



IT consolidation and the bottom line

By Richard M. Melnicoff, Marc E. Snyder and Rockwell Bonecutter

There are few more ready means of improving earnings per share than the consolidation and rationalization of IT systems, hardware, networks and other infrastructure. In fact, this isn't about technology at all: It's a business decision with profound balance-sheet implications.

Once upon a time, there was a company committed to running its business better by giving managers the IT systems they needed. Given the economics and the technologies prevailing at the time, executives knew that rolling out new systems built on a distributed, server-based computing model would be the most cost-effective way to do this. They were even more pleased that managers in the company's five divisions could incrementally add new servers to meet growing processing demands or when new offices were established.

Fast-forward 15 years: Today, the company has accumulated more than 1,000 servers (some of which were swept up during the acquisition of a number of new businesses), consisting of a veritable rainbow of technical platforms and proprietary variations. These servers are spread over more than 50 locations. About half are housed in data centers, many of which (though not all) have an assortment of backup power sources and security and operations staff. The rest reside in closets or sit beside workers in various offices.

How much does it cost the company to run, back up, maintain, upgrade

and network all these servers? Unfortunately no one really knows. Top management has limited insight into the total amount spent on its IT systems. Decisions about replacements and most other technology investments were made lower in the organization (a common enough practice at the time), and now all this IT infrastructure is scattered over the books and budgets of different divisions.

The good news is that over the past 15 years, product designs and configurations and systems management technologies have changed to such a degree that it is now possible to reap significant savings through

infrastructure consolidation and rationalization. In fact, there are few more ready and material means of improving earnings per share than infrastructure consolidation and rationalization of operating systems, hardware and software, processing and storage, networks and facilities.

Infrastructure consolidation requires no additional customer channels, no new products, no new revenue streams or increases in gross margin, and no reformulations of core value propositions. It is based entirely on internal policy changes and program execution. In fact, it isn't really a technology decision at

all; it is a fundamental business decision with profound bottom-line implications.

Infrastructure consolidation represents a right-under-the-nose opportunity to boost both income statements and balance sheets. Annualized earnings-per-share returns for IT rationalization commonly range from a half-cent to one cent. We have seen such initiatives reduce annual IT infrastructure costs by anywhere from 15 percent to 40 percent, and capital spending during the next refresh cycle by 15 percent to 30 percent—no small change given the fact that IT spending today can account for more than 50 percent of the capital outlay of many large companies worldwide.

So if the business case is so clear, why hasn't there been a stampede of infrastructure consolidation initiatives? You can chalk it up to—in varying degrees—fear, uncertainty and doubt.

For most executives, these are uncharted waters; there is little or no precedent for this kind of nontraditional, one-off project.

It is well enough understood that the shift to the distributed, server-based computing model has been accompanied by a parallel decentralization of IT decision making. It is less commonly understood that the shift has also frequently brought about a decentralization of perspective, particularly financial perspective.

The financial information has always existed—in dozens of separate departmental IT budgets. Before you know it, this adds up to real money.

But the business case for adding it up—for assessing the aggregate business impact, or acting upon it—has simply seldom been made clear.

Moreover, until recently, analytic tools powerful and sophisticated enough to gather the information to build the business case did not exist. The C-suite has generally (and rightly) chosen to focus business improvement initiatives on top-line growth, or on other more traditional cost-reduction methods. Those leaders have assumed IT managers were getting the best overall bang for their IT infrastructure buck—which they indeed were, given the economic dynamics and technologies that have been the norm until relatively recently.

For their part, IT managers have been seeking better pricing from vendors, more optimal designs and improved performance technologies. Not only has the pursuit of broader, cross-business consolidation and rationalization simply been beyond their mandate; it has been made virtually impossible, given organizational barriers and disincentives.

In some organizations, a legacy of underdelivery on cross-business initiatives has complicated the equation and produced a C-suite reluctance to fund these initiatives. If IT has not consistently been able to deliver the value promise of limited infrastructure initiatives, the reasoning goes, how can it be expected to deliver on a consolidated enterprise-scale initiative? And just how disruptive is this going to be to my business? For most executives, these are uncharted waters; there is little or no precedent for this kind of nontraditional, one-off project.

When computing infrastructure becomes an intelligent force

With a compelling business case for infrastructure consolidation in hand (see story) and given a green light to proceed, where does a CIO begin, and what long-term plan can best provide guidance?

Accenture's recent research into the IT infrastructure programs that lead to high performance has shown that companies encounter several predictable barriers along the way to data center or infrastructure transformation. In some cases, for example, the focus of the infrastructure initiative is too narrow; a program may take place within technology silos, which ultimately undermines efforts at integration and standardization.

Communicating with key stakeholders within the organization about the status of their IT investments is critical to the success of any infrastructure consolidation program. But CIOs often encounter difficulty finding the accurate and timely information needed to initiate the transformation and then keep it going. Often, the left hand of business doesn't know what the right hand of consolidation is doing, so ongoing and immediate business needs may undermine the transformation program. As one CIO told us, "We believe the worst of the [infrastructure] proliferation has passed. . . . But the last 10 years created complexity, and keeping up with innovation meant having a little bit of everything."

Companies that achieve the greatest benefits from an integrated and consolidated IT infrastructure are those that establish and follow a long-range infrastructure transformation plan. The ultimate objectives are to enable a company to quickly take control of its IT costs, and enhance its system security. Cost savings in the early transformation phases can actually underwrite longer-term improvements that will drive additional value. Co-sourcing and outsourcing options should also be considered.

Our research, including discussions with CIOs, has validated a three-phased approach to creating the data center of the future—an approach that goes beyond cost savings to generate business value from IT infrastructure investments.

Phase 1: Consolidation and rationalization. A company's initial focus must be on consolidating and rationalizing servers, storage, and licenses for applications and systems software. It's actually possible to proceed through an orderly checklist: servers and mainframe, desktops and workstations, central operations, network and local support. Not only do the savings pile up; the nimbleness of the entire IT organization—its capacity and its ability to serve business needs in a timely manner—is greatly enhanced as well.

Phase 2: Infrastructure virtualization. What does it mean to "virtualize" a data center environment? Here's an analogy from the world of astronomy: Put one radio telescope in Paris, another in Moscow and a third in Rome, and, in effect, you create a virtual telescope as big as the triangular area bounded by those three cities. With data centers, we can put a virtual layer between an IT organization's applications and its hardware so that a mix of disparate servers appears as a single set of computing resources.

Why is that important? Because on top of this virtualized platform, organizations can install software products to help manage and provision hardware resources and continuously balance and consolidate workloads. They can move applications among various processing resources within their data centers to optimize performance across the enterprise.

Phase 3: Dynamically provisioned data centers. The final transformation phase fully exploits commoditized, virtualized system resources. Here, companies develop their capacity for "predictive operations"—utility computing capabilities that enable companies to measure, analyze, and anticipate business performance and application availability issues, and then request just the IT investment that's needed. When you turn your coffeemaker on in the morning, you need only enough electricity to do that; you don't want to be hit with a million gigawatts of power. In much the same way, dynamic provisioning says, "Here's what I need; give me that, but no more."

Prediction and automation give companies the capability to affect changes within their IT infrastructure to meet business demands and requirements for scalability, availability and reliability. The data center of the future is not only more cost-effective. It's a responsive, intelligent entity giving companies the exact computing resources they need, when they need them.

—D. Neil Gissler

Nor was it unreasonable for many IT managers to have been skeptical of infrastructure consolidation exercises, particularly in organizations with no track record of successfully transforming the business effectiveness of IT. First, as mid-range computing has evolved from attractive option to industry standard, the conceptual tide (and experience base) within IT has flowed in the opposite direction, away from the center. Second, most enterprises charge their senior IT executives primarily with operations management and project delivery. Integrated, stakeholder-based financial perspectives are welcome but not required.

In some cases, the C-suite has not been sufficiently apprised of the business opportunity due to more parochial disincentives operating in the IT management ranks. Infrastructure consolidations do carry perceptions of risk—particularly political risk—common to most large-scale, far-reaching IT initiatives. They can entail job reassignments, reducing the size of local organizations and cultural dislocation. They ask IT executives already concerned about their organization’s ability to directly manage close-at-hand infrastructure to place confidence in a model in which physical assets may be far removed or run by someone else.

Measuring the savings

In each layer of the infrastructure, there are opportunities to make changes that will reduce costs. Total IT infrastructure costs can be cut by as much as 25 percent.

Infrastructure layer	Example components	Sample cost-reduction opportunities	Typical % IT cost reduction
Network	<ul style="list-style-type: none"> • LAN/WAN • Voice/video • Remote/Internet 	<ul style="list-style-type: none"> • WAN Migration to IP-VPNs • Voice/video/data convergence • Carrier renegotiation/RFP • Use of managed services 	10-20
Platforms	<ul style="list-style-type: none"> • Data center • Legacy systems • Intel/uni servers • Storage 	<ul style="list-style-type: none"> • Data center consolidation • Server/storage consolidation • Outsourcing/out-tasking 	20-35
Enterprise-enabling infrastructure	<ul style="list-style-type: none"> • E-mail consolidation • Intranet/KM • Middleware/EAI • Database 	<ul style="list-style-type: none"> • License/maintenance fees • Eliminate duplicate services • Corporate data architecture 	20-35*
Application-enabling infrastructure	<ul style="list-style-type: none"> • Component frameworks • Application server • Development environment and tools 	<ul style="list-style-type: none"> • Component reuse • Development/training costs • Development infrastructure 	15-25*
Security	<ul style="list-style-type: none"> • Risk assesment • Security architecture • Enterprise security • Managed services 	<ul style="list-style-type: none"> • Reduced outages • Loss prevention • Single sign-on 	5-10 **
Operations management	<ul style="list-style-type: none"> • Performance planning • High availability • Service-level management 	<ul style="list-style-type: none"> • Contractor rationalization • Outsourcing/out-tasking • Reduced outages/downtime • Automation 	15-30*

* Additional savings may be recognized in other areas of IT

** Savings may be much higher in terms of loss prevention

SOURCE: ACCENTURE ANALYSIS

Therefore, perhaps the biggest impediment to IT infrastructure rationalization is behavioral. This is about turf and about governance—about fear on the part of divisional managers and their IT organizations that ceding control of their servers will undermine their ability to run their operations. Senior management has been loath to push such initiatives when divisional managers warn that their ability to deliver on commitments may be jeopardized.

IT infrastructure rationalization can be done, however, and, with proper planning, done in a relatively straightforward and programmatic way. And given the significant earnings-per-share upside, it is well worth the effort. Ten years into the mid-range computing revolution and two to three years (by our estimate) into the current era of centralized support and shared services, we believe there is a sufficient pool of market-tested experience to point to the right ways to go about this for predictable success.

There are reliable contingencies for the unexpected, methodologies for the proper care of “mission-critical” capabilities, and proven execution roadmaps. IT organizations can now selectively complement their own competencies to minimize risk, and scale or accelerate their efforts (see sidebar, page 75).

The consolidated view of IT expenditures does bring surprises. In some cases, the deep mining out of budget information produces the impression that consolidation has actually increased IT costs. In fact, the “new numbers” are the result of transparency and the surfacing of costs previously buried in departmental line items across the enterprise.

In our marketplace conversations, we do encounter IT organizations that understand the benefits of infrastructure consolidation, but see it only as an incrementally implemented adjunct to their existing distributed model. We would suggest market developments have made that viewpoint increasingly obsolete.

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