact, IT is delivered to the business in many ways. For example, delivery is achieved through enterprise-level IT organizations (perhaps one or more separate organizations for network, ERP, corporate e-mail), outside providers (e.g., application-specific services like sales force automation), inside providers (e.g., specialized units within the business unit such as market/design support groups), and even individual providers (e.g., acquiring and using PCs/workstations/other technologies). Furthermore, the IT actually delivered across business functions is comprised of several specific services: applications (including data management), infrastructure (e.g., e-mail, Internet), projects, support (e.g., help desk), and management (e.g., assistance in acquiring PCs and tablets, etc.). Of course, the business unit itself is made up of a plethora of individuals, functions, and organizational subunits, all of which have various needs and opportunities for the IT being provided to them.

Having said all that, if we step away from the messy details of multiple IT sources and multiple business units and the many processes required to provide required IT services, such as planning, governance, operations, and the like, we can generalize with the simple statement that business and IT are linked in a relationship bound by partnership. They do things together, depend to various degrees on one another, and mutually work toward overall business goals such as competitiveness and operational excellence, measured ultimately by bottom line (or for government, mission) performance. Business and IT are, or at least should be, in a partnership relationship—one that is hopefully mutually successful. Understanding this allows principles to be defined that can help create and sustain that mutually successful goal. We expand on the nature of this partnership in subsequent chapters, and introduce and describe the full meaning of the Total Value Performance Model. Here, its message reinforces the concept of mutual interest, common goals, and the partnership between business and IT.

Overall, of course, our story is based on two concepts. First, that turbulence and its cousins uncertainty and change greatly affect the success or failure of the relationship. Second, that the existing “best practices” that characterize the operational aspects of the relationships (e.g., planning through operational excellence) must accommodate turbulence and uncertainty and also build partnership and trust in the relationship.

Our goal is to describe how IT organization(s) develop the capabilities to participate in and strengthen the relationships with business and, in so doing, better contend with the turbulence and uncertainty that plagues everyone. However, we go beyond thinking that this is just an IT problem; it is an enterprise-wide problem, equally involving business and IT. As a consequence, the business is as challenged to develop the respective capabilities to participate and strengthen the relationship with IT as IT is with the business.
IT’s Value Is a Core Issue

Since the 1960s everyone, it seems, has been working on the problem of linking IT to business organizations and the bottom-line outcomes produced. Much of the literature back then talks about the same issues of partnership, trust, and the gap between business and IT. More than 50 years have lapsed and we are still talking about the same things.

Part of the problem is the age-old “IT value” issue. Paul Strassmann devoted considerable research since the 1980s to the basic proposition that there is no correlative relationship between IT spending levels and business performance. In other words, enterprises that spend more on IT do not show higher profitability or returns. Faisal Hoque, in his descriptive book on consulting frameworks, presents some arguments that increasing maturities lead to better performance, but the connection is not causative. Simply put, there is little real data in the literature, other than Strassmann’s, that talks to the issue of IT’s value in meaningful financial or value terms. Yes, business cases are constructed for individual investments. However, there are still many open questions. How reliable are the results; what is included and what is not; what about intangible benefits and costs; how is the uncertainty of future outcomes accounted for, and so on? So far, for ex ante business cases, the ex post realization of the business case is rarely confirmed, let alone controlled.

This is simplistic, of course, because IT is certainly the heartblood of most business. Most industries could not function without IT—but the same can be said of electricity and other infrastructures. This is what led Nicholas Carr to argue that IT does not matter in competitive or distinctiveness terms: IT is simply a commodity, something that has to exist in order to do business. So the business–IT relationship, affected by barriers, poor partnership, and lack of trust, is also challenged by a poor understanding of IT’s value. This, along with lack of credibility about IT’s operational and project-development performance, erodes the relationship.

Challenges to Overcoming the Barriers and Walls

Finding new ways of managing IT and the business partnership is critical for all IT organizations and managers. It is difficult to imagine an industry that has not experienced IT-sparked transformations in how business is done, for example in working with customers, managing supply chains, providing insight into competitive and customer behaviors, and so on. Overall, there can be little question about the ongoing absorption of IT into the business. Demand for agility and speed, the use of information for strategic purposes, the role of the Internet in enabling this—all of these signal the incredible potential for even greater investment in IT. These transformative qualities are coming along
faster, as Chapters 3 and 4 point out, requiring the enterprise leaders to raise their game.

The challenges of addressing these transformations are reflected in five fundamental barriers to partnership and trust—and barriers to the ability to respond faster and better to turbulence and change:

- **IT’s Culture and Processes.** Several factors play into this barrier, but it can be summed up as being IT-centric rather than business-centric.
- **Business Failure of Accountability.** While the IT function may be IT-centric, business management does not understand its role or responsibilities in the partnership. The entire business, not IT alone, is responsible for applying information technology effectively within the business.
- **CIOs Are Not Providing the Leadership.** The CIO sets the tone and substance for the business and IT relationship. Without this, the partnership and trust suffers.
- **CEOs Are Not Setting the Stage.** Similarly, the CEO sets the tone for the enterprise as a whole, ranging from acknowledging IT’s role through encouraging business management to take notice and play their role effectively.
- **Lack of Capabilities.** Both the business and IT sides lack the capability to anticipate and manage change. In particular, there is a lack of Dynamic Capability.

In many ways, these barriers are opposite sides of the same coin.

**So Why Haven’t These Problems Been Solved?**

Where have the failures been?

A major problem is trust. Our premise is that a large part of failing to solve the problem is failure of trust between business and IT. This chapter lays out the groundwork, and we will return to this theme in Chapters 5 and 6. A second major problem is bureaucracy and associated time delays in performance. A third problem is the false notion that “one size fits all”—despite which, best practices and methodology seems to operate as though one size does in fact fit all. But fourth—and this is the most important—the prescriptions and processes that others have developed are mostly IT-centric, always focused on how to fix IT. In truth, it is a combined problem of both business and IT. And there is a fifth problem, voiced by Nicholas Carr. Maybe IT does not matter; maybe IT is really a commodity, and there is no competitive distinctiveness involved. We have always had these problems. But lack of trust, partnership, and the increase in turbulence and change make it worse.
We characterize the business–IT relationships, and the best practices that connect them, as the management of IT Supply and Demand. We will elaborate on these ideas a bit later, but these form the foundation of the relationship and practices that must evolve to contend with the kind of turbulence, change, uncertainty, and distrust we have identified and will discuss in coming chapters. We have seen many of these ideas since the publication of Bob Benson’s book a decade ago, From Business Strategy to IT Action.\(^\text{14}\) In the last decade, IT has become so much more of a “given” in business—something that every enterprise has to have, simply to play. Whether back-office or customer-facing or in the supply chain, IT is in the fabric of the business. And there are considerable new possibilities for every business to exploit IT, whether the application is business intelligence, a radical change to customer experiences, restructured supply chains, or any other use.

Exhibit 1.2, earlier in this chapter, shows one view of the partnership and service connections between the enterprise and IT. As we have emphasized previously, by IT we mean all sources of IT, whether internal to the business unit, a corporate IT organization, an external provider such as outsourcers and cloud-based services, or “do-it-yourself” IT developed by individual business activities or individuals. The connections exist for all, and all must be a part of developing an effective business–IT relationship.

To Solve These Problems, We Apply the Concepts of Strategic Management to Business and IT

We adapt the terminology and definitions of Strategic Management to the specific problem of effectively and efficiently supporting the business with information and IT. We base strategic IT management on the strategic management frameworks developed in the 1970s and thereafter. Their core idea is that management has to take a holistic view of the assets and resources available to the business and optimally deploy these assets and resources in pursuit of the strategic objectives and outcomes desired. One need only recall the introduction of Design for Manufacturability concepts in the 1980s to appreciate that leaders can overcome seemingly intractable divisions. When approaching IT, the same core idea applies. Management has to take a holistic view of the IT assets and resources available and optimally deploy them in pursuit of the business strategic objectives and outcomes desired.

This is a direct assault on the silo approach that infects business and IT. In IT in particular, it is so easy to separate the technology issues from the organization that it is perhaps understandable when a bureaucratic collection of turf and technical visions is produced (e.g., infrastructure, software development, data management, architecture, operations, etc.). The same applies to business organizations, where functional areas become silos, as do individual
lines of business. In both cases, the silo approach restricts flexibility and speed in responding to business requirements and turbulent change.

But what is Strategic Management exactly? Broadly, it is end-to-end planning and management of a business’s strategies and strategic goals from initial planning through the organization and implementation processes, as well as the required management actions to deliver them successfully. Strategic Management takes a holistic view of the business, its competitive and operational strategies (mission and mission strategies in the case of government), and the complete set of decisions and actions necessary to achieve those strategies. When applied to IT, the same definition applies. The strategic management concept is a new framework for managing the IT and business partnership, and is critical for all IT organizations and managers. Note that Strategic IT Management is not “treating the business as IT’s customer.” It is a partnership, with all that implies.16

The Emergence of Strategic IT Management

In influential authors on management of (or management and) information strategy and systems discuss a “three-era model,” which consists of a data processing (DP) era, a management information systems (MIS) era, and a strategic information systems (SIS) era. The DP era was a period where IT was efficiency driven and mainly function in a support role to improve existing data-intensive business processes. In the MIS era, focus of IT was to support management decision making (e.g., by providing exception reporting). During these eras, the objective of the application of information technology was to improve the internal functioning of the firm, either by adapting or changing business processes or by providing adequate management information to managers on all levels of management. The latter was made possible by new database concepts like the relational database.

The current SIS era has a fundamentally different view on the impact of IT, as it perceives the enterprise as an open system, contrary to the former views that looked at the enterprise as a closed system, the internal functioning of which had to be improved by IT. The open view included the notion that IT might have an impact on the (competitive) market position of the business. IT applications were to support that existing market position, or had the enabling possibility to shape new strategies. IT could dramatically change the firm! IT could offer a competitive advantage or could be a competitive necessity because of competitors who develops new IT-based concepts. For each era, practices, methods, and tools were developed and applied to support IT planning.18

The three eras have in common that the IT function is positioned as a separate function that maintains relations with business functions; the role of the IT function is to support the existing business organization or to enable
new strategies and structures. Steering committees and linking roles are needed to shape the business–IT collaboration at all levels.

In their analysis of strategic planning for information systems, Ward and Peppard conclude that a subsequent era has emerged: the era of the organizational IS capability. They define the IS capability as “the ability of an organization to deliver business value from investments in IS/IT continuously.” According to Ward and Peppard, this capability goes beyond seeking alignment and opportunities for competitive impact of IT. It is a capability that is ingrained in the activities of the organization.

Our book builds on this view and moves forward to Strategic IT Management. We define the firm’s IT capability as an organization-wide capability that depends on competencies of the business and IT functions. As a consequence, creating business value with IT is a business-wide responsibility, in which business and IT functions have distinct roles to play. In this book, we analyze the elements that compose the IT capability and the required competencies of business and IT functions upon which the IT capability depends.

**Strategic IT Management Is a New Approach to Old Problems**

Strategic IT Management is based on seven enterprise IT capabilities every enterprise must have. These capabilities connect business and IT; they are not specifically IT or business; rather they represent capabilities that the business and IT must have together.

**The Enterprise IT Capability for Strategic Thinking and Action about IT in the Business**

*Planning & Innovation.* An enterprise requires the capability for business and IT (together) to define the future of the business and its use of information and IT.

This capability requires the ability to establish strategies, products/services, and business models; to describe the turbulence and uncertainty affecting the business; to forecast its requirements or means for reacting to uncertainty; to understand competitive and performance requirements; and to respond to its requirements and uncertainty with viable plans, goals, and roadmaps for all its IT, as well as to do so successfully in conditions of turbulence.

**The Enterprise IT Capabilities to Deliver Value through IT**

*Service & Resource Optimization.* An enterprise requires the capability to optimize the sourcing, development, and application of all its IT services and resources, from all sources: internal IT, business-unit IT activities, suppliers, and do-it-yourself IT activities.
**Development & Transformation.** An enterprise requires the capability to develop, implement, and apply information and IT capabilities to change and transform the enterprise so that superior returns can be achieved.

**Information & Intelligence.** An enterprise requires the capability to acquire, manage, analyze, and apply the vast information sources at its disposal in all relevant enterprise areas.

**The Enterprise IT Capabilities to Execute IT in Partnership with the Business**

**Service & Operational Excellence.** An enterprise requires the capability to perform its IT services with operational excellence and the right balance of adaptability/flexibility toward standards and stability (and, overall, holistically covering the enterprise and all its IT).

**Sourcing.** An enterprise requires the capability to define, plan, acquire, manage, and effectively employ IT services from all sources: internal IT, business-unit IT activities, suppliers, and do-it-yourself IT activities.

**Cost & Performance.** An enterprise requires the capability to capture and analyze the complete IT costs from all sources and applications of information and IT, and to describe its IT performance requirements and metrics, from the business perspective.

Taken together, these seven capabilities create a systemic capability for the enterprise to exploit IT for maximum value and response to turbulence and uncertainty.

**Enterprise IT Capabilities Cannot Be IT-Centric: They Require a Partnership**

Enterprise IT capabilities are the essence of Strategic IT Management—mobilizing and directing all relevant enterprise resources to achieve strategic purposes, namely achieving superior business value and enabling superior business responses to turbulence. All IT resources, however sourced (e.g., internal, external), and all business resources (e.g., process management, planning and decision-making, product and customer activities, etc.) are engaged in the process of “transforming business in turbulent times.” This is a concertedly holistic approach.

*The enterprise IT capabilities are those of the business and IT partnership.* Again, these seven capabilities are not simply reworked IT processes. Enterprise capabilities are not focused solely on IT. These capabilities are at the enterprise level, with all stakeholders, in a trusting partnership.
Enterprise IT Capabilities Focus on the Enterprise’s Ability to Produce Value and Respond to Turbulence

We frame these capabilities in the seven-part perspective shown in Exhibit 1.3. These seven capabilities reflect the required management and governance activities that—fully engaging both business and IT—effectively enable the full power of IT to improve and transform the business. In subsequent chapters we’ll explore each of these in detail, including the idea that it is not critical who acts as pilot and copilot in performing the processes; rather, it is important that they occur in a climate of trust and partnership with the requisite speed and flexibility to respond effectively to turbulence and change in the business and technology environments. This requires both business and IT to take proactive steps together rather than simply react to circumstance. These connections can exist in informal relationships and in formal organizational structures and processes. For example, the first, “Planning for the Use of Information and IT,” can be as simple as having conversations between an IT manager and a business manager or as complex as a multistep strategic planning process. Perhaps IT is involved in the business strategic planning itself. All kinds of patterns exist: The hope is that the function is satisfied, namely that the process will “find and implement the best business opportunities for applying information technology to transform the business,” as shown as the first element of Exhibit 1.3.

Some of these enterprise IT capabilities deal mostly with IT Demand. Some of the connections deal with day-to-day activities, or the relationships between IT service providers. Critically, each of these connections has a “dynamic capability” component requiring the ability to respond effectively to turbulence and uncertainty.

As shown in Exhibit 1.3, each enterprise IT capability does include traditional IT-centric topics, but with the specific additional focus on business-centric issues. New in our approach is the combination of a thorough examination of the management and governance activities together with a clear assessment of the reasons they currently do not work well. At the same time, we are mindful of the stage theory for the effectiveness of IT organizations as presented in Chapter 2: the notion that what an organization is ultimately capable of doing is dependent on its success in performing more foundational tasks, such as operational excellence, software development, and so forth.

We package the end-point characteristics into overall solutions and specifics of the seven areas of management governance as shown in Exhibit 1.3, and in the process address barriers with restructured governance and management processes. We focus on planning, financial management, accountability, operational excellence, and development. We use tools like portfolio management, PMOs, and governance structures. These are described in Part III. Their
### Exhibit 1.3  Seven Enterprise IT Capabilities and Outcomes

<table>
<thead>
<tr>
<th>Enterprise IT Capability</th>
<th>The Enterprise—business and IT working together—is capable of this: (IT Perspective)</th>
<th>The Enterprise—business and IT working together—is capable of this: (Business Perspective)</th>
<th>The Enterprise is capable of this: (to deal with turbulence and uncertainty)</th>
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| Planning & Innovation    | 1. Plan for the Use of Information and IT  
2. Match IT Supply to IT Demand | 1. See the potentially massive disruptions in business and technology  
2. Understand the potential for IT as transformational force  
3. Move beyond business as usual  
4. Take a holistic perspective of the business; overcome the silo mentality.  
5. Ensure that business and IT work in partnership  
6. Understand the business  
7. Think strategically  
8. Find business innovations through the use of information and IT  
9. Adopt “sense and respond” to fast moving business requirements  
10. See and understand industry patterns  
11. Rise above the IT-centric perspective  
12. Plan for adaptive/dynamic IT (These apply to all seven IT Enterprise Capabilities) | • Perform faster, produce quicker responses, enable dynamic business changes  
• Adopt enabling architectures and capabilities necessary for dynamic IT |
| Development & Transformation | 3. Maximize Project Value | | |
| Information & Intelligence | 4. Apply Analytics and Data | | |
| Services & Resources Optimization | 5. Manage IT Assets  
6. Strategic Sourcing | | |
| Sourcing | 7. Make the Best Decisions among the Alternatives for IT Sourcing  
8. Manage Sourcing Decisions | | |
| Cost & Performance | 9. Know and Manage Costs  
10. Understand the Cost and Value of all Information and IT | | |
| Service & Operational Excellence | 11. Perform Service Excellence in all Five IT Service Portfolios  
12. Deliver IT Services to the Business | | |
power lies in how they address the fundamental issues of trust and turbulence. Overall, these represent the capabilities and capabilities the enterprise (IT and business) simply must have to address current challenges in business and technology.

Note that we do not call for the “integration” of business and IT. Rather, we look for IT to take its place as one of the core business functional areas. Like any other business function, information and IT are used in the business, however supplied. This makes the concerns as to how IT is supplied simply a supply problem, unrelated to the specifics of how to use it effectively in the business. Other than details like cost, reliability, and flexibility, no one really cares about the details of supply. This is not an integration issue; it is a relationship within the business issue.

But look carefully at the business perspective column in Exhibit 1.3. While many of these capabilities have the characteristics of a process (e.g., partnership, planning, overcoming silos), most focus on the attitude that business executives and professionals take about IT. For example, the capabilities raise the expectations for understanding the transformational role of IT, understanding the industry disruptions, and generally thinking strategically about IT. This is major, and it describes much of the capabilities gap between IT and business. Indeed, it underlies the importance of fully developing the enterprise IT capabilities, with IT and business working together. This is not an IT problem; it is equally a business problem.

Of course, identifying the issue as a problem for both business and IT also emphasizes the challenges of accomplishing this in the context of turbulence in IT itself, particularly given the organizational changes in how IT is supplied to the business. Again, this emphasizes the need for thinking holistically about the capabilities the enterprise requires.

**Strategic IT Management Changes the Mental Models about IT in the Enterprise**

A mental model is a representation of how things work, the relationships of things, “the ideas and beliefs we use to guide our actions . . . we use them to explain cause and effect as we see them, and to give meaning to our experience.” Peter Senge has remarked that to achieve change, one first changes the mental model. Gary Hamel states that “to design business models, the existing mental models must first be exposed and challenged. Mental models form and reinforce the current business model.”

There are, of course, a great many patterns of mental models that have been applied to enterprises. Many are old, such as Fayol and Weber’s view of the hierarchical organization. Many others have evolved—for example,
Ansoff’s view of turbulence in the enterprise, Porter’s competitive models, and so forth. Most if not all of these mental models apply to the business domain: its position in its industry, its competitive position, the role of the customer, the supply chain. Mental models for IT are developed as well; for example, see Weill's and Ross’s view of the possible IT organizational forms (e.g., federal, centralized, etc.). In all cases, the mental model gives a vocabulary and a visual image of the specifics introduced in the model, which is helpful in giving “meaning to our experience” per the earlier quote.

Gary Hamel gives a strong argument that mental models applied to business are changing—and that they must change to deal with turbulence and uncertainty. He notes that the 20th century evolved a pretty clear business management model involving Standardization, Specialization of Tasks and Functions, Goal Alignment, Hierarchy, Planning and Control, and Extrinsic Rewards. He argues that while this has been valuable, particularly in conditions of relative stability, the current evolution of the management mental model has to embrace variety, flexibility, activism, meaning (for the actors in it), and serendipity.

Thomas Davenport and his coauthors give a striking commentary on the changes in the business mental model, with words that characterize a From and To view. The from is the traditional model; the to is the expected changed model. The words are like Sales Push to Customer Pull, Production to Value Innovation focus, High Finished Good to Direct Delivery to Customer, Ownership of Production to Outsourcing. These Davenport and Hamel discussions certainly fuel our discussion of turbulence in Chapters 3 and 5; here, they give important examples of what we mean by mental models. They are the ways managers, both business and IT, visualize, understand, and communicate the essence of the business in which they are engaged.

Our particular interest here is the mental model on which managers rely, which describes the relationships between business and IT. Much of this model is based on assumptions managers have about the kind of business they are, the role IT plays in the business, and the best way to govern, plan, and control IT. Our position is threefold:

- It is likely that business and IT, for a particular enterprise, in fact have different mental models about IT in the enterprise and the role that business and IT organizations have in planning and managing IT.
- It is likely that the mental model about IT in the enterprise is inappropriate for the current business context for the enterprise.
- It is even more likely that increased turbulence will necessitate changes in the mental model and, accordingly, will drive even more differences in perspective between business and IT.
Our mental model addresses the assumptions managers have about six aspects of the business/IT relationship. Using a From and To perspective, the role of Strategic IT Management is to enable the enterprise to achieve a To endpoint in each of the six aspects of the relationship.

Of course this begs the critical question of whether the From position is bad and the To position is “good.” We, of course, believe so, as you will note that the difference between our From and To is moving from a separate IT-centric technology organizational posture to a business-centric partnering relationship. Whether that is good on its merits remains to be seen; however, we believe it is critical. We also do not believe that one size fits all, and it may well be that for some enterprises, our From position is perfect. What comes to mind is an enterprise in a very unchanging business environment with little competition and stable demand for its products and services. These do exist. However, we also believe that our current climate of turbulence ultimately affects all and, more pertinently, that many of the traditional IT characteristics really do not serve the enterprise well. We will in subsequent chapters consider this one-size-fits-all issue.

Here, we describe these assumptions with two very distinct endpoints for each characteristic. At a high level, this model is shown in Exhibit 1.4, Changing Enterprise Characteristics. It describes one end of the endpoint as traditional; by this we mean viewing IT as it evolved from early data processing through MIS stages of development. As such, we observe that most, if not all, enterprises have been at the traditional end at some point in their history—and perhaps even today. We describe the other end as not traditional; by this we mean the evolution of the business–IT relationship into a more partnership-oriented, business turbulence–capable, and strategic destination. We do not attempt to specify the nature of this To destination; this is enterprise-specific. But the overall characteristics described here do apply.

Exhibit 1.4 shows a high-level comparison of the two endpoints, the From and the To. These are described in black/white terms; of course, no individual enterprise would be completely at one end or the other, and various parts of the enterprise and IT organizations would have different characteristics. But it is useful to consider where an enterprise is and where it needs to go.

(For self-assessment, pick the Enterprise Characteristics number that most closely reflects your enterprise. Choosing a 1 means the left-hand column is most descriptive; a 5 means the right is most descriptive. Exhibit 1.5 shows an example for two enterprises.)

The seven enterprise IT capabilities expect to cause change in the way information and IT are planned, managed, deployed, and provided to the enterprise, particularly in response to turbulence and uncertainty but also to
### Exhibit 1.4 Changing Enterprise Characteristics

<table>
<thead>
<tr>
<th>Enterprise Business and IT Characteristics</th>
<th>From The Traditional View</th>
<th>To The Transformational View—The evolution to partnership-oriented, turbulence-capable, strategic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business environmental context</strong></td>
<td>The environment is stable, static. Changes come in relatively constant speed and are not transformational. The business and IT organizations focus on the enterprise level.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>IT's primary focus</strong></td>
<td>Cost reduction, cost management is key.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>The values IT places on the business solutions delivered to the business</strong></td>
<td>Stability, engineering, specifications, responsive to business requirements.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>The approach to governance</strong></td>
<td>Hierarchical, orientation to control.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>IT's basic culture and values</strong></td>
<td>Command the technology. Respond to the business. Service an arm's-length service client.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>How business views the relationship of IT and business organizations</strong></td>
<td>Business is viewed as client, defines requirements. IT operates the technology, provides technical expertise. IT is a sole provider.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td><strong>How IT views the relationship of IT and business organizations</strong></td>
<td>IT is reactive to the business. Business is viewed as a client, defines requirements. IT operates the technology, provides technical expertise. IT is a sole provider.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

The environment is turbulent, dynamic. Change comes in unexpected ways and speeds. The business and IT organizations focus on the business unit and lines of business.

Strategic focus, optimal (not lowest) cost is key.

Flexibility, adaptability and responsiveness, modular, meet expectations.

Network, participative, orientation to business problem solving.

Know the business, proactive with solutions to business, partner.

Business is viewed as partner, collaborative. IT as a transformative factor; IT functions as partner. Many sources of IT are possible and need management.

IT is proactive, in collaboration with business partners. Focus on strategic use of IT. Need to manage the many sources of IT.
simply create more value from IT. In effect, we expect the seven capabilities to be a central factor in changing the mental model about the enterprise and how information and IT is used, planned, and managed.

Consider how the current enterprise mental model exists in the minds of senior business and IT executives. This model, as stated previously, is used to guide management actions about the use and development of IT. Three contexts are important. First is whether the mental model, in the minds of business management, is the same as in IT management minds . . . or even more so, whether the mental model is consistent throughout the enterprise and IT silos. Second is whether the current mental model is, in fact, good for the enterprise. Our point ultimately is that the endpoint we define here is the desired model and indeed the destination for the enterprise and its application of Strategic IT Management. Third is whether the current mental model(s) is consistent with changing environmental conditions. In short, does turbulence create change in the requirements reflected in the enterprise model, which may cause disruption in how managers on both sides think about governance and the role IT should play?

Consider an enterprise and where it stands. Again, we understand that this analysis may be quite different for separate business units and even separate providers of IT to the enterprise. Nevertheless it is interesting to consider where the enterprise stands. Using Exhibit 1.4, we can consider the situation for two different enterprises, answered by the senior IT executives, in Exhibit 1.5.  

**Exhibit 1.5  Two Enterprise Examples**

<table>
<thead>
<tr>
<th>Enterprise Business and IT Characteristics</th>
<th>Enterprise 1 Characteristic</th>
<th>Enterprise 2 Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business environmental context</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>IT’s primary focus</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>The values IT places on the business solutions delivered to the business</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>The approach to governance</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>IT’s basic culture and values</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>How business views the relationship of IT and business organizations</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>How IT views the relationship of IT and business organizations</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
Obviously, as Exhibit 1.5 shows, these are two different enterprises (or possibly two different lines of business within the same enterprise). Does this mean anything? Consider the three points we suggested earlier:

- Is the mental model the same in business and IT? Assume the answer is no; this offers some room for concern and possible action.
- Is the current mental model good for the enterprise? This of course depends, but our sense is that fundamentally, in the 21st century, the answer is no for enterprise 1.
- Is the current mental model consistent with the turbulence in the enterprise environment? This is the magic question, and we’d need to know more. But for enterprise 1, again, we would say no.

To Whom Are We Writing? Who Is Our Audience? Whose Mental Models Are We Changing?

We write for both IT and business executives/managers/professionals. The IT audience is easily seen as a prime focus, as so much of the gap with business is laid at their feet, based on things like culture, ignorance about the business, and excessive focus on technology. Given that the CIOs at most North American companies are viewed as responsible for closing the gap, consequently requiring the IT managers and professionals to master the concepts we describe, perhaps that focus is appropriate. Yet business management bears a considerable amount of responsibility for the current state of affairs and certainly has mental models that get in the way of partnership. In Europe, of course, business managers may be the key actors.

The bottom line is that Strategic IT Management applies to both domains, balancing the responsibilities and requirements for mastering the skills and capabilities to effectively apply IT in the enterprise. In turbulent times, this is of paramount importance.

In short, the systemic capabilities represented by the seven Enterprise IT Capabilities are required for coping with turbulence and change:

**Strategic IT Management—The Business Outcomes**

*Deliver Superior Business Value.* This consists of strategic effectiveness/enlargement and operational effectiveness, which includes business and technical risk mitigation, and business and technical cost mitigation.

*Deliver Superior Responses to Turbulence and Uncertainty.* This consists of faster responses to conditions (as emphasized in Chapter 4), as well as adaptability and flexibility.
Strategic IT Management—The Systemic Capabilities for Producing the Outcomes

Build Trust and Partnership among Business(es) and IT(s). This consists of building the foundation for working together to achieve common goals, the essence of Strategic IT Management.

Provide Business and IT Leadership and Personal Responsibility. This includes individual accountability for results, as well as both business and IT leadership to overcome culture and trust barriers to the partnership.

Adapt to Enterprise and Leadership Characteristics and Culture. One size does not fit all, and Strategic IT Management approaches deal with the uniqueness of each enterprise.

Notes

2. See Chapter 5’s “Impact of Technology Turbulence” section for a description of the Hype Cycle.
5. See, for example, Susan Cramm, *8 Things We Hate about IT* (Harvard Business Press, 2010).
7. Recent developments in the “agile” community describe the barriers to adopting agile methods as people and culture. See, for example, Ken Collier, *Agile Analytics: A Value-Driven Approach to Business Intelligence and Data Warehousing* (Addison-Wesley, 2011) and Jim Highsmith, *Agile Project Management* (Addison-Wesley, 2004).
13. Michael Porter, quoted in Walter Kiechel, *The Lords of Strategy* (Harvard Business School Press, 2010): “To this day, I completely accept the premise that every company is different, that every company is unique . . . and there was a framework or structure for thinking about competition from which we can generalize.”


20. See Hunter and Westerman, *The Real Business of IT*. For example: “Effective CIOs do more than manage their units well; they help the rest of the company play their parts in producing and overseeing value generation” (p. xii).


23. See, for example, Chapter 8: Strategic Alignment, in Lane Dean, *The Chief Information Officers’ Body of Knowledge: People, Process, and Technology* (Wiley, 2011).


28. Amy Edmondson uses the term “framing” to describe how leaders set the context for a cross-organizational or multorganizational team: “A frame is a set of assumptions or beliefs about a situation.” The orientation is to a problem or project, not an enterprise or business unit, but the concept and value is similar. Amy Edmondson, *Teaming: How Organizations Learn, Innovate, and Compete in the Knowledge Economy* (Jossey-Bass, 2012).


32. See three case examples in Chapter 16 for other enterprise examples.