

## **THE FORRESTER REPORT**

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### **Executive Summary**

#### **The Catalytic CIO:      Organizational Architect**

Three forces -- the Internet, globalization, and a new generation of executives -- are driving top-performing CIOs to reinvent their roles. These Catalytic CIOs are the organizational architects of their companies.

Organizational architects: 1) work on the frontlines by using technology to redefine customer-facing processes; 2) drive efficiencies into -- and then lead -- the back office business functions; and 3) influence boardroom decisions by integrating business and IT strategies.

To become an organizational architect, CIOs must break the shackles of the constraints on CIO success by: 1) creating a new set of performance measures that clarify what IT success is; 2) developing new skill sets; and 3) delegating the time-intensive day-to-day management of technology to talented lieutenants.

## THE CATALYTIC CIO: ORGANIZATIONAL ARCHITECT

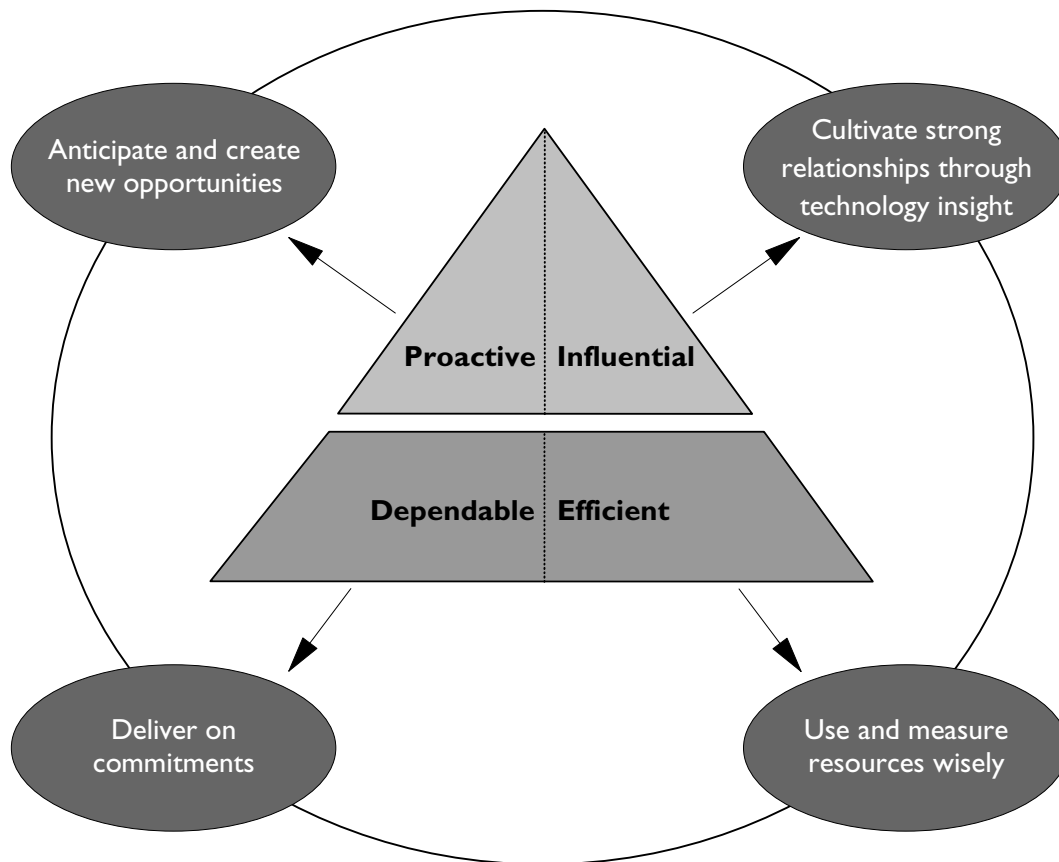
Catalytic IT groups build on a track record of dependability and efficiency to proactively identify IT opportunities and influence business direction (see Figure 1). They have intimate knowledge of business operations, place corporate objectives above technical needs, and gauge their success with business-focused performance measures (see the May, 1998 *Leadership Strategies Report*, “The Four Faces Of Catalytic IT”). But what does this mean for the leaders of Catalytic IT organizations? The answer is clear: CIOs of top-performing IT groups must reinvent *their* roles. Forrester believes that Catalytic CIOs:

- **Are the organizational architects of their companies.** These CIOs: 1) work on the frontlines, using technology to redefine customer-facing processes; 2) drive efficiencies into -- and then lead -- the back office business functions; and 3) influence boardroom decisions by integrating business and IT strategies.
- **Must break the shackles of today’s constraints on CIO success.** They: 1) create a new set of performance metrics that clarify what IT success is; 2) develop new skill sets; and 3) delegate the time-intensive day-to-day management of technology to talented lieutenants.
- **Need to redefine their relationships with other senior executives.** As organizational architects, Catalytic CIOs will play a different role on the executive team. To be effective, they will have to consciously reshape their relationships with other senior managers.

For this report, we spoke with senior IT executives at 26 large organizations about the challenges they face as CIO, the factors causing the CIO job to change, and what they’re doing to cope with these changes.

## THE FORCES DRIVING CHANGE IN THE CIO’S JOB

Why would today’s CIOs want to reinvent their roles? After all, they are well-positioned -- everyone we spoke with reports to a top company executive (see Figure 2-1). Nearly all CIOs, however, want to spend more time dealing with strategic business challenges and less time dealing with the day-to-day technology issues. Despite this aspiration, they’re held accountable primarily for technology delivery and operations, not business results (see Figure 2-2). What’s worse:

**Figure 1****Catalytic IT**

Source: Forrester Research, Inc.

Seventy percent told us that achieving their performance targets doesn't guarantee the satisfaction of senior management. Looking forward, our respondents saw their jobs changing as a result of three major forces: the Internet, globalization, and a new generation of senior executives (see Figure 2-3).

**The Internet Is Creating New Business Models And Opportunities**

The Internet -- as both a new distribution channel and a new platform for enterprise computing -- is forcing companies to rethink their business models and create new IT-based products and services. The CIOs we spoke with see this as the No. 1 factor impacting the role they play in their company.

"The need to create new business models is having the greatest impact on my job. We're moving into direct selling, iCommerce, and looking to achieve huge cycle time reductions in our core processes." (John White, Retired CIO, Compaq)

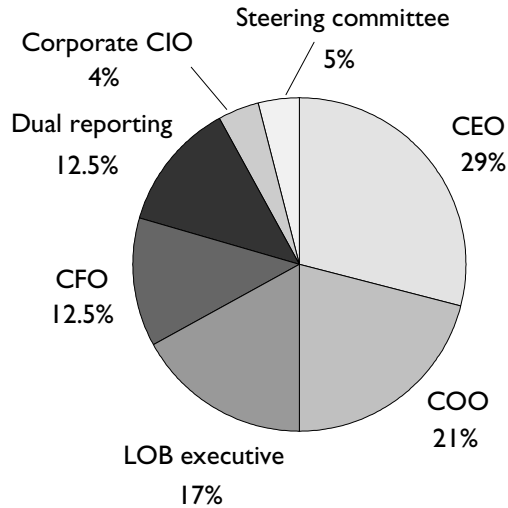
"Internet commerce is changing our industry's boundaries, requiring us to rethink how we customize and deliver our services. This will require our development teams to better understand how our

**Figure 2**

**Snapshot Of Today's CIO Role**

2-1

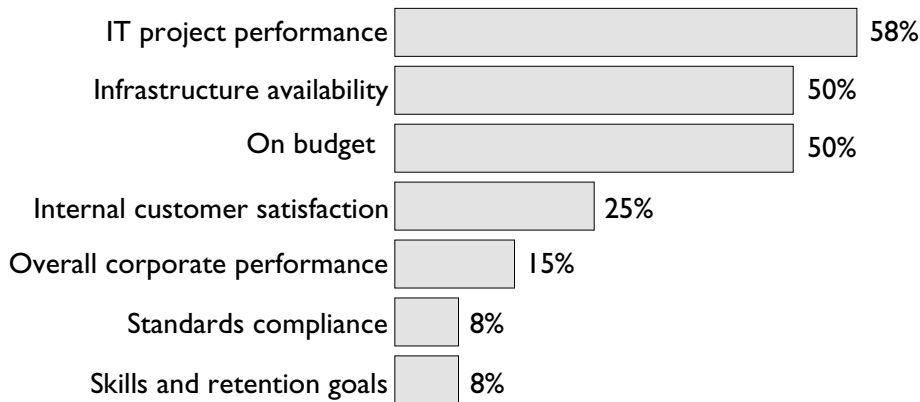
**“Who does the CIO report to?”**



Percent of 26 companies interviewed  
(multiple responses accepted)

2-2

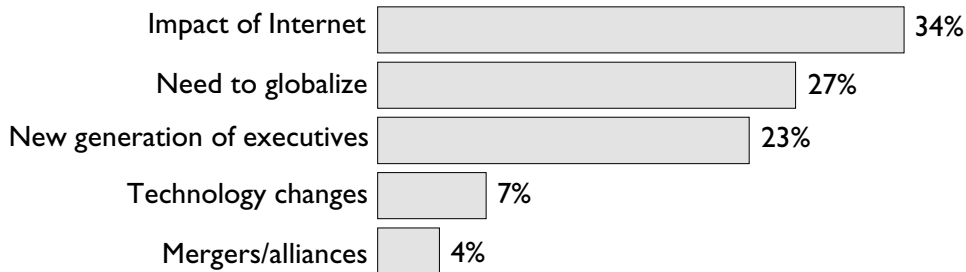
**“What performance metrics are CIOs held accountable for?”**



Percent of 26 companies interviewed  
(multiple responses accepted)

2-3

**“What factors are driving the CIO job to change?”**



Percent of 26 companies interviewed  
(multiple responses accepted)

Source: Forrester Research, Inc.

customers work with our services so that we can help them improve their business processes.” (Alan Jones, VP/GM/CIO, AT&T)

## **Globalization Requires New Behaviors And Skills From IT**

CIOs also recognize that the globalization efforts of their companies will have a major impact on their job responsibilities.

“I have to deal with more enterprisewide issues because of our global efforts. I’m trying to foster cultural changes and create a global infrastructure. Thus, I’m having to evolve into more of a business leadership position -- rather than just being the techno-guy.” (Bruce Barnes, CIO, Nationwide Financial)

“Globalization will cause a paradigm shift here. We may need to rethink where we locate our future call centers and distribution centers around the globe -- and global changes have a huge impact on this.” (Frank Giannantonio, CIO, Victoria’s Secret Catalogue)

## **A New Generation Of Technologically Sophisticated Executives Is Key**

A new generation of managers in the executive suite who are comfortable with technology is affecting CIOs’ relationship with top management. CIOs don’t need to spend as much time educating this new breed on the opportunity for IT to have real impact on business results.

“There’s a new generation of technology-savvy managers pushing from the middle. In some companies this produces tension with the older generation -- they have different views of how and where to use and justify IT.” (Dennis Mally, CIO, Wm. Wrigley Jr. Company)

“The younger guys in sales have a stronger understanding of technology than I do. I can even envision the company eliminating the CIO position altogether, with a Chief Operating Officer who has my responsibilities.” (CIO, Insurance company)

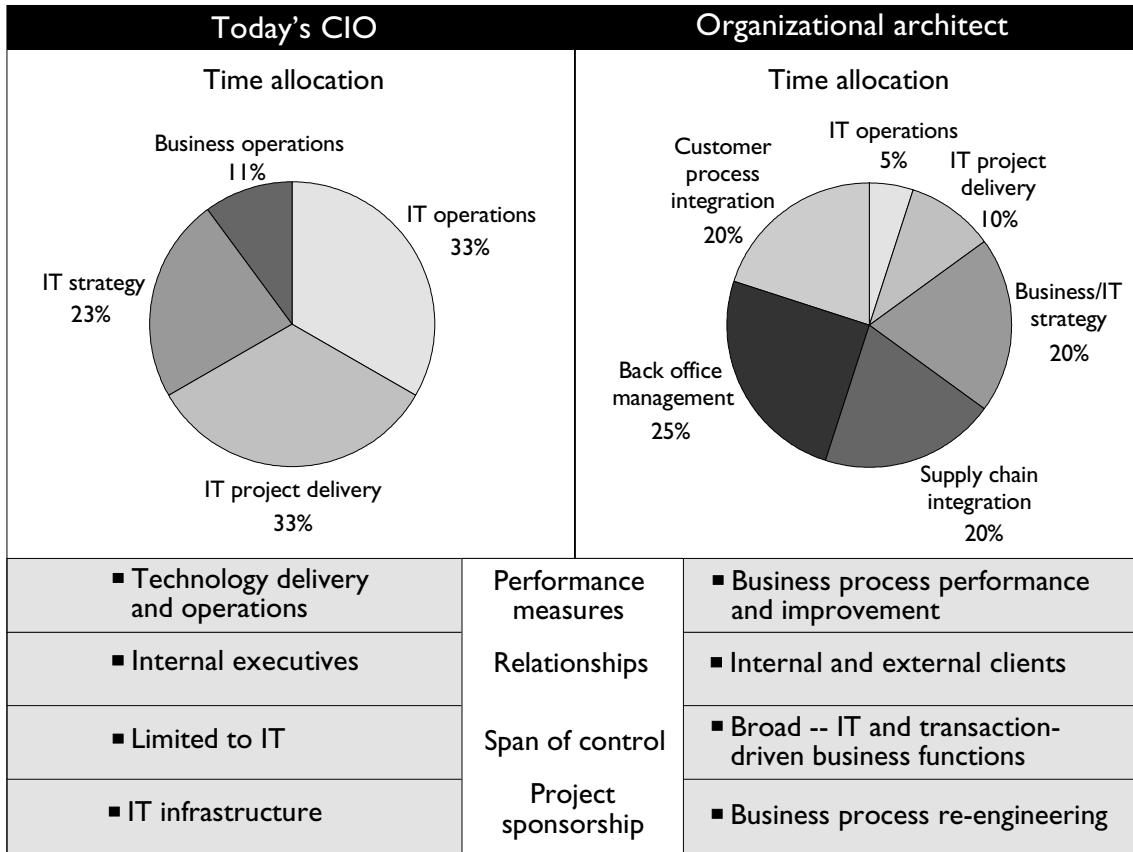
To meet these challenges, CIOs must assume a new role and set of responsibilities and break free from the constraints of today’s CIO function.

## **THE CATALYTIC CIO**

The pressures bearing down on today’s CIOs will force a significant change in what a CIO does, how success is measured, and the role of the CIO on the executive team. The main drivers cited by our CIO respondents are part of an all-encompassing shift to what Forrester calls dynamic trade -- the ability to satisfy on-line demand with customized response (see the May, 1998 *Business Trade & Technology Strategies Report*, “Dynamic Trade”). Over the next few years, CIOs

**Figure 3**

**Today's CIO Versus The Organizational Architect**



Source: Forrester Research, Inc.

will find themselves at the critical intersection of technology and the demands of dynamic trade. This will push talented CIOs to assume a new role: organizational architect. As the organizational architect, the Catalytic CIO will blend technology understanding with insight about dynamic trade to reshape how the company operates. This role is very different from the one most CIOs play today (see Figure 3). Forrester defines an organizational architect as:

*The executive responsible for ensuring the seamless integration of business processes between: 1) internal business functions and business units, and 2) the company and its customers and trading partners.*

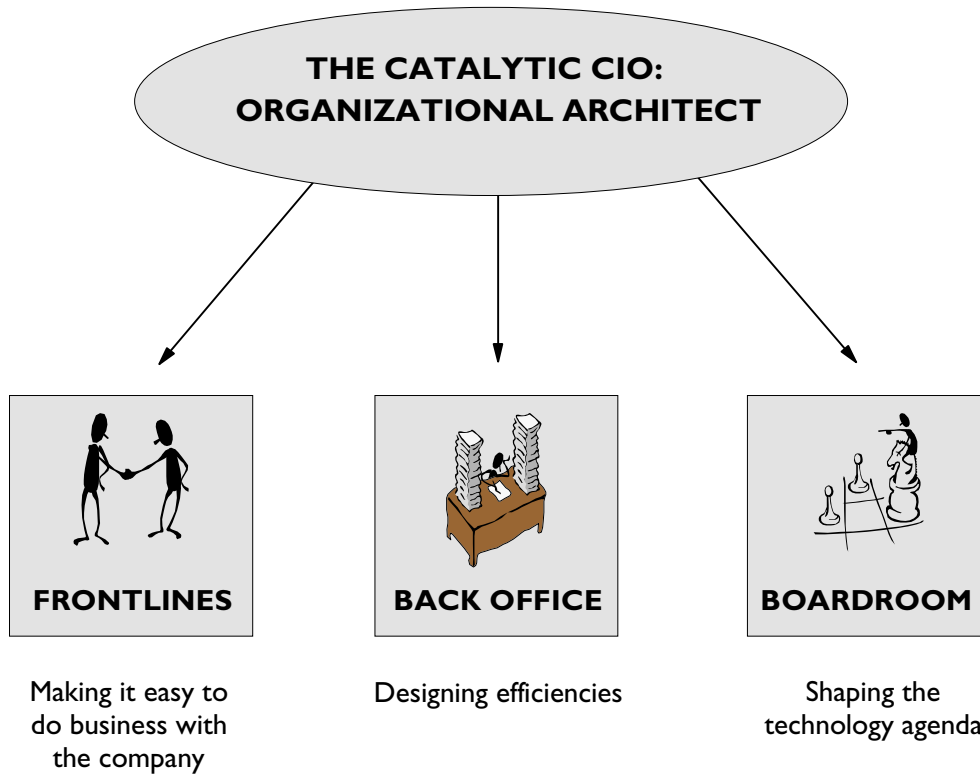
This executive is responsible for achieving business results -- revenue increases, cost reductions, cycle time reductions, and quality improvements -- not technology measures like uptime, response time, and service levels.

**The Organizational Architect**

The Catalytic CIO -- as the organizational architect -- has broad impact and reach throughout the organization. This executive will have meaningful involvement with every business process that uses IT. As Catalytic CIOs work to improve business processes with technology, they will obsess on three initiatives (see Figure 4):

Figure 4

The Catalytic CIO: Organizational Architect



Source: Forrester Research, Inc.

- **Working on the frontlines to make it easy to do business with the company.** Working with customers, trading partners, and other functional executives, organizational architects leverage the IT perspective to optimize and streamline the connections between their company and key external constituents.
- **Designing efficiencies into the back office.** The organizational architect re-engineers back office, transaction-driven processes like accounting and order processing -- and then absorbs these functions into IT after they're rearchitected.
- **Shaping the technology agenda in the boardroom.** Catalytic CIOs make sure that decision-makers have factored technology appropriately into both planning and execution. This ranges from assessing new business opportunities to evaluating M&A candidates to rethinking the company's organizational chart.

**ON THE FRONTLINES: REDEFINING CUSTOMER CONNECTIONS**

To envision and provide technology solutions that meet the demands of dynamic trade, successful organizational architects must work on the frontlines of the business -- with sales, marketing, and call centers. They create a seamless customer-facing environment -- one that enables self-service and enhances customer intimacy -- through customized interfaces and integrated business processes.

“I’m working with external customers to redesign order processing. Without their involvement we’d only get 20% to 30% improvement -- the real benefit is going beyond the internal processes. We’re in a product development role, and we already have 70% of all orders coming through our eCommerce apps.” (CIO, Electronics company)

“I work with our customers -- not just on using our products, but to help them with their strategy. We talk about how to do things together -- how our infrastructure and standards will evolve together, how to decrease risk and increase market opportunity.” (Barry Weinstein, CTO, State Street Global Financial Markets)

Speed is the new metric for the organizational architect. Catalytic CIOs are held accountable for: 1) how fast their company brings new products and services to market, and 2) how quickly -- and efficiently -- they implement new processes that create tighter links with customers and partners.

### **Effective On The Frontlines**

Catalytic CIOs leverage IT and business resources that may or may not report directly to them. To be an organizational architect on the frontlines you need to:

- **Redesign the customer experience.** Engage customers by providing customized ordering capabilities and direct links to relevant product information. Re-engineer the order-to-delivery process to support customers’ specific buying habits -- like Cisco, which allows buyers to establish desired configurations and then e-mails a purchasing manager for approval, or BOC, which maintains customer cost center codes and checks their validity before accepting orders (see the August, 1998 *Business Trade & Technology Strategies Report*, “Best Of The Business Web”).
- **Grease the global supply chain.** The biggest hurdle in supply chain optimization is not the implementation of new technology but the adoption of business practices, organizational structures, and a culture that encourages coordination and collaboration. Start by: 1) defining new partnering policies and procedures -- experiment with new approaches to data sharing and making collaborative decisions, and 2) recruiting a portfolio of key supply chain partners -- no more than 20 companies -- to create standards for critical data like customer and part numbers.
- **Give customers access to back office functions.** Forrester calls this outward-in replacement: implementing outward-facing solutions that integrate functions handled by back office apps (see the February, 1998 *Packaged Application Strategies Report*, “Industry Apps Aren’t Ready”). Wrapper core business apps to allow them to function as modular components that other apps can leverage through APIs. Wells Fargo used this approach to integrate its legacy apps with Internet home banking applications.

Having personal relationships with external constituents is a key success factor. One best practice: Call your customers' CIOs -- ask about their Internet plans and share stories about the hazards and loneliness of being a CIO. Building this connection is a necessary first step to working together closely on technology issues.

## **IN THE BACK OFFICE: ACHIEVING NEW LEVELS OF EFFICIENCY**

No other senior executive understands the way information flows through the business as well as the CIO/organizational architect. From this vantage point, revamp back office processes -- like accounting, billing, and fulfillment -- to reduce costs and cycle times significantly. The organizational architect also builds the bridges between the newly designed customer connections and the back office processes that support them.

“When we created the services company we combined back office operations -- like check processing and call centers -- with IT. The economies of scale were compelling. At first there was resistance, but managers finally realized the move enabled them to focus on more strategic issues.” (Al Gula, CEO, Key Services)

“We implemented SAP worldwide not only to standardize the apps but to centralize and standardize the underlying processes. It wasn't easy -- user knowledge of the system wasn't always there. Users in some countries had good technical expertise, while in others we had to rely on business analysts from within IT.”  
(Steve Winterbottom, CIO, Scientific-Atlanta)

Organizational architects are knowledge magnets -- operating executives look to them to know how processes are run in other parts of the company. Performance measures in the back office include cost and cycle time reduction and quality improvement in the business processes they impact.

### **Improving The Back Office**

Catalytic CIOs drive efficiencies into back office functions by:

- **Quarterbacking the re-engineering agenda.** Liz Claiborne CIO John Thompson, who leads his firm's enterprisewide re-engineering efforts, is a good example. Following his lead, start by getting involved in a small effort with managers you currently have a strong relationship with. Gain support for a broader role by publicizing early wins with your peers. Continue on this path by: 1) assembling a business process SWAT team -- a group of business analysts or consultants -- to identify process inefficiencies and quantify potential savings, and 2) implementing a global best practices database for the SWAT team to populate and disseminate across the company.
- **Evaluating the economics of business process outsourcing (BPO).** The large consulting firms and companies like AT&T Solutions and Federal Express offer to manage and operate entire business processes like accounting, logistics, and call centers. Catalytic CIOs will lead BPO

evaluations because they are best able to gauge their organization's ability to shift key business processes to third parties.

- **Absorbing rearchitected business functions into IT.** Re-engineering back office processes doesn't guarantee that performance improvements will continue. Using cost data from your SWAT team, demonstrate to the senior management team how further economies of scale can be achieved by combining the rearchitected functions under one roof. Be sure to mention how this move will enable other executives to focus on more strategic issues.

## **IN THE BOARDROOM: SHAPING THE TECHNOLOGY AGENDA**

Let's be honest: While many CIOs may be on the executive committee of their firm, they're not viewed as equals by other senior execs. As one CIO put it, "many of us are at the kiddie table -- we're in the room, but we don't have a seat at the big table, we speak only when spoken to." Catalytic CIOs don't suffer this fate -- they lead the senior team's efforts to develop and integrate business and IT strategies.

"My role on the board of directors has changed to 'facilitator of internal dependencies.' I've got accountability for re-engineering and quality initiatives as well as information management."  
(Chris Bowman, Group Director Quality, Process and Information Management, Otis UK PLC)

"I'm pulled into operational discussions with division presidents regularly -- being responsible for quality worldwide, in addition to technology, allows me to influence the company operations."  
(Diana Bourke, CIO, AC Nielsen)

The performance measures of Catalytic CIOs mirror those of other senior managers in the boardroom -- overall corporate results.

### **The Organizational Architect In The Boardroom**

One of the organizational architect's critical -- and often difficult -- roles to play is ensuring that senior managers understand the overall impact of strategic decisions and directions. This means that the Catalytic CIO uses time in the boardroom to:

- **Pull technology out of the backroom.** Use boardroom discussions to ensure effective governance of IT. Make the senior team the owner of IT strategy by presenting the critical tradeoffs the team needs to resolve -- e.g., how IT investments made in one business unit impact infrastructure costs affecting other units (see the July, 1998 *Leadership Strategies Report*, "Making An IT Strategy Pay Off").
- **Sketch out a new org. chart.** Leverage your experience on the frontlines and in the back office to envision new organizational structures. For example, to provide ongoing applications support after their SAP implementation, the CIO of a public utility drew up plans --

approved by the CEO -- for a new business integration unit staffed by people with both business and IT backgrounds who reported to the Chief Operating Officer.

- **Draft the blueprints for integrating potential merger candidates.** Create a template that will enable you to evaluate the technical viability of acquisition candidates efficiently. Convene your own cross-business-unit task force to recommend an integration approach and develop an implementation plan. Stay personally involved with technology-related acquisitions -- for example, Debra Robinson, CIO of publisher CMP Media, assumed responsibility for National Software Testing Labs after it was acquired.

## **BREAKING THE SHACKLES OF TODAY'S CONSTRAINTS**

Becoming the organizational architect is a gradual process -- where you start is dependent upon your current role and capabilities (see Figure 5). To even start on the path of becoming a Catalytic CIO, you must break free from today's constraints on CIO success. To do this:

- **Create a "shadow"-balanced scorecard.** Getting your boss to evaluate you on a new set of strategic business metrics won't happen overnight. Start by defining and tracking a set of metrics that reflects your contributions as an organizational architect, encompassing your impact on financial performance, customer impact, process improvement, and innovation (see Figure 6). Highlight your impact on these metrics in performance reviews and with the executive team.
- **Develop new skill sets.** If you've come up through the technical ranks, you may be at a disadvantage. Consider taking a lateral move to run a business function. One CIO we spoke with took a director of marketing position, which proved to be the clincher he needed to secure the CIO position at a larger firm looking for a business-oriented IT executive.
- **Ensure that daily technology management is in good hands.** To break free from the day-to-day time demands of technology management: 1) Create a Chief Technology Officer position -- promote

**Figure 5****The Organizational Architect Checklist**

Do you have . . .

- . . . a Chief Technology Officer hired?
- . . . a standing agenda item in executive committee meetings for you to discuss operational issues and improvements?
- . . . hallway conversations with marketing executives to discuss the Internet's impact on efforts to attract and retain customers?
- . . . weekly contact with corporate customers to discuss business process integration progress and issues?
- . . . a seat on the steering committee of a supply chain re-engineering project?
- . . . an M&A checklist for technology issues that's been adopted by strategic planning?
- . . . a new set of business-driven performance metrics that has been adopted by your boss?
- . . . the ear of the CEO to discuss your ideas for organizational structure changes?
- . . . formal executive responsibility for shared business functions?
- . . . a new title on your business card: Chief Organizational Architect?

Source: Forrester Research, Inc.

the young hotshot itching to whip this area into shape, or  
2) outsource technology operations altogether, like the CIO of AC Nielsen, who did this not only to concentrate on strategic issues but also to avoid the recruiting and retention hassles that come with running a worldwide infrastructure.

**IMPLICATIONS FOR EXECUTIVE RELATIONSHIPS**

A CIO won't become an organizational architect in a vacuum. Playing this new role impacts the responsibilities of -- and your relationships with -- other senior executives. In this new role you will be (see Figure 7):

- **The CEO's early warning radar.** More than any other executive, you'll have a deep understanding of how the company works on a global scale. Gain the confidence and trust of the CEO by alerting him or her to operational and integration issues -- and solutions -- to address at executive committee meetings.
- **The heir apparent to the Chief Operating Officer.** In many companies, high-performing CIOs will grow into the Chief Operating Officer position. Develop strong relationships with the COO by

**Figure 6**



**Organizational Architect's Balanced Scorecard**

1999 RESULTS	METRICS	IMPACT
<p><b>Financial performance</b></p>	<p>Cost reduction from process integration efforts</p>	
	<p>Department: _____</p>	<p>\$ _____</p>
	<p>Department: _____</p>	<p>\$ _____</p>
	<p>Increased revenue from iCommerce efforts</p>	
	<p>Product: _____</p>	<p>\$ _____</p>
	<p>Product: _____</p>	<p>\$ _____</p>
<p><b>Customer impact</b></p>	<p>Percent of customers/suppliers using Internet-based apps</p>	
	<p>Tier I customers: _____</p>	<p>_____ %</p>
	<p>Preferred suppliers: _____</p>	<p>_____ %</p>
	<p>Percent of transactions using Internet-based apps</p>	
	<p>Product: _____</p>	<p>_____ %</p>
	<p>Product: _____</p>	<p>_____ %</p>
<p><b>Process improvement</b></p>	<p>Cycle time reduction in processes impacted</p>	
	<p>Initiative: _____</p>	
	<p>Initiative: _____</p>	
	<p>Quality improvement in processes impacted</p>	
	<p>Defects reduced: _____</p>	
	<p>Accuracy improved: _____</p>	
<p><b>Innovation</b></p>	<p>Business process best practices deployed</p>	
	<p>Submitted: No.: _____ Deployed: No.: _____</p>	
	<p>New IT-based products and services implemented</p>	
	<p>Product: _____</p>	
<p>Service: _____</p>		

Source: Forrester Research, Inc.

**Figure 7**

**The Executive Relationships Of An Organizational Architect**

Potential pitfalls . . . 	Executive	Actions for an organizational architect to take . . . 
Potential role confusion, may see organizational architect as stepping on toes	<b>COO</b>	Create shared objectives -- get COO to sponsor initiatives
May resist involvement	<b>Marketing</b>	Share knowledge of customer's processes, competitive initiatives, and technology-driven market opportunities
Confusion between corporate organizational architect role and LOB CIOs	<b>LOB executive</b>	Share knowledge of other business units' activities
Competition for COO position	<b>HR executive</b>	Develop change management approaches for new technology processes
Competition for COO position	<b>CFO</b>	Take over transaction processing to free up CFO for strategic issues

Source: Forrester Research, Inc.

establishing shared objectives -- for example, enlist the COO as the executive sponsor for key re-engineering projects you initiate.

- **Marketing's best friend.** Don't let marketing colleagues misinterpret your involvement as pushing IT's priorities on them. Add value to your marketing colleagues by sharing your newly gained knowledge of customer's business processes and resolving conflicts between marketing and other divisions involved in iCommerce efforts.
- **The eyes and ears of line-of-business (LOB) executives.** You'll know you're being an effective organizational architect when the general managers of the various business units ask you what's going on in the other units. Use these opportunities to influence and consolidate business process improvement and systems integration efforts.
- **Both a threat and a hero to the CFO and HR executive.** They may see themselves as the rightful heirs to the COO throne, but you can do them a great favor by taking the transaction processing loads off their plates, freeing them up for more strategic matters. Further enhance your relationship with HR by seeking their counsel on change management issues when you propose operational and organizational changes.

