

“In the Cloud” Information Technology Creates New Opportunities for Network Service Providers

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Introduction

For the past several years, incumbent telecommunications service providers (SPs¹) have faced a decline in core legacy revenues, such as fixed-line voice and legacy packet data services in the enterprise and small- and medium-sized business (SMB) markets, which has forced them to move into adjacent markets primarily through acquisitions. Data and voice mobile services and unmanaged fixed data services fueled revenue growth for integrated SPs, but have left a gap in earnings before interest, taxes, depreciation, and amortization (EBITDA).

As a result, SPs have been retooling themselves to move “up the stack” into adjacent market spaces in the information technology value chain such as data center, unified communications, security, other IT-centric services, and advisory services. Many large, incumbent SPs entered these “up-the-stack” markets to a greater or lesser degree through acquisitions and alliances with IT providers. Managed network services are a part of this services market and a must-win battle for the incumbent service provider.

Meanwhile, as SPs move into these adjacencies, “in the cloud” service providers—such as software-as-a-service (SaaS), infrastructure-as-a-service (IaaS), and hosted service-oriented architecture (HSOA) providers—are targeting transaction costs associated with IT services contracts and offering powerful, scaling economies. These new economies are disrupting the very adjacencies that traditional SPs are entering. The new providers target buyers’ economic costs and—through the sharing of computing, storage, applications, processes, and even data—create scaling economies. New business models are creating fluidity (fluid machines, fluid applications, fluid processes, and fluid data), making IT readily accessible across the globe. The fluidity and ready access to IT resources are creating a new level of information sharing and access to knowledge resources that affects all segments of the economy. The new breed of “Third-Generation” services targets traditional IT services markets and creates a dilemma, not only for software and hardware providers, but also for systems integrators/outsourcers (SI/Os).

1. Telecommunications service providers are referred to as SPs throughout this paper, while IT service providers are referred to as such.

Information technologies are evolving in tandem with the ascendancy of the Internet, taking advantage of the Internet's pervasiveness to create greater fluidity of information technologies. Fluidity in this context means the ability to transcend IT and network barriers, allowing computing, storage, network, application, process, and data resources to flow wherever they are needed. Similar to the impact that the first transatlantic cable had on business transactions (reducing month-long processes to minutes by speeding communication), fluidity accelerates businesses' ability to share and act upon great volumes of information.

Five major technological developments are core to the concept of fluidity:

- By creating a layer of abstraction above the physical layer (decoupling), Internet Protocol (IP) makes networks truly multipurpose (voice, data, video) and hence more flexible, responsive, and easier to integrate.
- Virtualization, also an abstraction layer above physical machines, enables heterogeneous machines to behave as one, increasing machine utilization and computing power. Coupling virtual machines with the network enables computing power to flow where it is most needed.
- Platform-independent, open-standard, browser-based applications are driving device-agnostic, personalized, multifirm-capable, highly flexible applications and application architectures. Again, coupling these applications with networking capabilities allows applications to flow where they are most needed.
- Web services and service-oriented architectures create another layer of abstraction or "loose coupling" among organizations' processes, allowing for flexible, real-time, and automated B2B communications and collaboration.
- The rise of the Semantic Web (still in its infancy) seeks to express information on the web and within existing databases in a form that can be interpreted and used by any software agent, permitting organizations to more easily find, share, and integrate information.

The adoption of these technologies and the shift to greater fluidity makes it possible for companies to achieve truly global collaboration, as well as greater productivity and efficiency, from key inputs such as information, labor, and computing assets.

A new generation of service providers takes advantage of these same technologies and combines them with disruptive business models to offer services that are creating new levels of collaboration (both human-to-human and machine-to-machine), productivity, and efficiency through what are essentially outsourced services.

The rise of fluidity, which makes the network a critical global link for information sharing, creates a broader opportunity for network-based service providers to create infrastructure services and related managed service offerings for business customers and emerging Third-Generation service providers. These new offerings will give customers greater flexibility for infrastructure consumption and managed services at a much lower price. The flexibility and low price of some of these offerings will make them attractive to a wider number of business customers, such as SMBs, which were traditionally “overshot” by existing offerings.² The network becomes the platform for SPs to compete in this new world, but a paradigm shift takes place. Rather than the upper layers of the OSI³ model commoditizing the network layer, the more flexible the upper layers, the more intelligent the network layer needs to be. SPs can take advantage of this shift to:

- Compete in new ways that take advantage of the value of their network and other assets instead of competing head-on with IT service providers
- Close the EBITDA gap

Service Providers Strive to Close the EBITDA Gap

Information technology is a fundamental part of the global economy (it reflects approximately 35 percent of all U.S. non-residential capital expenditures, the single largest part of all capital spending).⁴

Globally, SPs’ business (non-residential) revenue⁵ is around US\$600 billion (in 2007), with an overall compound annual growth rate (CAGR) of 5.6 percent until 2010, reaching approximately US\$700 billion by 2010⁶ (see Figure 1).

As depicted in Figure 1, the CAGR of traditional telecom business services, namely PSTN, leased lines, and legacy packet, is declining over the period of 2007 to 2010 at 6.8 percent globally. On the other hand, unmanaged data, mobile voice, mobile data, and network-centric services⁷ are increasing at 11.7 percent, 2.8 percent, 20.4 percent, and 27.6 percent, respectively.

2. “Unlocking the Value of Service Provider Assets to Win the SMB Customer: SMB Connected Office and the Channel Experience,” Seanan Murphy and Wagdy Samir, Cisco Internet Business Solutions Group (IBSG), Service Provider Practice, 2008.

3. The Open Systems Interconnection Basic Reference Model (also referred to as OSI Reference Model or OSI Model) is a layered, abstract description for communications and computer network protocol design.

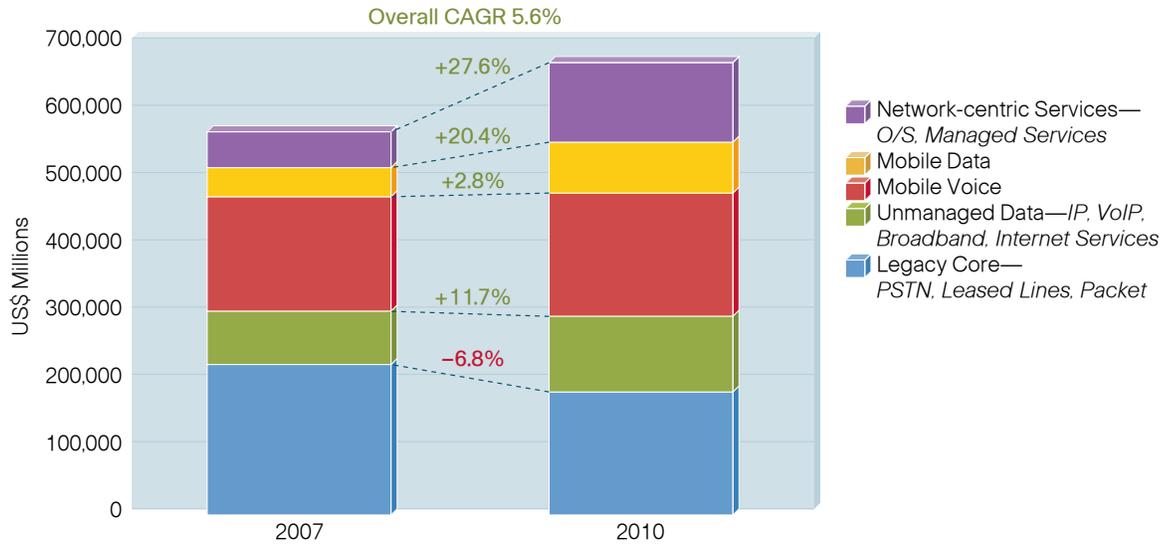
4. “IT Survey Spending: Mapping 2007,” The Goldman Sachs Group, Inc., December 5, 2006.

5. The main categories of SPs’ business (enterprise, government, and SMB) revenues are included here. These include legacy core revenues (PSTN, leased lines, and packet data); unmanaged data (IP, VoIP, broadband, and Internet services); mobile voice and data; and network-centric services (outsourcing, managed IP services).

6. Gartner, 2004 to 2010 forecast; Ovum, 2005; SP Systems Engineering; and Cisco IBSG, 2007.

7. Network-centric services include enterprise network outsourcing (CPE, LAN, and WAN) as well as managed network services (managed IPT, managed IPVPN, managed metro, managed telepresence, managed SIP trunking, and managed video surveillance).

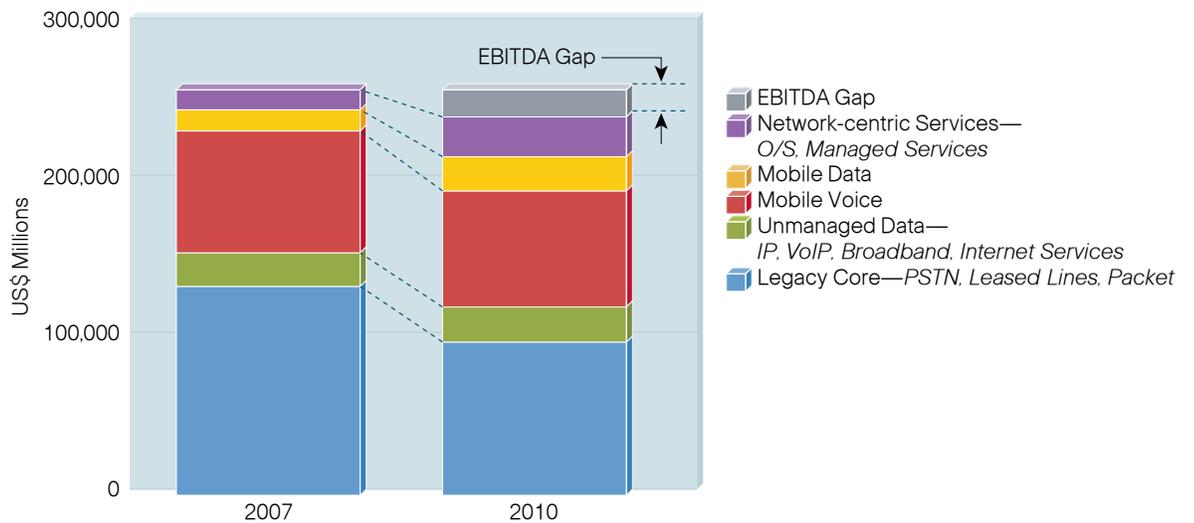
Figure 1. Worldwide SP Business (Excludes Consumer) Revenues for 2007 and Projected Growth for 2010



Sources: Gartner, 2004 to 2010 forecast; Ovum, 2005; SP Systems Engineering; Cisco IBSG, 2007

Despite top-line growth, SPs are struggling to close the EBITDA gap because of the decline in their highly profitable legacy revenues, as depicted in Figure 2. This gap⁸ is projected to be around US\$20 billion by 2010.

Figure 2. Estimated Worldwide SP Business (Excludes Consumer) EBITDA for 2007 and Projected Growth for 2010



Source: Cisco IBSG, 2008

8. Note that EBITDA estimates are based upon the performance of a small sample of operators around the globe. Share of wallet and growth in EBITDA assumptions for 2010 are based on IBSG analysis. EBITDA assumptions will differ by country and provider as a function of provider strategy, market dynamics, and competitive landscape.

Figure 2 shows that based on estimated EBITDA for each category of revenue, it is clear the EBITDA gap still is not closing despite revenue growth potential through mobile data and network-centric services.

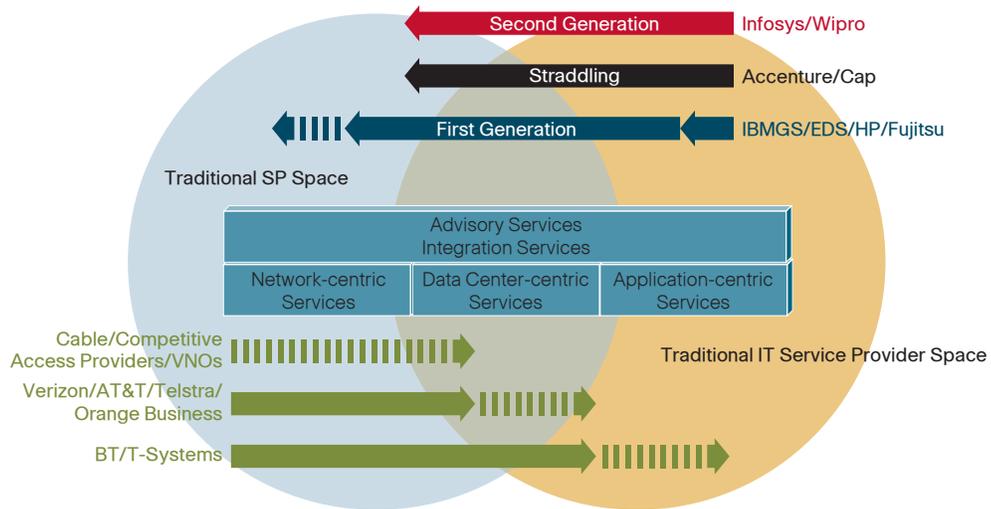
Moving “Up the Stack”: SPs Expanding across IT Services and Intensifying Competition

SPs have targeted services as a potential source of growth, recognizing that continued growth in IT services is driven by a number of factors, including business customers’ increased propensity to outsource, coupled with the perception of relatively low entry barriers and pull-through revenues.

In doing so, SPs are competing against large outsourcers and IT service providers who typically are more capable of “solution selling,” have a larger installed base of customers, are adept at rapidly moving up the learning curve through knowledge management, can more easily source and shift labor resources, and have more experience in providing IT services.

The dynamics of the market are such that some SPs are expanding their presence beyond managed network services, offering other managed services (such as web hosting) and building services organizations (moving into data-centric and application-centric services). Meanwhile, IT service providers are expanding into network-centric services, while strengthening their services portfolios. IT service providers range from “First-Generation” providers (well-established and scale players, such as IBM Global Services [IBMGS], Hewlett-Packard, and EDS) to “Second-Generation” service providers (those who have established themselves as cost leaders, such as Wipro, Infosys, and Tata). Figure 3 depicts the complex competitive dynamics (see also “Sidebar 1: SPs Move into the IT Services Space”).

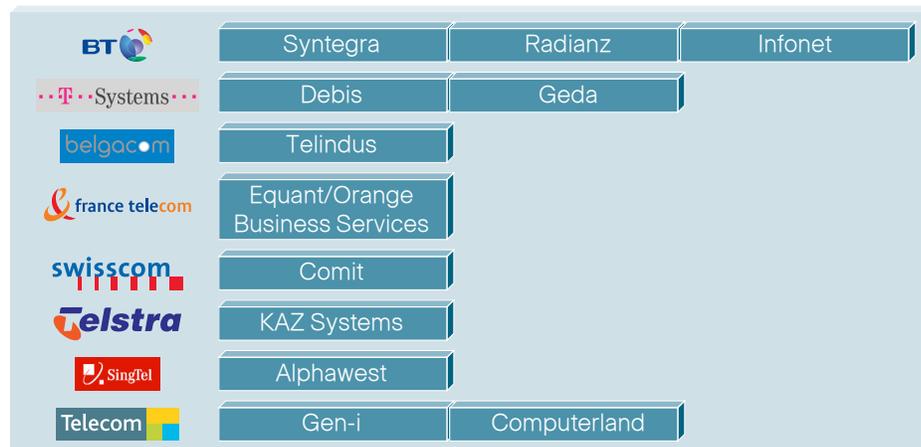
Figure 3. Competitive Landscape for Telecommunications SPs and IT Service Providers



Source: Cisco IBSG, 2008

Sidebar 1: SPs Move into the IT Services Space

Over the past decade or so, the SP market has seen many acquisitions⁹ with the aim of developing “IT Services” capabilities. Some of these are illustrated below.



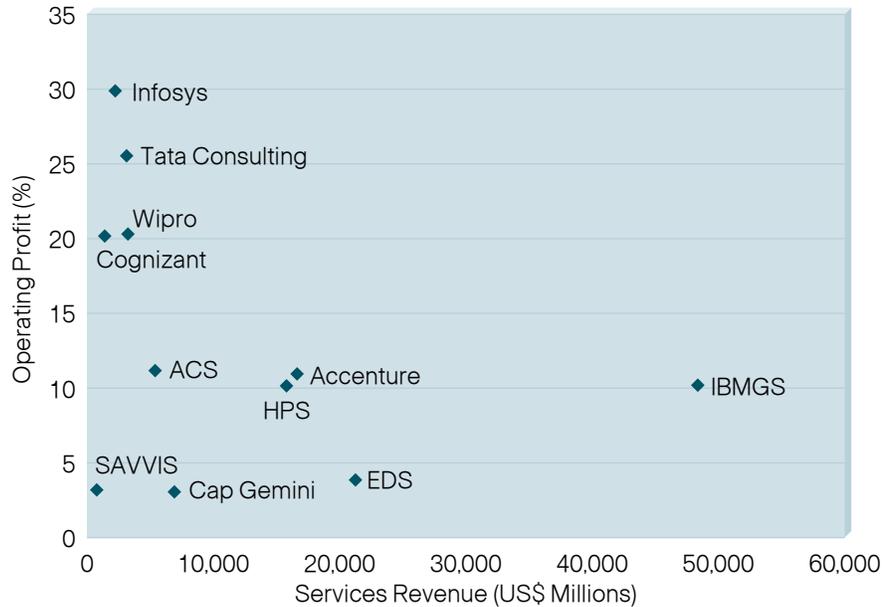
Source: Cisco IBSG, 2008

The DNA of IT services is quite different from that of the connectivity services offered by SPs, and competition in some markets is intense. Although data center services and application management services experience the greatest amount of growth, these markets are not easy to enter. SPs must offer enterprise customers a value proposition that is superior to both the “do-it-yourself” (DIY) approach and to incumbent IT service providers’ experience and capabilities. In other words, SPs must find a way to deliver more value at a better price while at the same time building brand, a channel, repeatable methods and tools, and economies of labor. Traditionally, such services are low-margin, primarily due to the DIY competition, which requires a provider to offer essentially the same service for less than an enterprise could do it internally. This provides few opportunities to realize scaling economies across customers, as most IT environments are not shared, but isolated islands of disaggregation. Precisely for this reason, scale does not seem to guarantee higher profit margins, as depicted in Figure 4 (larger players such as EDS and IBMGS command lower operating margins—albeit their portfolio of services is quite diverse).

The thin margins on services deals can rapidly turn to losses if deals are poorly constructed or the provider experiences problems with execution. Intense competition in the procurement phase can lead to a form of the “winner’s curse,” where the contractor bids a low price to win the contract, but finds it difficult to make a profit, with break-even not occurring until one or two years into a contract. If such a deal goes badly, it can rapidly become a financial negative for the service provider.

9. Ovum, 2005; Gartner, 2006; Goldman Sachs, 2007; websites of the companies under discussion.

Figure 4. Profitability of IT Services



Sources: Factiva, Yahoo.com, TBR Reports, and Cisco IBSG analysis (based on 2006 Fiscal Year)

Although SPs using offshore labor are showing strong revenue growth and high operating margins, some of the results they have achieved through labor arbitrage are not a promising source of sustainable competitive advantage. First, competitors are becoming more adept at global sourcing. For example, IBMGS, EDS, and Accenture have invested in and accelerated global labor sourcing capabilities, which include not only the ability to source labor from a given source, but also to respond to changes in labor demand and available labor supply. Enterprises are also identifying resources globally and, as a result, placing additional downward pricing pressure on IT services deals. Finally, as both DIY companies and suppliers seek resources in specific geographies, they increase the demand for local resources. This suggests that wages and attrition rates will rise as resources follow the money.

Although First-Generation services are considered revenue-growth engines for SPs, they have not managed to close the EBITDA gap. But major shifts are occurring in the IT services market that will undoubtedly impact SPs' current and future investments in IT services strategies.

Third-Generation Technologies, Services, and Business Models Are Shifting the Market

A third wave of service providers with fundamentally different models is changing the IT and network services markets. The information technology value chain, of which network services and managed services are a part, is undergoing significant change due to

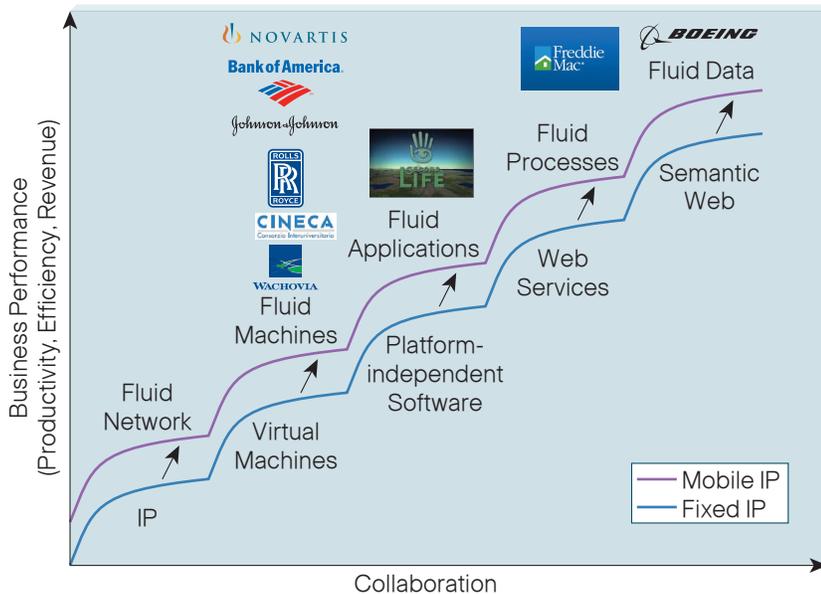
rising adoption of SOAs and web-centric, on-demand information technology services. The Internet investment of the 1990s and subsequent important technology developments have combined to create a new way to offer and consume information technology. Examples of these new services include SaaS and utility compute platforms.

To date, SaaS's disruption has been largely confined to the software industry, while utility computing platforms frequently have acted not as substitutes, but only as complements to other infrastructure services. These dynamics are about to change.

Figure 5 provides some examples of how enterprises are investing in a wide array of technologies that take advantage of the shift toward more open, interoperable standards and maximization of investments, creating new levels of collaboration (both human-to-human and machine-to-machine), productivity, and efficiency.

The new technologies that enterprises are adopting create new levels of collaboration (machine-to-machine, application-to-application, person-to-person, etc.), as shown along the x-axis of Figure 5. This increased collaboration creates efficiencies in obtaining access to information as a factor of production, increasing productivity of labor resources by enabling more rapid access to needed skills and enhancing communication. The improved efficiencies in information access and enhanced productivity make it possible for companies to shorten the time to market of new products and services or to respond to change, accelerating revenue. For example, in the financial services industry, brokerage firms take advantage of parallel computing to more quickly analyze data that could affect prices of commodities or stocks. With more rapid access to the analysis, they can respond quickly to changing conditions.

Figure 5. Paradigm Shift—Businesses' Adoption of Third-Generation Capabilities and Models



Source: Cisco IBSG, 2008

A virtual machine software layer can link heterogeneous machines so that they behave as one. This kind of virtual machine, coupled with the network, enables computing power to flow where it is most needed.

The creation of virtual machines and the fluid network also has enabled applications to be delivered in a new way; the application flows where it is most needed. Applications can now be delivered over the Internet through a browser instead of through a fat client on a desktop. These platform-independent, device-agnostic, open-standard (web) applications are being deployed within enterprises such as Freddie Mac, which made a large-scale investment to shift its IT to new platforms.¹⁰

The next development is the availability of more open standards for interoperability through web services and the ability to build SOAs. One of the most powerful aspects of SOA is that it enables “loose coupling” among organizations, which creates new flexibility for B2B communications—real-time and automated.

Finally, the Semantic Web is an evolving extension of the World Wide Web in which all information on the web is structured in a way that can be understood, interpreted, and used by software agents.¹¹ This permits agents to find, share, and integrate information more easily.

Enterprise IT is evolving to reflect these investments. IT departments are expected to move from being tactical, headcount-heavy, significant infrastructure consumers to strategic, headcount-light organizations with infrastructure predominantly purchased through service providers.

Enterprise adoption of these technologies is changing customers' expectations of service providers. New service providers are taking advantage of these same technologies to build more profitable services and to develop offerings that are attractive to previously underserved portions of the market, such as SMBs. These new providers operate in an Internet environment, not in a traditional on-premise data center. As a result, consumption of web and edge hosting is on the rise.¹² (Figure 6 provides examples of such providers.)

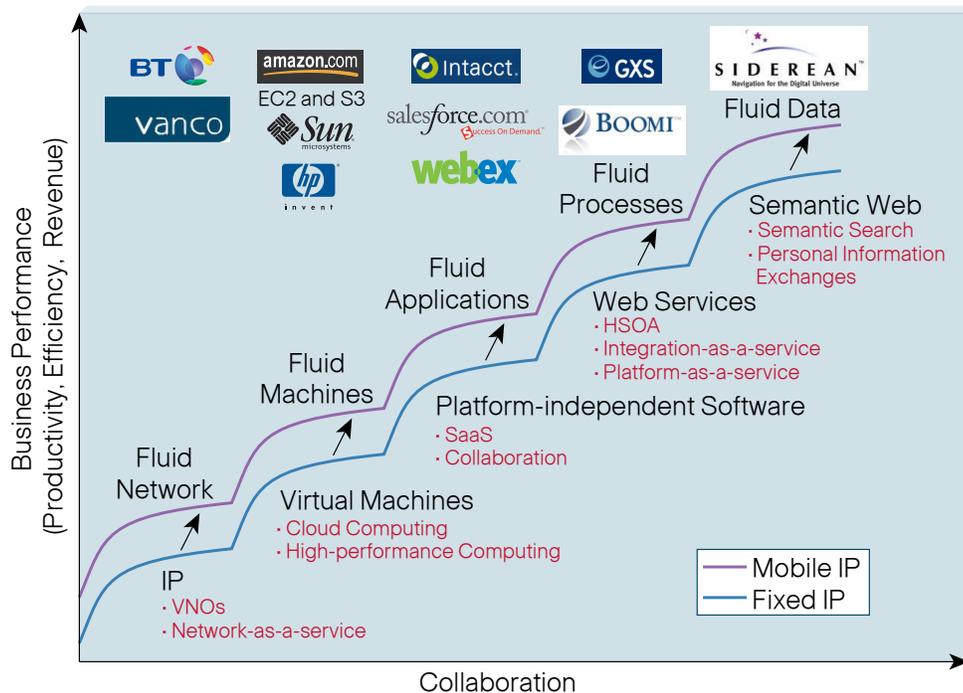
For example, BT exposes network capabilities, such as voice calling, conference calls, messaging, profile, and location information, from its core network to developers. Developers can then access these services through web services-based application program interfaces that work with existing development environments, or by using the BT 21C Software Development Kit (SDK) developer tools. This shift has also made it possible for service providers to integrate virtual networks to create end-to-end global networks. For example, one provider, Vanco, built a business model called a virtual network operator that combines networks owned by different service providers.

10. “Mortgage Company Cashes in on Web Services: Freddie Mac Updates Its Architecture and Applications and Saves Billions,” David Strom, *Network Computing*, September 21, 2006.

11. “The Semantic Web, A New Form of Content that Is Meaningful to Computers Will Unleash a Revolution of New Possibilities,” Tim Berners-Lee, James Hendler, and Ora Lassila, *Scientific American*, May 2001.

12. Tier 1 Research, *The Managed Hosting Overview*, Spring 2008.

Figure 6. A Market Opportunity for Third-Generation Service Suppliers



Source: Cisco IBSG, 2008

Amazon's entry into IT infrastructure services suggests that other web providers with high capital costs could try to monetize their excess capacity or begin to offer services externally that take advantage of their core competencies and proprietary technologies. Amazon Elastic Compute Cloud (EC2) is a web service providing resizable compute capacity in the cloud, designed to make web-scale computing easier for developers. Amazon Simple Storage Service (S3) similarly enables storage in the cloud. Google is working closely with IBM to develop "cloud computing," and IBM claims to have created a new rack server for cloud computing.¹³

The market for on-demand, "in the cloud," multitenant software applications is rapidly evolving. WebEx and Salesforce.com are two of the leading lights in this market, but many new companies—including incumbent software providers like Microsoft—are offering their applications as SaaS. Other providers such as Google, which were initially focused on developing web applications for consumers, have recently turned their attention to offering applications specifically targeted to the business customer. Unlike on-premise software applications, SaaS applications often are shared across a wide number of enterprises and are fully supported in the cloud by the same company that developed the application. Some other examples of SaaS providers include Intacct

13. "Virtualization—IBM Creates Cloud Box," Maureen O'Gara, *Open Web Developers Journal*, April 2008.

(on-demand enterprise resource planning and business and financial accounting suite), SugarCRM (open source, customer relationship management suite), Taleo (talent management), NetSuite (full business software suite), and many more services, from simple email programs to application development environments such as Bungee Connect and Coghead (platform-as-a-service).

The ability to quickly create mashups among web-based applications, the availability of preintegrated ecosystems (like WebEx Connect), and the increase in open interoperability standards has created opportunities to address the challenges of application integration in new ways. For example, companies like Boomi and Hubspan are offering business-to-business integration services in the cloud. Similarly, companies such as GXS are transforming themselves from proprietary electronic data interchange platforms to platforms based upon web services, and making them available in the cloud. GXS offers hosted and managed B2B integration services that support synchronous yet loosely coupled B2B integration transactions. These services make it easier for companies and providers to integrate solutions.

Finally, some companies are commercializing Semantic Web technologies. These technologies most often are used in search applications, such as Siderean's Seamark Navigator, which makes it possible to search heterogeneous information. Similarly, companies like AdaptiveBlue are making "personalized smart browsing" possible by using Semantic Web technologies to structure data across the web and serve up relevant services.

These providers are taking spending from traditional IT services companies and rapidly evolving the market, changing the economic cost basis of competition by taking advantage of these technology advances. The technologies they are adopting are far more scalable due to asset and code-base sharing. These scaling economies make the model more profitable for the supplier and suggest that there will be scaling benefits that enterprises will be hard-pressed to replicate—in sharp contrast to previous generations of services (see "Sidebar 2: Changing the Way IT Services Are Offered").

In addition, these new service providers are addressing many of the key buyer economic costs by offering standard contracts (hence, no time is spent negotiating the contract), providing short contracts (typically a year or less), provisioning on demand, avoiding costs associated with on-premise deployments, and simplifying the environment.

Sidebar 2: Changing the Way IT Services Are Offered

	First Generation	Second Generation	Third Generation
Attributes	<ul style="list-style-type: none"> High degree of customization Software “sell through” or third party provided Focused primarily on enterprise-level accounts Little or no infrastructure/application sharing across customers Typically large, complex contracts 	<ul style="list-style-type: none"> High degree of customization Software “sell through” or third party provided Focused primarily on enterprise-level accounts Little or no infrastructure/application sharing across customers Typically large, complex contracts Lower-cost labor locations 	<ul style="list-style-type: none"> Configurable with low degree of customization Provider-developed Focus on SMB and enterprise High degree of infrastructure/application sharing Typically simple contracts, monthly fee, and limited SLAs Mostly U.S., but this is changing
Examples	<ul style="list-style-type: none"> EDS IBM CSC Unisys 	<ul style="list-style-type: none"> Wipro Tata 	<ul style="list-style-type: none"> WebEx Taleo Amazon Salesforce.com
Impact	<ul style="list-style-type: none"> Gross margins of 10–15% (can easily turn profits negative) Growth relatively flat 	<ul style="list-style-type: none"> Gross margins of 40-50% Revenues growing at ~40% CAGR 	<ul style="list-style-type: none"> Gross margins of 70-80% Revenues growing at ~40% CAGR

Source: Cisco IBSG, 2008

“Fluidity” and the Role of the Network

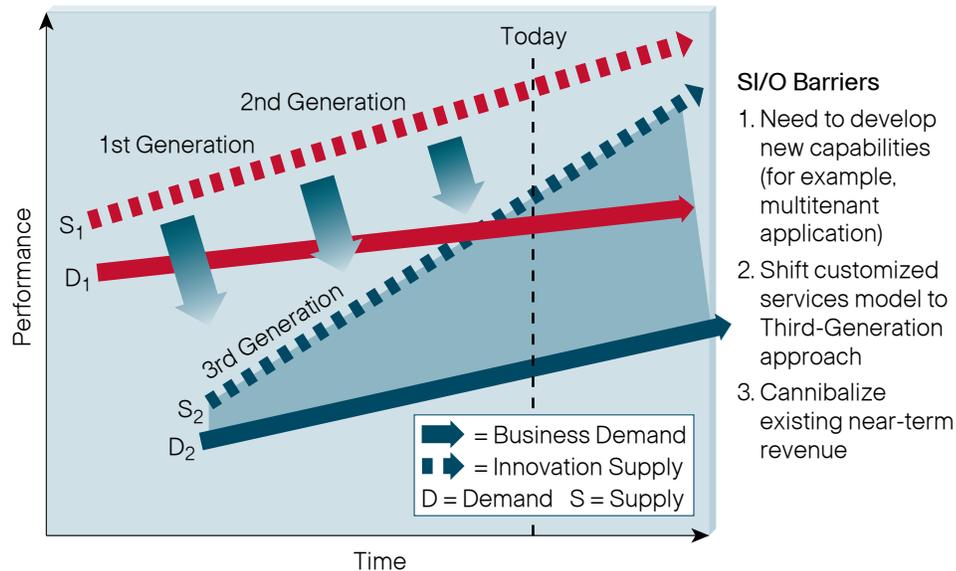
The changes that these key trends are causing in IT services market dynamics throw new light onto the service providers’ strategy of moving into IT services as an attractive market adjacency. Although some SPs (as described in Sidebar 1) have and are making the decision to compete head-to-head with IT service providers, we believe that the risks outweigh the benefits. Instead, SPs can avoid repeating the mistakes of IT services incumbents and approach the market in a new way by applying a Third-Generation approach to improve the economics of their services businesses.

The growing consumption of multitenant, on-demand infrastructure and applications creates an opportunity for SPs, especially the fully integrated¹⁴ ones, to address customers in new ways.

14. Fully integrated SPs are those that possess both wireline and wireless capabilities.

IP coupled with mobility is creating a ubiquitous network that allows information to flow where it is most needed. The network is becoming an enabler of the extended enterprise. SPs should be able to use their most valuable and unique assets to create a new space, rather than compete on the IT service providers' turf (see "Sidebar 3: Innovator's Dilemma for Systems Integrators/Outsourcers").

Sidebar 3: Innovator's Dilemma for Systems Integrators/Outsourcers



Source: Clayton M. Christensen, *The Innovator's Dilemma*, HarperCollins, 2003; Cisco IBSG, 2008

The SI/O business model is based on high variable costs (cost of professional service resources), with the aim of maximizing utilization rates. For example, SIs rely heavily on a high level of application customization and integration to drive their revenues. The more complex the project, the higher the utilization rates—despite the fact that companies such as IBMGS and Accenture are investing in SaaS and SOA models.

The new multitenant capabilities and shift to off-the-shelf solutions present themselves as near-term revenue cannibalization for SI/Os (First- and Second-Generation providers). Third-Generation providers can initially satisfy the demands of less-sophisticated customers (such as the SMB segment), who require lower performance but higher cost-effectiveness (solid blue demand curve D_2). Over time, however, the performance of Third-Generation providers (dotted blue supply curve S_2) will exceed the demand of the more sophisticated customer set (solid red demand curve D_1), allowing them to effectively compete with First- and Second-Generation providers, but under different conditions (fixed rather than variable assets—the network).

The barriers described above are likely to prevent First- and Second-Generation providers from being aggressive first movers, allowing SPs to take the high ground, if they desire to do so.

SPs have the ability to provide an “all IP” network that satisfies enterprises’ desire for security and low latency. The value of the network increases as more XML (a bulky language) traffic traverses it, with some predictions suggesting that 40 percent of enterprise traffic will be XML-based by the end of 2008. Furthermore, SOAs will have an impact on the network by facilitating the distribution of business functionalities across services and business units within an organization and, externally, across suppliers, customers, and partners.

A fluid network coupled to fluid machines allows computational power to flow where it is needed. SPs then have the ability not only to facilitate a utility model, but also to offer their own compute capacity as a service (like Verizon Business Services or Fujitsu).

As fluid applications and fluid machines are coupled together, Internet data centers replace traditional data centers (AT&T, Verizon, and BT, among many SPs, provide hosted data center services over the Internet).

Platform-independent software requires data center services, giving rise to the need for virtualization and the provision of IaaS. By marrying their infrastructure assets, their network, and their channel capabilities, SPs are well-positioned to provide Third-Generation providers such as SaaS players with the desired infrastructure, leaving SaaS players to focus on applications.

Application Aware Networking, where the network is able to discern among different applications that are being assembled on the fly in a SOA environment, plays a significant role in organizations’ effectiveness. Furthermore, wide-area network (WAN) optimization and application acceleration assume paramount importance in supporting web services.

With fluid processes, intra- and inter-enterprise collaboration facilitation becomes crucial to the business performance of enterprises. Real-time, flexible B2B communication provided over a robust network becomes a key enabler.

Paradigm Shift: New Strategies for SPs to Capture the Fluidity Phenomenon

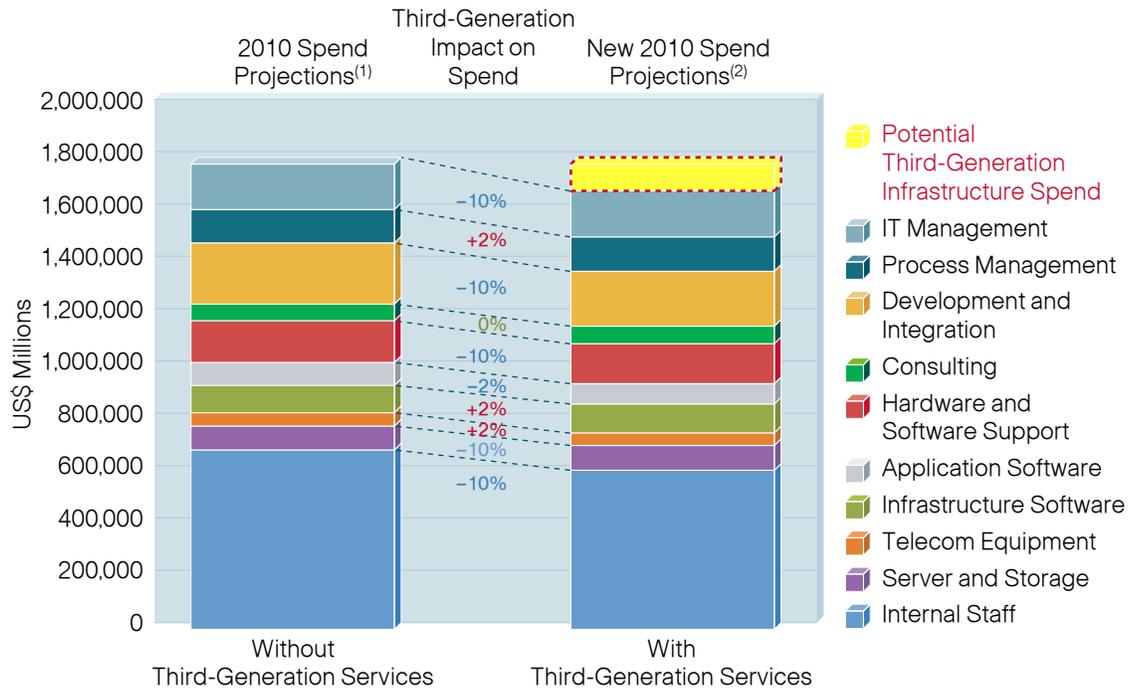
Almost any infrastructure can be delivered as a service, including data centers, computing capacity, storage resources, IP contact center infrastructure, enterprise applications, and network resources. In these cases, the provider owns and manages the infrastructure. Customers pay only for what they need. This creates new business models.

The proliferation of these new business models has the capacity to change the way IT departments for enterprises (and midmarket firms) spend their IT budget. This creates a fundamental shift in spending. Such a shift is depicted in Figure 7. The key premise of the analysis presented in Figure 7 is that linear extrapolation of IT spend into the future may be erroneous.¹⁵ Disruptive technologies that are accompanied

15. Note, for example, that the 2007 Triple Tree SaaS report has projected a much larger SaaS market than was predicted by IDC. Triple Tree attributed the difference of opinion to potential oversight through the use of traditional forecast methods when addressing disruptive business models and technologies.

by disruptive business models have the potential to create fundamental shifts in spending. Figure 7 looks at 2010 global IT spend projections by industry analysts, and proposes potential new 2010 global IT spend distribution, due to the rise of Third-Generation technologies and models. This shift in spending will change the competitive dynamics of the IT services market, and SP strategies will need to respond to this change.

Figure 7. Potential Shift in IT Spend Due to Emerging Third-Generation Technologies and Business Models



Sources: (1) Gartner, 2004 to 2010 forecast; (2) Cisco IBSG, 2008

In Figure 7, we hypothesize that the impact of the Third Generation will result in shifts in IT spend from some categories to others, while assuming that the overall 2010 Gartner projection of IT spend remains constant. We hypothesize that as Third-Generation technologies and models (and services) take hold, enterprise IT departments will reduce their spend on IT staff by around 10 percent¹⁶ by 2010. The rationale behind this decrease (while still maintaining the total IT budget constant) is that with IaaS, SaaS, and HSOA, fewer resources will be required within the enterprise. Similarly, as utility models proliferate, server and storage spend and associated support will decrease. With web services (fluid processes) as well as platform-independent software (fluid applications), enterprise software, associated support, and development and integration (customized

16. The exact percentage of shift in spend is immaterial in this conceptual framework. The focus is on the fact that new business models adopted by enterprises will result in fundamental IT spend shifts. These will differ by geographies, industries, enterprises, and over time. The hypothesis is that a shift will take place over time, with 2010 as an assumed anchor year.

projects) spend will decrease. Meanwhile, other spends are likely to increase to accommodate the shift to utility models. These include process management, infrastructure software, and telecom equipment (to cope with information traversing the network in a more intelligent way). The resulting balance from the decreases and increases in spend in different IT categories produces a new category of spend (maintaining a constant total spend in 2010) termed “Potential Third-Generation Infrastructure Spend” (yellow bar at the top of the new 2010 spend projections in Figure 7).

This new category of spend presents an opportunity for service providers who seek to benefit from the shift in enterprise spend. SPs are well-positioned to capture a portion of the new spend with a well-planned execution strategy, with the objective of closing the EBITDA gap through better utilization of their assets.

For example, a 1.5 percent improvement in EBITDA through the adoption of Third-Generation service provider approaches will lead to approximately a US\$2 billion EBITDA gain.

Conclusion

Forged by web-based technologies and approaches, the impact of Third-Generation services is rippling across the IT services market. Telecommunications SPs have a window of opportunity to leapfrog traditional IT service providers by accelerating the change to infrastructure-as-a-service and targeting new segments, cementing their position in the SMB market through channel investment and integrated offers, and more effectively competing in the battle for data center-centric and network-centric services by adopting a Third-Generation services approach.

First, SPs should consider enabling the shift to Third-Generation services addressing new segments. Their strategy should include:

- Introducing application-aware capabilities in their networks
- Providing IaaS, along with virtualized server and storage resource offerings
- Using mobile assets, monetizing their mobile device “real estate” to application providers, and developing strategies to link capabilities across mobile and fixed uses
- Creating a service-oriented, Third-Generation integration portal (such as AppExchange) built on verticalized business communities, accessed through a browser and mobile client, and offering integrated infrastructure and application services with business-level SLAs translated down through infrastructure

Second, SPs should consider the monetization of their channels to enable Third-Generation supplier models. Sales and marketing is the largest category of spending for Third-Generation providers (such as SaaS providers, WebEx, or Salesforce.com), ranging between 30 percent and 60 percent of revenue.¹⁷ These Third-Generation providers are mostly in start-up mode, chasing a growing market, and competing against large, traditional players. Given that they are also focusing on the fragmented SMB market, their ability to take advantage of strong SP channels through revenue-sharing models can only benefit themselves, the SPs, and the SMB market as a whole. SPs, working with Third-Generation providers, could develop foundational offerings that provide an integrated solution for the SMB market. An example of such an offering¹⁸ is the “connected office” (also termed “my office everywhere”), which integrates network-centric services with applications.

Finally, as SPs pursue even traditional network-centric and data-centric services, they should adopt Third-Generation approaches. Adopting such methods includes rethinking solutions both architecturally and from a process and business-model perspective. SPs can take advantage of advances such as multitenancy, interoperability, and open standards from an architectural perspective to enhance scalability and improve services margins. Similarly, SPs should make greater use of process automation and modularity across all process areas from the point at which they first target a customer, all the way through the purchase and enabling/supporting them. Applying these disciplines not only drives out costs from the SP operation but also—and perhaps more important—makes it easy for customers to buy, use, and pay for services. Third-Generation providers such as Amazon that enable “one click” purchasing of compute power demonstrate the impact that true process automation has on the customer experience. From a business-model perspective, SPs need to align usage more closely with pricing, find ways to shift customer expenditures from CapEx to OpEx, and create greater value for customers by offering an ecosystem of interoperable services. As SPs adopt such frameworks, more effectively utilizing their network assets, they will be able to improve their profitability and start to close the EBITDA gap.

17. WebEx Communications Inc. (now part of Cisco) income statement, 2006; Salesforce.com income statement, 2006.

18. For a detailed discussion of such an offering, please refer to “Unlocking the Value of Service Provider Assets to Win the SMB Customer: SMB Connected Office and the Channel Experience,” Seanan Murphy and Wagdy Samir, Cisco Internet Business Solutions Group, Service Provider Practice, 2008.

For More Information

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More Information

The Cisco Internet Business Solutions Group (IBSG), the global strategic consulting arm of Cisco, helps CXOs and public sector leaders transform their organizations—first by designing innovative business processes, and then by integrating advanced technologies into visionary roadmaps that address key CXO concerns.

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