

June 20, 2006

Converged Service Delivery: The Missing Link In Achieving Business Flexibility

by Thomas Mendel, Ph.D., and Pascal Matzke

FORRESTER BIG IDEA

FORRESTER BIG IDEA

June 20, 2006

Converged Service Delivery: The Missing Link In Achieving Business Flexibility

An Executive's Introduction To Converged Service Delivery

This is the first document in the "Introducing Converged Service Delivery" series.

by **Thomas Mendel, Ph.D., and Pascal Matzke**

with Andrew Parker and Reedwan Iqbal

EXECUTIVE SUMMARY

As enterprises adapt to accelerating business change, their business processes become increasingly complex. As a result, companies face pressure to optimize their combined IT and telecom operational resources to provide more flexible, coherent, and cost-efficient services to the business. One of the key challenges in this context has always been the inability of internal IT organizations and external service providers to provide a consolidated view of service performance across the different layers of IT and telecom functionality that support business processes. Technical innovations around service management technologies and new standardized processes mean that we will see a new service delivery paradigm that will enable converged end-to-end management globally across the formerly distinct layers of IT and telecom infrastructures. This new paradigm — which Forrester calls Converged Service Delivery — will be instrumental in helping business leaders map service efficiencies end to end, based on meaningful business metrics.

TABLE OF CONTENTS

- 2 **Technology Users In The Business Can't Get The Service Clarity They Need**
 - 5 **Networked Business Processes Require Converged Service Delivery**
 - 12 **What Will Be Will Be; The Question Is When**
- RECOMMENDATIONS
- 13 **Converged Service Delivery Requires A Grand Coalition**

NOTES & RESOURCES

Forrester interviewed 14 vendor and user companies, including Cisco Systems, HP, IBM, T-Systems, and Wipro.

Related Research Documents

["The Four Stages Of Enterprise Managed IP Communications"](#)

May 5, 2006, Market Overview

["Digital Business Architecture: IT Foundation For Business Flexibility"](#)

November 7, 2005, Forrester Big Idea

["Integrated IT Management Drives Efficiency"](#)

February 2, 2005, Forrester Big Idea

["Organic IT 2004: Cut IT Costs, Speed Up Business"](#)

May 18, 2004, Trends

TARGET AUDIENCE

Business process executive, chief information officer, IT operations executive

TECHNOLOGY USERS IN THE BUSINESS CAN'T GET THE SERVICE CLARITY THEY NEED

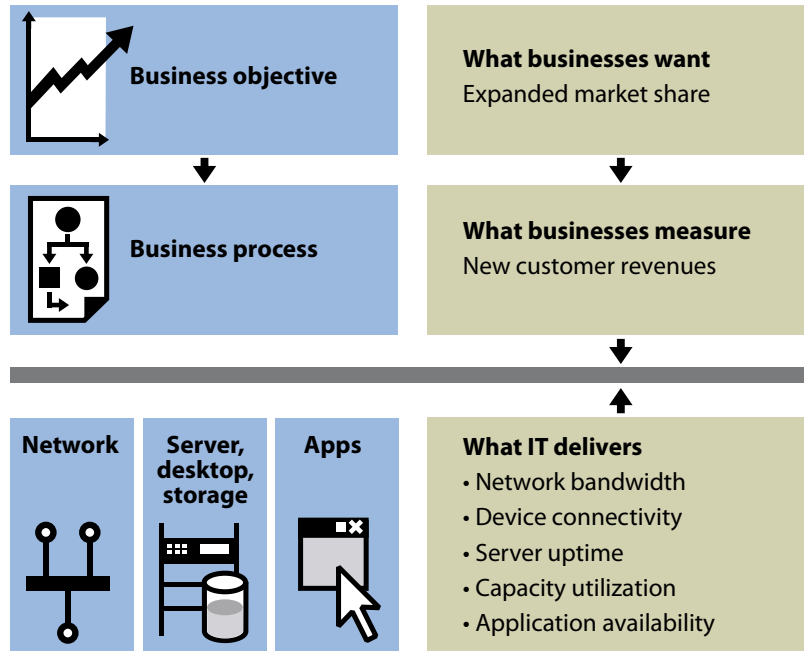
As enterprises become more aware of the increasing interdependence of business and IT issues — described in Forrester's Digital Business Architecture (DBA) concept — they need to adopt a more holistic view of both internal and external service delivery.¹ The aim is a consolidated picture of the impact of the services that operate at varying levels in the stack of IT and telecom infrastructure, applications, and business processes — and how the performance of these services impact the overall operation of the business. This is vital for business leaders in targeting and executing business change. But today's siloed service delivery can't give them the integrated picture they need (see Figure 1). Companies continue to suffer from significant internal resource and budget constraints. The key stumbling block results from the fact that continuous IT operations and maintenance consume the lion's share of companies' current IT budgets; our data shows that average spending on operational services has actually increased from 76% in 2005 to 80% of overall IT budgets today.² While this leaves insufficient resources and money for new projects, Forrester also believes that the 80% budget share is not well spent in many companies.³ The underlying problem is twofold.

Internal IT Can't Provide End-To-End Service Visibility

Today's business leaders feel growing frustration, as the majority of internal IT organizations lack the tools and resources to provide a consolidated view across the different layers of IT and telecom functionality. Interviews with Forrester clients clearly indicate three key sources of dissatisfaction with the current state of internal service delivery:

- **Most firms manage IT and telecom services separately.** Historically, IT services and telecom services have been managed and funded out of different buckets of the underlying operational budget. This has created distinct islands of IT and communication technologies, each operating with their own distinct delivery mechanisms and service goals. As enterprises begin taking a more holistic view of their IT operations, these islands are becoming increasingly burdensome to manage and integrate.

“I can't get a holistic and consolidated view of our IT and telecom spending. I have to go to more than 10 different departments in the company to get some idea, but it's still incomplete.” (Business line manager, European health insurance firm)

Figure 1 The Disconnect Between Business Requirements And IT Deliverables

39778

Source: Forrester Research, Inc.

- **Local, ad hoc operational service delivery predominates.** In particular, large global companies suffer from the fact that their underlying organizational structure presents a fairly heterogeneous picture, in that they commission and contract operational services — both IT and telecom — locally.⁴ As companies try to consolidate and streamline their operational services in a globally coherent and flexible infrastructure, the local differences represent a major road block.

“There is a serious lack of a global view when it comes to IT and telecom services. No matter where I look, things are handled differently in each country and even in most of the subsidiaries.” (Production manager, global manufacturing company)

- **Service quality and price are difficult to measure and compare.** The heterogeneous nature of technology service delivery within most enterprises today presents a major challenge to their efforts to link service goals to business metrics. As companies begin to integrate services using globally consistent standards and packages, they find it increasingly difficult to compare current services in terms of their internal costs as well as their external prices.

“I have no way of doing a true apples-to-apples comparison for a given service. IT can’t even give me a comprehensive description of the services they offer me.” (Business executive, global retail company)

Service Providers Also Fail To Deliver What Businesses Need

As clients struggle with internal technology service delivery, they look to external IT and telecom service providers for help. The goal: to achieve greater operational coherency and cost transparency. Unfortunately, the service provider landscape is also highly heterogeneous. Consequently, most technology service providers are challenged to organically build or acquire appropriate expertise and to assume accountability for all aspects of service delivery. Forrester has discovered three primary reasons for this:

- **A lack of global reach.** As large companies become increasingly global, their technology service providers often struggle to provide a consistent set of services across all different locations worldwide. While such firms can often deploy resources for the metropolitan areas of core regions — North America, Western Europe, Japan — consistent service delivery in the more remote and less prominent locations presents a major challenge. Even large global IT outsourcers like IBM, EDS, HP, and CSC have to partner with local service providers and telecom carriers — and even these local partnerships may not provide clients with truly global services.

“As much as I like doing business with HP, for many of my local subsidiaries, I am forced to deal with local subproviders that are unable to meet the desired quality standards.” (CIO, large European manufacturer)

- **An insufficient portfolio of skills and technology competence.** Mirroring their customers’ buying behavior in the past — where they largely contracted for IT and telecom services separately and usually locally, rather than globally — the supply side for these different types of services is extremely fragmented. Most service providers have become specialists in one or more areas rather than good service integrators across the board. Consequently, most technology service providers struggle to provide credible end-to-end service delivery that encompasses all the different elements of IT and telecom functionality.

“We tried to put out an RFP for global end-to-end management of our ERP system, including the network, and no one was able to meet our demands.” (CFO, global pharmaceutical company)

- **A mismatch in terms of existing client relationships.** On the end user side, decision-making power has gradually shifted from the IT operational group to the line-of-business groups, but the great majority of technology service providers still maintain their client relationships with the IT group. Despite the fact that almost all vendors endeavor to articulate their service value proposition in more relevant business terms, the key challenge remains the need to establish trusted business relationships with a wider group of stakeholders across the enterprise and win the role of strategic long-term business partner.

“I am trying to get solutions for my business problems from the vendors, but all I hear from them is techno-babble.” (Sales and marketing executive, European packaged goods company)

These challenges mean that end-to-end service delivery remains a distant dream today. Consolidation of enterprise and service provider data centers — and the fact that application users are no longer either internal or external, but increasingly represent a growing blend of the firm’s suppliers, partners, and channels to market — has created an explosive mix.⁵ End users and business decision-makers in most large firms now demand consistent end-to-end service delivery from their internal and external technology service providers — and it therefore sits high on the agenda of all IT and telecom managers, as well as service providers.

“We have tried it all over the years: full outsourcing, insourcing, selective outsourcing. Today, it feels to me that we are just back where we started. It’s really frustrating.” (R&D executive, global car manufacturer)

NETWORKED BUSINESS PROCESSES REQUIRE CONVERGED SERVICE DELIVERY

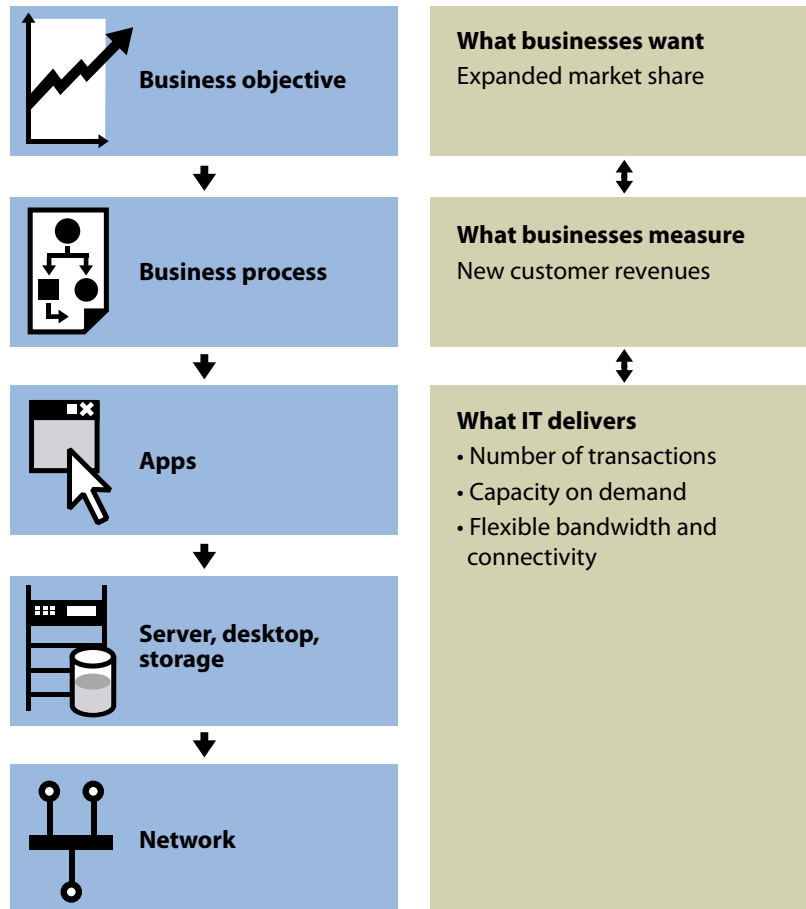
Vendor hype has so far dominated the theme of convergence between the formerly distinct markets for IT and telecom services. Most vendors today position convergence as a way to build isolated IP-based communication solutions for voice, data, video, and other emerging multimedia applications, while maintaining the different layers of heterogeneous infrastructure management underneath. While these services are limited in terms of their technical adaptability, they also fail to accurately reflect actual end user desire for a better and more flexible alignment of their internal operational IT and telecom resources to changing business requirements. In other words, the sort of convergence that really matters to enterprises today is the increasing convergence of IT and business agendas — not the bespoke bundling of IT and telecom functionality (see Figure 2).

A Real-Life Business Scenario Highlights The Urgency

To illustrate how business imperatives force companies to address service delivery more seriously, one large global financial services company outlined to Forrester its business scenario. The company has:

- **Multichannel and multidevice challenges.** Remote investment sales representatives sell to both consumers and partners, using three types of devices: laptop PCs, PDAs, and mobile phones. They need to access a sales force automation (SFA) application for opportunity tracking, order entry, and order management, independent of the location. They also need to access the corporate intranet for support elements like sales collateral, online multimedia training material — such as presentations and video-on-demand — and online customer sales support. A subset of that functionality has to be available via the mobile phone for the sales representatives, as well as on an extranet for business partners and on the Internet for customers and prospects.

Figure 2 Executives Require An End-To-End View To Determine Business Performance



39778

Source: Forrester Research, Inc.

- A need for an end-to-end business perspective.** At the same time, management needs a 360-degree view of customers' involvement with the company across all channels, including the call center. This has to be integrated with the back office for global campaigns and multichannel management. The IT organization has to ensure quick access to all the complex behind-the-scenes information that brokers might need. While different business units may today require different QoS levels, the company expects a strong shift toward real-time functionality in the future.

“Our business has truly globalized over the past few years. We can no longer afford partial views of the business or our clients. Consequently, we need to consolidate our data sources and get global end-to-end service-level guarantees across all communication channels and applications that we are using, measured from a business perspective.”

Forrester client evidence reveals similar challenges in other industries. For example, retail companies feel pressed to integrate remote devices and systems like RFID to get a unified view of their supply chain.⁶

IT And Telecom Technologies Mature To Finally Meet Business Demands

After years of smoke and mirrors and unfulfilled vendor promises, the convergence of the IT and telecom worlds is finally reaching the stage where monitoring and management tools and processes can provide integrated reports using business metrics. The key issue so far has been a lack of standardization and maturity across the different technology and process layers. Forrester has identified four key developments that are responsible for enabling a new, integrated service delivery paradigm:

- **IT and telecom service management merge, creating a unified process perspective.** The evolution of ITIL and eTOM into de facto standards for IT and telecom service delivery, respectively, has laid the foundation for consistent service management across two different infrastructure domains.⁷ We now see ITIL and eTOM process descriptions being combined to create a single unified process perspective; European telecom providers that are combining their two delivery organizations are largely driving this.⁸
- **“IP everywhere” enables traffic-agnostic communication.** IP has evolved over the years from being one communication protocol among many to becoming the all-encompassing standard for all communication across the LAN and WAN. This creates a unified platform to support data, voice, and video traffic. Companies of all sizes and industries have already developed business cases that justify the migration from legacy systems to IP communication infrastructure and applications.⁹
- **Consistent global end-to-end management finally becomes possible.** Technology has advanced in the areas of end user response time monitoring, service discovery, and dependency mapping — as well as applications and infrastructure monitoring. Service providers and IT departments can now, at last, provide a true end-to-end picture of both IT and business services. As a result business leaders are now able to map and measure service efficiencies based on meaningful business metrics.¹⁰
- **Standardization enables plug-and-play service provider selection.** Standardized processes and traffic platforms allow the creation of service building blocks; service providers are starting to sell these following the “Lego” principle. While external service providers are already making huge investments to industrialize service delivery — and to protect their margins — customers are beginning to benefit from a wider choice of comparable and benchmarkable offerings.¹¹ Forrester expects IT departments to adopt similar approaches for internal service delivery. As a result, customers will be able to select and deselect provider offerings on an as-needed basis, and IT departments will effectively evolve into service brokers over time.¹²

Introducing The Converged Service Delivery Concept

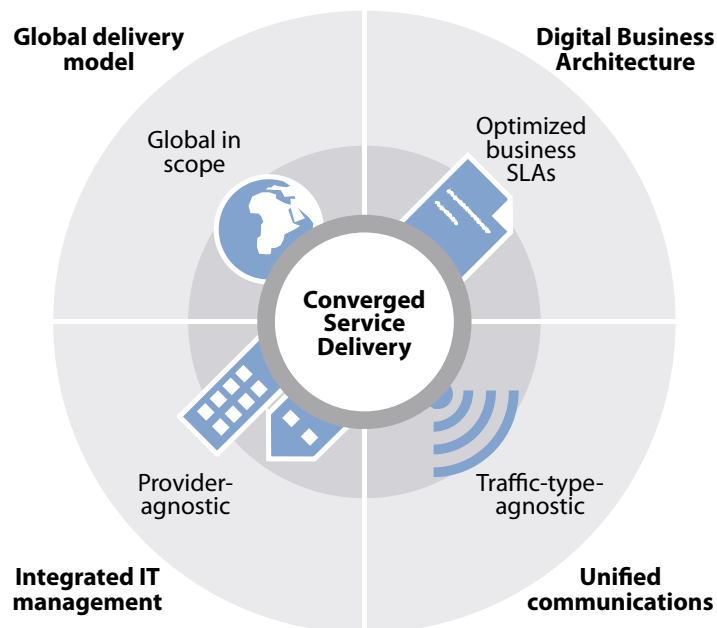
Forrester calls this new model Converged Service Delivery, which we define as:

The global delivery of IT and telecom services via coherent and transparent mechanisms that help manage the underlying resources end to end, regardless of physical location.

Converged Service Delivery leverages the full benefits of the new standardized elements outlined above to become (see Figure 3):

- **Global in scope.** Services will be consumable regardless of location and time zones — anywhere, anytime; no more limits or boundaries exist for individual locations or even countries.
- **Traffic-type-agnostic.** Services will handle all types of network traffic; it will no longer make a difference whether it's data, voice, or video communication.
- **Provider-agnostic.** Services will operate as standardized components or building blocks that the IT department or an external service provider can deliver on an as-needed basis. Eventually, IT departments will manage them as service brokers.
- **Focused on effective and efficient business SLAs.** Services will follow meaningful business metrics, with SLAs tied to operational continuity and business success. Service costs and prices will become transparent as a result of benchmarking and global competition.

Figure 3 Converged Service Delivery



Essentially, Converged Service Delivery provides the missing link between data center automation (Organic IT), the holistic view of the IT budget (integrated IT management), and unified IT solutions to business problems (DBA).¹³

Putting Converged Service Delivery Into Practice

Converged Service Delivery will address some of the key technology management issues that business decision-makers face today. Adoption will evolve through four phases, with each phase delivering benefits for the enterprise (see Figure 4):

- **Phase 1: Achieving cost and process transparency.** An important early benefit of Converged Service Delivery will be better insight into actual resource consumption by service. The widespread adoption of ITIL and eTOM and the use of consistent service catalogs means that companies will be able to fully understand for the first time exactly what services they are buying, what resources are necessary to deliver them, and just what that costs.

What it means: This phase would now enable our financial services company to fully understand what channel and what devices represent the best choice for any particular kind of service and what these will cost.

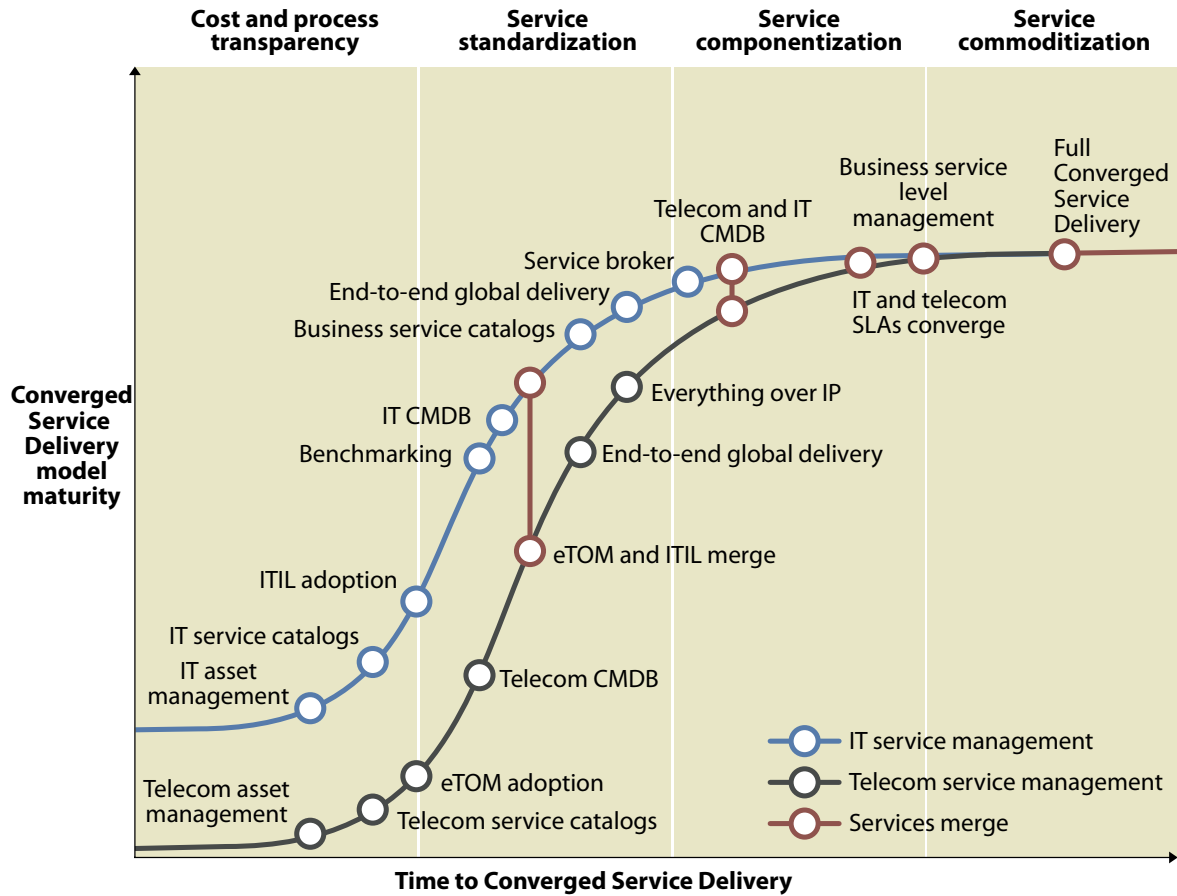
- **Phase 2: Enabling end-to-end management through service standardization.** This is the phase where it all falls into place. Processes standardize around the merger of ITIL and eTOM into one, unified service management framework; end-to-end management technology enables global delivery; everything over IP provides the seamless communication platform. Early adopters will already be able to reap the benefits of Converged Service Delivery at this stage.

What it means: Our financial services company needs an end-to-end business perspective of its channels and clients; this phase will be instrumental in determining the appropriate business service levels for each process and channel — from initiation of an order via the front-end device to processing in the back-end system.

- **Phase 3: Industrializing delivery through service componentization.** Using increasingly common standards, service providers and IT departments will define reusable packages of service components that they can use as industrialized service bundles. This phase will see increasing consolidation of the service provider landscape, as well as steep growth in outsourcing. On both sides of the fence, only the fittest will survive. IT departments will be forced to adopt the service broker model to justify their continued value to the enterprise.

What it means: Service componentization means that companies will be able to commission and decommission services on an as-needed basis, ultimately reflecting changing business requirements. This will be crucial for our financial services company, as it will have to adapt to changing client behavior by bringing new services to market more quickly and retiring services that don't have sufficient demand.

Figure 4 The Converged Service Delivery S-Curve



39778

Source: Forrester Research, Inc.

• **Phase 4: Receiving relevant services at competitive prices through commoditization.**

This phase will see companies reap the full benefits of Converged Service Delivery. As service providers and IT departments become more experienced in aligning service building blocks with business needs, business leaders will finally receive the services they need, based on relevant business metrics. At the same time, economies of scale will lead to substantial cost savings.

What it means: With business-aligned services now becoming standard deliverables, IT departments will be better able to align themselves with the needs of their business clients. This will result in a significant competitive edge for our financial services company, as it can now respond to changing market conditions much more quickly and with lower underlying change and alignment costs.

Understanding The Business Benefits Of Converged Service Delivery

Where will all this lead us? As a result of Converged Service Delivery, end users will be able to experience new levels of transparency and efficiency across formerly distinct technology domains. In particular, companies will derive the following key business benefits from this new service delivery approach:

- **Price transparency.** As service componentization leads to service standardization, repeatable service packages will become the norm. Just as it does in the traditional IT infrastructure outsourcing world, service commoditization will not only lead to greater competition, but also to enhanced price transparency based on benchmarking. Consequently, companies will become much more sophisticated in their RFP and service sourcing processes, as they can more easily benchmark comparable service bundles.
- **Resource flexibility.** Just as Organic IT promises resource flexibility in the data center, Converged Service Delivery will allow companies to seamlessly extend the service delivery chain end to end — from the data center through the network to the internal or external customer of the service. And by substituting subscription services for capital investment in technology, companies will be able to quickly turn a large portion of fixed costs into variable ones, open to scaling as demand rises or falls.
- **Service quality.** For the first time, companies will be able to enjoy consistent service delivery on a global scale. Imagine being able to guarantee a given transaction time to every SAP user in your organization at all times. Sounds too good to be true? Just wait and see! Companies like BT Infonet and Vanco are already starting to exploit these new capabilities.

Assessing The Impact On IT Departments and Service Providers

Meanwhile, internal IT departments and external service providers will face a number of challenges that will eventually see only the fittest survive:

- **Price reduction.** The end result of Converged Service Delivery? Buyers of IT services rejoice! Prices will drop quickly, as service providers are forced to share economies of scale and global cost differences with their customers. Standardization of services will drive commoditization of offerings, which in turn will lead to price deflation based on price benchmarking. The developments we are going to see will bear a lot of similarities to what we saw in the PC and broadband access markets.¹⁴
- **Competition.** We will see global competition for IT services reach unheard-of severity, as service providers and IT departments begin to face a much larger set of potential competitors with more readily comparable service offerings. Despite ongoing price deflation, the IT and telecom infrastructure service markets are getting increasingly crowded, with new competitors

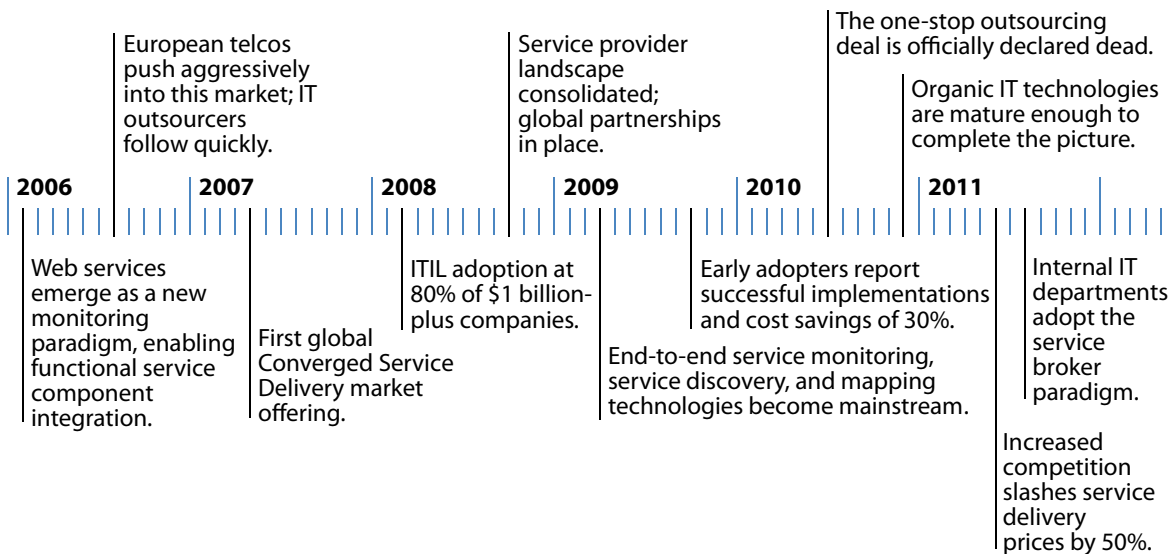
entering the market almost every day. While Indian offshore vendors are currently trying to capture IT infrastructure market share in particular, the telecom infrastructure space has recently seen an influx of virtual network operators.¹⁵

- **Consolidation.** Those who cannot adopt Converged Service Delivery will quickly face extinction. IT departments will be outsourced, service providers will be gobbled up, and only the fittest will survive. Even more importantly, we are already seeing companies streamlining and consolidating their portfolio of external service partners. As clients are becoming more sophisticated in their sourcing patterns, they are focusing on fewer but more strategic relationships with service vendors that have proven their capabilities in aligning service offerings with business needs.

WHAT WILL BE WILL BE; THE QUESTION IS WHEN

As we move forward, the service delivery landscape will look very different to the traditional buyer-supplier relationships we have today. With businesses able to measure service efficiencies and success much more consistently, services will become an integral part of any business process or external offering — requiring internal and external suppliers to align themselves much more tightly with their business customers. To that end, Forrester offers a perspective on key market events over the next five years (see Figure 5).

Figure 5 The Converged Service Delivery Adoption Timeline



RECOMMENDATIONS

CONVERGED SERVICE DELIVERY REQUIRES A GRAND COALITION

Both constituencies — businesses as well as internal and external service providers — need to recognize that the Converged Service Delivery trend will be irreversible, with companies overcoming the cultural hurdles and mutual distrust that currently exists between IT departments and their internal business customers. To achieve the desired benefits and efficiencies, all parties involved should start their planning process by collaborating and communicating closely on issues such as management, technologies, and road maps.

- **Business managers: Your time has come.** Realize the opportunity to leverage new technologies and standards for direct business results. As you start to articulate your requirements more proactively, work in close liaison with internal IT and external service providers. Start to measure IT project success in business terms, such as reduced order processing costs, faster customer response, or lower costs per sale.
- **IT departments: Adapt or your time will be up.** Understand that no one will be able to hide behind the potential lack of standards or technology any longer. You must proactively work with the business to set expectations and a road map for Converged Service Delivery. Realize that, ultimately, you will not be able to provide all the services and functions yourselves, but will need to closely collaborate with external providers. Eventually, you will have to adapt to fulfill the new role of a service broker for your business.
- **Service providers: Now is your time to shine.** Long talked about and often positioned the wrong way, convergence is now becoming a real opportunity for service provider differentiation in an increasingly commoditized and competitive market. However, you need to actively work through strategic partnerships with other technology vendors and internal service brokers to provide the right services to the right customers. However, keep in mind that competition will be fierce and consolidation inevitable — so start building standardized and industrialized delivery platforms now!

ENDNOTES

- ¹ Many have said that business depends on technology, but we're past that. The reality of the digital age is that your business is embodied in your technology, and your business can change only as fast as your technology can. See the November 7, 2005, Best Practices "[Digital Business Architecture: Harnessing IT For Business Flexibility](#)."
- ² On average, 76% of firms' IT budgets go to ongoing operations and maintenance, as opposed to new investments. See the December 15, 2004, Data Overview "[2005 Enterprise IT Outlook: Business Technographics® North America](#)."

- ³ It's no longer your father's — or mother's — IT. Why? Previous failures and money under the bridge, technology commoditization, more sourcing alternatives, and a growing maintenance load have made IT's business constituents wary. Average spending on maintenance and operations has reached 80% of the IT budget, up from last year's 76%, and IT execs themselves are not pleased with their own organizations' performance. See the March 22, 2006, Trends "[The Three Archetypes Of IT](#)."
- ⁴ Of the 1,007 telecommunications decision-makers who participated in our survey, only 279 — or 28% — directly influence the purchase of global or multiregional telecommunications services; 72% are responsible just for local/in-country telecom procurement. See the October 13, 2005, Trends "[Sourcing Global Telecoms Is Fraught With Risk](#)."
- ⁵ The trend to consolidate data centers is far from over. In fact, Forrester believes that it will greatly accelerate during the next three years, with Organic IT technologies also now becoming more mature. However, data center consolidation will put additional pressure on the network. Enterprises will have to migrate legacy data networks to MPLS IPVPNs. In addition, new high-speed networking technology, such as high-speed gigabit Ethernet switches, will have to be deployed to virtualize the consumption of storage, and processing power. Infrastructure automation and consolidation activities are among the top IT investment priorities in Europe. See the December 1, 2005, Data Overview "[Europe's IT Infrastructure Adoption Plans: Business Technographics® Europe](#)."
- ⁶ The potential for RFID to improve product visibility and use is driving RFID adoption at user companies. Without standardized data and process definition, network-wide adoption is elusive, and building end-to-end supply chain visibility is not possible. See the October 31, 2005, Trends "[RFID Traction In Logistics: Slow But Certain](#)."
- ⁷ The Information Technology Infrastructure Library (ITIL) is a set of standard IT terminologies — such as a high-level definition of a change request — that the United Kingdom Central Computer and Telecommunication Agency developed in the late 1980s and early 1990s to address the IT service support and delivery issues that IT infrastructure organizations face. See the September 21, 2004, Best Practices "[Implementing ITIL](#)." ITIL is a registered trademark, and a registered community trademark of the UK Office of Government Commerce, and is registered in the US Patent and Trademark Office. In 2001, the United Kingdom Central Computer and Telecommunication Agency was absorbed into the Office of Government Commerce, which now owns ITIL. See www.ogc.gov.uk/index.asp?id=2261 for more information.

The enhanced Telecom Operations Map (eTOM) from the TeleManagement Forum is the most widely used and accepted standard for business processes in the telecom industry. The eTOM describes the full scope of business processes that a service provider requires and defines the key elements and how they interact, creating a guidebook that is fast becoming the common business language of the telecom industry. See www.tmforum.org for more information.

- ⁸ Development and modification to ITIL will advance as convergence between the telecom and IT worlds brings together eTOM — a set of best practices for communications services — and ITIL, providing a more service-oriented set of best practices for the IT function. See the June 7, 2004, Quick Take "[HP Reinforces Commitment To ITIL](#)." ITIL and eTOM, although coming from different backgrounds, jointly

represent a truly powerful combination, as they individually emphasize different but complementary aspects of service delivery. ITIL's service delivery categories deal more with the operational elements of the planning and execution of services by looking at processes such as service-level management, financial management, capacity management, IT service continuity management, and availability management. In contrast, eTOM looks at processes from the perspective of business outcomes, such as product development and retirement, supply chain performance assessment, product marketing and customer performance assessment, and retention and loyalty. Combined, both frameworks will act as key enablers for IT organizations to act more like service providers in supporting the business and for service providers to take a more enterprise-like view of their services. After the merger with Compaq, HP was the first vendor to map ITIL to eTOM processes for its two product suites, OpenView and TeMIP. See www.tmforum.org/browse.aspx?catid=860&linkID=30250 for more information.

- ⁹ IP across the WAN and LAN is creating fertile ground for the multimedia desktop. Multimedia-ready LAN and WAN infrastructure is emerging quickly. Nearly half of large European firms will migrate to an MPLS IPVPN by 2009. Upgrading the LAN to support quality of service (QoS) and power over Ethernet is also growing accordingly, at 30% CAGR. See the May 5, 2006, Market Overview "[The Four Stages Of Enterprise Managed IP Communications](#)." Forrester also believes that IP communications will benefit large European firms in a variety of ways, and the benefits will be unique for every firm. Large firms, the vendor community, and service providers are all participating in the quest to achieve these benefits of IP communications, and are tackling it in a variety of ways. See the October 7, 2005, Trends "[IP Communications Adoption In Europe](#)."
- ¹⁰ BT Infonet offers its application-centric VPN (AC VPN) using products from Ipanema Technologies. AC VPN is a new approach for providing a complete applications-aware MPLS VPN. AC VPN delivers per-application traffic optimization, per-application reporting, and dynamic allocation of VPN resources to achieve application performance objectives defined per application and per user flow. See www.bt.infonet.com/services/internet/ac_vpn.asp and <http://www.ipanematech.com/New/DocUpload/Press/CP-Infonet-US.pdf> for more information.
- ¹¹ For example, BT offers its Applications Assured Infrastructure (AAI) solutions: a managed network monitoring service offered in five modules — audit, optimize, monitor, manage, and assure — that measures end-to-end process performance. BT has implemented more than 50 major AAI solutions in the past 12 months. AAI has helped one large automotive company to increase use of a critical CRM application in its dealerships from 10% to more than 60% in six months. EDS, meanwhile, is working to implement a solid infrastructure backbone for service management, such as secure networking and data center consolidation, to sustain its vision for the "agile enterprise." EDS is trying to find the right balance between customization and repeatable service offerings. Rather than building arrays of packages of predefined solutions, the company is building a large number of blueprints that provide reference architectures and partner technologies.
- ¹² Over the past 12 months, Forrester has observed a strong shift away from the traditional outsourcing mega-deals toward more selective and flexible outsourcing arrangements that allow companies to more easily commission and decommission certain aspects of service on an as-needed basis. The multisourcing arrangement that General Motors signed with various service providers earlier this year is one good

example of this trend. See the February 3, 2006, Quick Take “[GM Drives Multisourcing Through Process Standardization](#).” IT execs need to also keep in mind that services are constructed of interdependent components and that an end-to-end QoS guarantee depends on some level of control over all service components. See the March 7, 2005, Trends “[Remote Infrastructure Monitoring](#).”

- ¹³ Infrastructure monitoring software has existed for a decade or more, and two emerging disciplines — application portfolio management (APM) and project portfolio management (PPM) — provide visibility within their individual domains. However, these colloquial views — where they exist — are insufficient. Forrester believes that convergence across these three areas in the next 24 to 36 months will culminate in integrated IT management (IIM) dashboards. See the February 2, 2005, Forrester Big Idea “[Integrated IT Management Drives Efficiency](#).” Organic IT, Forrester’s vision for next-generation data center architecture, offers firms massive IT cost savings and business agility — if they can get past the confusion of ideas and offerings. Forrester’s Organic IT vision now includes new organic management capabilities, multiple innovations across five infrastructure categories, and key prerequisites necessary to get to Organic IT. See the May 18, 2004, Trends “[Organic IT 2004: Cut IT Costs, Speed Up Business](#).” Forrester’s Digital Business Architecture lets diverse IT domains work together as one, enabling IT to deliver unified solutions to business problems that cross IT domains. Building a Digital Business Architecture means capturing business processes and policies as metadata and combining diverse trends like business process management (BPM), service-oriented architecture (SOA), unified communications, and utility computing into a coherent model. See the November 7, 2005, Forrester Big Idea “[Digital Business Architecture: IT Foundation For Business Flexibility](#).”
- ¹⁴ Within the PC industry between 1982 and 1992, the number of vendors offering an IBM-compatible PC exploded. The PC vendor population then slowly declined through specialization and consolidation to only a handful of reputable vendors remaining today. During that period, the overall quality of the product increased, and prices continued to decline. See the April 12, 2005, Forrester Big Idea “[How To Predict Which IT Innovations Will Succeed](#).” The average price premium that Western European consumers pay for broadband over dial-up fell from 181% in 2004 to 68% in 2006. Broadband got 35% cheaper, while dial-up got 8% more expensive overall. In 11 out of the 17 countries we covered, consumers can now choose a broadband subscription service without too many onerous restrictions from an incumbent telco for less than the magical €30 per month, bringing the weighted average Western European entry-level broadband price down to €26.27 per month. See the March 28, 2006, Trends “[Price Cuts And Competition Drive European Broadband Growth](#).”
- ¹⁵ A new breed of networkless managed networking services vendors — global virtual network operators (VNOs) — is emerging and will be an important catalyst in transforming the global telecommunications outsourcing landscape. These companies offer multinational corporations (MNCs) professional services and fully managed IP services on a global scale. See the November 11, 2005, Trends “[Global VNOs Are In Your Future](#).”

FORRESTER®

Helping Business Thrive On Technology Change

Headquarters

Forrester Research, Inc.
400 Technology Square
Cambridge, MA 02139 USA
Tel: +1 617/613-6000
Fax: +1 617/613-5000
Email: forrester@forrester.com
Nasdaq symbol: FORR
www.forrester.com

Research and Sales Offices

Australia	Israel
Brazil	Japan
Canada	Korea
Denmark	The Netherlands
France	Switzerland
Germany	United Kingdom
Hong Kong	United States
India	

*For a complete list of worldwide locations,
visit www.forrester.com/about.*

For information on hard-copy or electronic reprints, please contact the Client Resource Center at +1 866/367-7378, +1 617/617-5730, or resourcecenter@forrester.com. We offer quantity discounts and special pricing for academic and nonprofit institutions.

Forrester Research (Nasdaq: FORR) is an independent technology and market research company that provides pragmatic and forward-thinking advice about technology's impact on business and consumers. For 22 years, Forrester has been a thought leader and trusted advisor, helping global clients lead in their markets through its research, consulting, events, and peer-to-peer executive programs. For more information, visit www.forrester.com.