

DIGITIZATION AND SIMPLIFICATION

GETTING THE BEST OF BOTH

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IN THE DIGITAL AGE, companies are expected to connect with customers and run IT in simpler, more agile ways. In addition, companies need to provide accessible new channels for customers and suppliers, develop applications quickly, and optimize their use of the cloud and their data. Although IT complexity can hinder these efforts, there's a common perception that the problem resolves itself once a company starts down the digital path. Companies look at digital start-ups and see that they have managed to be nimble without simplifying. For many businesses, this begs a question: Is simplification still necessary in the digital era?

The short answer is yes. Indeed, in our experience, companies put themselves in the best position to reap the rewards of their digitization efforts when they undertake IT simplification in tandem. For example, consider the three main opportunities of digitization:

- *Stimulating growth* in and around the core business by enhancing product offerings, gaining actionable insights

(such as those that can be garnered from analyzing big data and monitoring social media), and improving the customer experience

- *Spurring efficiency* by streamlining processes (for example, by automating the supply chain) and reducing costs
- *Transforming the core* by optimizing the IT landscape and building up digital capabilities throughout the organization to better compete—and succeed—in the digital age

These opportunities hold great promise. But to take advantage of them, businesses will have to answer the following questions:

- How can we make the multitude of data sets accessible for more than their original purposes, unlocking the value for the benefit of the entire enterprise?
- How can we adjust our product portfolio and application architecture to support the digitization of business processes?

- How can we transform our IT infrastructure to support our digitization efforts?
- How can we turn IT into a “digital organization,” with more of a start-up mindset and a digital-ready workforce?

The answers to these questions lie in IT simplification. To realize the full potential of digitization, companies need to reduce unnecessary complexity in their IT systems, processes, and workforce. Only by doing so will businesses be able to develop applications nimbly and scale IT resources up and down as needed. Less complexity will also lead to improved IT efficiency, which will help companies maintain an IT cost structure that supports competitiveness and that allows for ongoing digital innovation.

To be sure, many start-ups are flexible, agile, and efficient. But their situations are different from those of established companies. Start-ups don't have to deal with legacy systems. For example, they can design IT systems from the ground up to use cloud services and big data analytics, facilitating, among other things, a 360-degree view of the customer. Established companies, by contrast, often find that their existing IT infrastructure is a major impediment to becoming more flexible, agile, and efficient. Cloud services don't always integrate into the infrastructure seamlessly, and customer views often have to be pieced together from multiple data sources with various tools. To implement their goals, established companies must develop more than a digitization strategy. They must also create a roadmap for simplifying their IT environment in a way that helps them achieve their digital objectives.

A Roadmap for Simplifying IT

Reducing unnecessary IT complexity isn't easy, but some companies have already seen significant success by following a multipronged approach. (See the sidebar “How to Rein in Excessive Complexity.”) Simplifying IT to support a digital transformation, however, calls for tweaking the traditional approach. Here, we answer the questions posed earlier, outlining four ways that companies can substantially reduce complexity that does not create value.

Organize and manage data differently. In many companies today, data is scattered among an array of systems; there is no clearly defined master data repository and no synchronization among the systems. Often, companies attempt to organize and manage their data by building a data warehouse on top of this structure and using data marts to give various business units access to the information they need. But this approach rarely provides the results that companies need; namely, the ability to view data in real time and to access consistent data company-wide.

To unlock the value of the information a company possesses, leaders should implement an architecture built around data clusters that are shared by all processes.

A European bank, for example, helped its digitization efforts by designing an IT application architecture around data clusters and three main application domains that correspond to client relationship functions, client-servicing functions, and transaction processing. Having organized the application architecture in this way, the bank could develop applications for each domain using the most appropriate methodology, instead of using one approach for all initiatives. For some projects, agile software-development methodologies might make the most sense; for others, the traditional waterfall model might be more appropriate. Indeed, the bank reduced the cost of developing applications by a third and shortened the development schedule. This design also gave all systems—including those of data providers and other corporate partners—easy access to the data they require. Legacy systems could then be refocused on providing transactional services—such as those that let a bank's customers manage their accounts and pay bills—the types of services such systems were designed to handle. In addition, this approach enabled the company to develop new digital applications that could easily tap the necessary data.

Simplify the product portfolio and the application architecture. In a typical product portfolio, 20 percent of a compa-

HOW TO REIN IN EXCESSIVE COMPLEXITY

The traditional approach to IT simplification is based on the following six levers. (See *Simplify IT: Six Ways to Reduce Complexity*, BCG Focus, March 2013.) These levers can be applied in unison or selectively, depending on a company's needs.

- *Intelligent Demand Management.* Help business units develop a clear understanding of the available IT resources and their costs, so managers can make informed decisions about how to consume them.
- *Scenario-Based Application and Data Simplification.* Look for ways to consolidate and decommission applications—or replace them with better, less complex alternatives—and to simplify the data landscape.
- *Infrastructure Technology-Pattern Reduction.* Embrace opportunities (for example, through standardization) to minimize the number of unique configurations of hardware and software.
- *A Simplified IT Organization and an Enabled IT Workforce.* Remove bottlenecks by trimming management layers and optimizing spans of controls. Also, ensure an appropriately sized and skilled IT staff.
- *Effective Governance and Simplified Processes.* Create a governance model that positions IT as a strategic partner of the business units, while streamlining IT processes.
- *A Shared-Services Model and Optimized Sourcing.* Pool demand and adopt a shared-services model for both external and internal resources.

ny's products generate 80 percent or more of its revenue. Eliminating the offerings that do not add value lets a business streamline the corresponding business processes and decrease the number of supporting applications, thus reducing IT complexity.

Identifying which products to eliminate requires the joint effort of business and IT stakeholders. Their first step should be to group the products into three categories: “differentiating products” that generate substantial profit and for which customization is economically reasonable; more “standard products,” whose differentiation comes not from features but from the company's brand, delivery speed, or the additional information provided; and third-party products, whose underlying complexity is irrelevant as long as they can be technically integrated into the company's own digital platform. The stakeholders' second step should be to determine the value that each product group contributes to the business.

A major financial-services company divided its capital markets products into groups. It then calculated each group's contribution margin, analyzing the associated business, operations, and IT costs. This calculation enabled the company to identify the products generating the least value—and to simplify its product offering and underlying IT systems without negatively affecting its bottom line.

It is also important to simplify the application architecture by implementing strong business-IT governance. Many companies take what seem to be the right steps toward IT simplification—such as replacing an ever-growing and fragmented array of applications with a single state-of-the-art system—yet they fail to achieve their goals for improving flexibility and agility. The problem is that existing complexity is carried over to the new system, not eliminated. To avoid this, IT and business stakeholders have to work closely together to ensure that business requirements are challenged when necessary and that sim-

plification is achieved by carefully weighing additional functionality against IT complexity.

The collaboration between IT and business stakeholders should not end there, however. IT should work with the business side to reduce current costs so that a higher percentage of the IT budget can be allocated to digital initiatives. Traditionally, business units do not know their IT costs or how to contribute to IT's cost-reduction efforts. On a regular basis, IT and the individual business units should discuss a cost breakdown that details the IT resources that can be influenced by the business unit. Typically, the business side can influence the number and types of critical applications, the transaction and storage volumes, the number of IT employees serving the business unit, and the number of desktops supported. During this regular "performance dialogue," participants can discuss the sources of significant cost increases (for example, rising storage requirements) and agree on measures to address them (such as reducing the level of service or decommissioning rarely used applications).

Standardize the IT infrastructure and transform the sourcing model. Standardizing a company's IT infrastructure will boost flexibility and agility by simplifying the provisioning and administration processes. Standardization lets companies take advantage of automated infrastructure provisioning and on-demand scalability and, thereby, launch new applications much more quickly.

An international services company is taking this step and building a simplified and standardized private-cloud infrastructure platform. This platform will enable the company to develop a self-service provisioning function that lets application teams log on to a portal to choose standard infrastructure components (for example, a logical server with predefined specifications, including the CPU performance, operating system, middleware, and database). By giving teams this flexibility, the company expects to reduce the time required for server provisioning and deployment from what had typically been several weeks (but on one occasion stretched to more than 150 days) to a few days.

It's also worth taking a close look at the company's sourcing model and asking how it could be simplified to more effectively seize digital opportunities. For example, if a company needs to replace a legacy platform, it could turn to transformational outsourcing and rely on a vendor to not only manage the existing system but also to lead the migration to the new platform. Such an approach is particularly valuable for companies that have limited experience with IT transformations. In general, companies should structure their sourcing relationships similar to partnerships in which the goals of each party are complementary and the value achieved is shared. An increasingly common practice is to link a vendor's financial compensation to business KPIs, such as the savings generated or the level of customer satisfaction achieved.

Adopt new tools and a collaborative approach. Agile software-development frameworks, such as Scrum, and lean development methods reduce IT development cycles to weeks or months. But companies should not completely eliminate traditional methodologies, such as the waterfall model. For many businesses, it makes sense to have the so-called two-speed IT, which employs traditional development processes for legacy systems and agile and lean methods for digital platforms.

Collaboration, too, is crucial. For this to happen, however, the workforce increasingly needs to speak both languages. The IT staff needs to understand the business experts' lingo, and the business side needs to understand technical terms and concepts. Only then will both sides be able to cooperate and make the right decisions, such as when it makes sense to use agile development methods.

Taking steps such as these will significantly help simplify the way many companies work. A European bank, for example, was able to implement a new customer experience in less than four months—cutting the cost of the project by more than 50 percent—by creating a joint IT-business team and applying agile methodologies. The team was comprised of IT and business

process specialists who had a good understanding of the existing setup and an ability to think creatively and see the other side's perspective. During development sprints, the team used special tools that let it collaboratively describe the new business process, translate it into an "application skeleton," and then fine-tune the skeleton. Together, the new tools and the new way of working spurred creativity and improved productivity.

Managing a Digital Transformation

No matter which industry a company is in, creating a digitization strategy has to be a team effort, developed jointly by the business and IT leadership. Executives need to agree on which digitization opportunities should be pursued and in what sequence, prioritize the IT-simplification levers, and develop a transformation plan.

Implementing best practices can help ensure the plan's success. The transformation should be governed jointly by business and IT stakeholders and should receive the commitment and support of top management. These actions will create company-wide momentum. It's also important that the company stay firmly in control of the transformation; although the company may outsource some tasks, it should ensure that it has sufficient project-delivery and technical capabilities to be the key decision maker on all design, implementation, and delivery issues, including selecting and managing vendors.

The rollout plan shouldn't be set in stone. As with everything else in the digital world, flexibility is important. For example, a major financial-services company is detailing

only the first six months of a three-year transformation plan and defining only critical milestones for the remaining two-and-a-half years. The plan will be reevaluated and updated every six months. Even critical milestones can change, so long as the completion date remains firm.

So how does a company start developing a digitization strategy? Executives should examine the digital trends that are relevant to their industry and perform an assessment of the company's capabilities. It's also important to assess customers' needs and competitors' activities. Finally, executives should identify the areas in IT that are ripe for simplification.

Contrary to what many leaders think, digitization does not make IT simplification obsolete. Indeed, digitization and simplification should be executed in parallel: simplifying IT makes a digital transformation more likely to succeed, and a digital transformation creates a wealth of opportunities to simplify IT. Undertaking them in tandem also lets CIOs take advantage of a significant investment budget for digitization—along with a strong buy-in from the business side and a commitment from top management—to simplify. As to the question of whether IT simplification is necessary in the digital age, the answer is a resounding yes. If the benefits aren't reason enough to embrace it, however, consider this: companies that simplify IT can operate more like start-ups—and can come closer to replicating their digital success.

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12/14