Speaker 1: Welcome to the MIT CISR Research Briefing series. The center for information systems research is based at the Sloan School of Management at MIT. We study digital transformation.

Stephanie Woerner: Hi, I’m Stephanie Woerner, principal research scientist and director of MIT CISR. Today I’m pleased to share with you a research briefing from the archives—a briefing from December 2005 authored by Jeanne Ross:

Forget Strategy: Focus IT on Your Operating Model

Most companies try to maximize value from IT in­vestments by aligning IT and IT-enabled business processes with business strategy. But business strat­egy is multi-faceted, encompassing decisions as to which markets to compete in, how to position the company in each market, and which capabilities to develop and leverage. In addition, strategic priorities can shift as companies respond to competitor initia­tives or seize new opportunities. As a result, strategy rarely offers sufficiently clear direction for devel­opment of stable IT and business process capabili­ties. IT is left to align with individual strategic initia­tives—after they are announced. Thus, IT becomes a persistent bottleneck.

To make IT a proactive rather than reactive force in creating business value, companies should define an operating model. An operating model is the ne­cessary level of business process integration and standardization for delivering goods and services to customers. By identifying integration and standardi­zation requirements, an operating model defines crit­ical IT and business process capabilities. This brief­ing explores how a company’s operating model guides IT investment and enhances business agility.

Four Alternative Operating Models

Companies make two important choices in the de­sign of their operations: the first is how standardized their business processes should be across operational units (business units, region, function, market seg­ment); and the second is how integrated their business processes should be across those units. In making these two choices, company management is target­ing one of four operating models:

One, Diversification (low standardization and low integration)

Two, Unification (high standardization and high integration)

Three, Coordination (low standardization and high integration)

And four, Replication (high standardization and low integration)

All four operating models represent viable alterna­tives for delivering goods and services to a compa­ny’s customers.

The Diversification model is a decentralized organi­zational design. Business units pursue different mar­kets with different products and services, and benefit from local autonomy in deciding how to address customer demands. Carlson, a $20 billion company of related but autonomous hospitality businesses, is an example of a Diversification model.

The Unification model describes a centralized organi­zational design. The company pursues the need for reliability, predictability, and low cost by standardizing business processes and sharing data across business units to create an end-to-end view of operations and a single face to the customer. Delta Air Lines’ standar­dized global business is an example of Unification.

The Coordination model focuses on integration. A Coordination model company creates a single face to its customers or a transparent supply chain without forcing specific process standards on its operating units. Toyota Europe, for example, shares product data across country business units so they can rapid­ly exchange automobiles and parts to meet customer needs.

The Replication model focuses on process standardi­zation. Operating units perform tasks the same way using the same systems so that they can generate global efficiencies and brand recognition. However, operating units rarely interact. As an example, Mar­riott replicates systems and processes related to a wide range of processes, including reservations, fre­quent guest rewards, wake-up calls, and revenue plan­ning in each of its independently managed hotels.

Implications for IT Investment

By identifying the intended level of business process integration and standardization, the operating model determines priorities for development of digital capa­bilities and thus IT investment. Accordingly, IT in­vestments not only address immediate business needs, they digitize key business capabilities, thereby build­ing a foundation for future business initiatives.

For example, CEMEX, a Replication company, has built a foundation based on process standardization. CEMEX has standardized eight key business processes: commercial (customer facing and cement logistics), ready mix manufacturing, accounting, planning and budgeting, operations, procurement, finance, and HR. Although the businesses reuse processes, they do not typically share data—each business is run autonomously. CEMEX has leve­raged its IT-enabled standardized processes in assi­milating acquisitions. For example, in 2000, CEMEX acquired Southland, the US’s second larg­est cement manufacturer, and completed assimilation in four months. Subsequent acquisitions have been assimilated in as little as two months.

While CEMEX has built standardized processes, Merrill Lynch’s Global Private Client business, known as GPC, has built a foundation of digitized processes to sup­port a Coordination model. GPC’s business objective is to provide a wide range of investment products to wealthy clients across a variety of channels (such as inte­ractions with a financial advisor, online access, and tele­phone access). To meet this objective, GPC devel­oped integrated product data and standardized customer interfaces on its Total Merrill platform. But GPC does not typically standardize business processes across the globe. GPC leverages these IT capabilities every time it introduces a new investment product or creates a new channel for accessing its products. As a result of GPC’s standard technology platform and access to shared business data, the com­pany has the best revenue per advisor, earnings per advisor, and assets per advisor in the industry.

As a Unification company, Dow Chemical seeks both integration and standardization to achieve efficiencies and meet the demands of global customers. Dow uses a single instance of SAP to support highly standardized core processes (such as manufacturing, finance, and logistics) while creating a global supply chain. Dow has leveraged these capabilities to grow profitably both organically and through acquisitions. From 1994 to 2004, despite a downturn in the mar­ket, Dow nearly doubled its revenues while growing its employee base less than 10%—a productivity improvement of eight percent per year.

By purposely not creating shared digital capabilities, the Diversification model encourages organic growth of individual business units and poses unlimited op­portunities for growth through acquisition. But be­cause Diversification leverages fewer capabilities than the other models, companies need to find syner­gies to create shareholder value.

Some Diversification companies are introducing shared services to gain economies of scale; others are diversifying into close­ly related businesses to feed a core business. For ex­ample, with its package delivery business at its core (a Unification model), UPS has diversified into a set of smaller, growth-oriented businesses such as UPS Supply Chain Solutions, UPS Capital Corporation, UPS Consulting, The UPS Store, and UPS Profes­sional Services. These new businesses cannot reuse the existing IT and business process foundation be­cause they operate differently, but they have become profitable in their own right while adding value by feeding the core business. As a result, UPS has con­tinued to grow while boasting an operating margin nearly three times the industry average.

Choosing an Operating Model

Although most companies can identify processes fitting every operating model, they need to select a single operating model to guide management think­ing and system implementations. Management can then organize business unit and IT responsibilities based on principles about how the company will op­erate most of the time. One way companies respond to conflicting demands is to adopt different operat­ing models at different organizational levels.

For example, Johnson & Johnson has long operated in the Diversification quadrant. But J&J’s US pharmaceutical group applies a Coordination model to present a single face to health care professionals. In Europe, Janssen Pharmaceutical Products applies a Replication model providing low-cost, standar­dized processes for drug marketing, delivery, and monitoring. Targeting different operating models at different organizational levels allows J&J to meet the multiple objectives of a large, complex company while keeping organizational design reasonably sim­ple at the individual operating company level.

Our research has found a strong preference across companies and industries for the Unification model. Data collected at 103 companies in 2004 indicated that 63% of companies were targeting Unification. Only nine percent were targeting Diversification; 17% were targeting Coordination; and 11% were targeting Replication operating models. The appeal of the Unification model is that it provides a thick foundation of digital capabilities to leverage in fu­ture business initiatives. However, implementing that foundation requires a great deal of time, money, and management focus.

In contrast, the Coordination and Replication operating models require less time for building capabilities before companies can start reusing them. These models abandon the centralization-decentralization tradeoffs by allo­cating different decision rights to the center and the business units. In a Replication model, local manag­ers must accept enterprise-wide process standards, but they have the autonomy to manage customer relationships locally. In a Coordination model, local managers accept enterprise-wide data standards and customer interfaces, but they have the autonomy to develop products and processes to achieve local business objectives. Companies should recognize that each operating model creates opportunities—but also creates limitations.

Making a Commitment

The operating model concept requires that manage­ment put a stake in the ground and declare which business processes will distinguish a company from its competitors. A poor choice of operating model—one that is not viable in a given market—will have dire consequences. But not choosing an operating model is just as risky. Without a clear operating mod­el, management careens from one market opportunity to the next, not leveraging reusable capabilities.

In adopting an operating model a company benefits from a paradox: standardization leads to flexibility. By building a foundation of standardized technolo­gy, data and/or processes, our research shows a company achieves more business agility and re­sponds to new market opportunities faster than its competitors. Admittedly, most companies will need to regularly experiment with initiatives that do not leverage their foundation. But an operating model provides needed direction for building a reusable foundation for business execution. IT becomes an asset instead of a bottleneck.

Speaker 1: Thanks for listening to this reading of MIT CISR research, and thanks to the sponsors and patrons who support our work. Get free access to more research on our website at cisr.mit.edu.