Point of View

Navigating Turbulent Waters

The Next Wave for Service Providers

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> "Prediction is very difficult, especially about the future."
>
> —Niels Bohr, Physicist and Nobel Laureate

An Industry in Transition

The service provider (SP) industry no longer exists as we once knew it. With the advent of the Internet and the proliferation of digital content, the industry now consists of much more than traditional telcos and network providers. It incorporates all aspects of the new, digital value chain, including content creation and management, devices, advertising, and traditional network transport and service provision.

This new industry generates more than US$3 trillion in annual revenue globally, according to industry reports. Revenue comes not just from voice and traditional data services, but also from the growing areas of media, IT, devices, and new data services, such as mobile and telepresence (ultra-high-definition video collaboration technology). In fact, these are the areas fueling industry growth—experiencing, collectively, a 10 percent compound annual growth rate (CAGR) over the past 10 years, compared to 3 percent CAGR for traditional fixed voice and data services.[1]

In addition to coping with what some experts have called the worst economic downturn since the Great Depression, SP executives face a string of issues unique to their industry. For example, traditional network providers are experiencing unprecedented, double-digit growth in terms of network traffic, but just single-digit revenue growth. Meanwhile, over-the-top (OTT) providers are collecting revenue from customers, while treating the network as a "dumb pipe" to deliver services. The digital value chain continues to blur even further, as players along the chain look to adjacent areas for opportunities. In the United States, for instance, Verizon returned to the device business with Verizon Hub, a new home media phone. In addition, systems integrators such as IBM and Wipro are incorporating network transport and service provision into their core offerings to provide enterprise customers with an integrated service and experience.

In most countries, the rapid increase in broadband connectivity, digital content, and mobile data has led to the proliferation of Web 2.0 applications and services. The network has truly become the platform for delivering everything from content . . . to anywhere, anytime experience . . . to all manner of IT services. It is clear that IP has become the undisputed network standard driving this transformation.

1. Sources: Research from the Cisco® Internet Business Solutions Group (IBSG) and several market research firms.

Despite increasing consumer demand and network growth, the industry's future is far from clear. How much longer will this phase continue? How will it ultimately unfold? And, what will ultimately replace it? These are the questions on CEOs' minds as they determine the strategies and actions they should take to ensure future success.

Mapping the Future

Cisco developed a number of plausible scenarios that provide a framework for SP executives to evaluate the future and rationally assess strategic options under different conditions.

In creating these scenarios, Cisco determined that the most important dimensions are "demand" (What will be the nature of demand for SP services?) and "industry structure" (Will the industry be fragmented, comprised of a multitude of providers, or consolidated and characterized by a select number of large providers?).

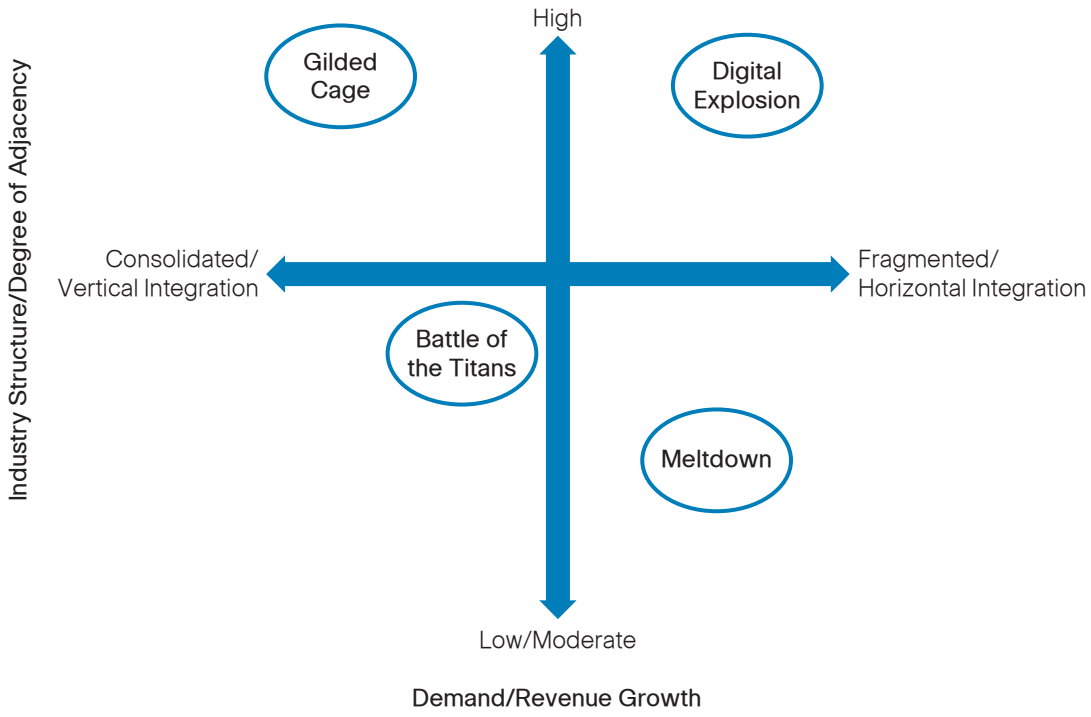
Our research identified 16 unique drivers we believe will exert a large impact on where the industry might fall on this "demand-industry structure" framework. These drivers fall into four categories:

1. Business Environment
   - Real GDP growth—influence the overall wealth of end users
   - Credit access—for both SPs and end users
2. Regulation
   - Net neutrality—open access for all Internet content and applications
   - Program access—equal access to content for all distributors
   - Network resale/unbundling—requirements for operators to open networks to all providers
   - Broadband spectrum—availability and competitiveness of new spectrum
   - Privacy—controls on use and distribution of end-user information
   - Green—requirements to reduce environmental impact
3. Technology
   - Broadband infrastructure—availability of high-speed and high-quality broadband
   - Mobility infrastructure—availability of high-speed, high-quality mobile broadband
   - Openness—openness and interoperability among networks, devices, and content
   - Networked devices and applications—number of devices and applications connected to the network

4. **Customer Behavior (consumers and business users)**
   - Collaboration—interest in and use of collaboration
   - Degree of connectedness—level of interest in an "always on," connected world
   - Willingness/ability to pay—proportion of total budget spent on SP services
   - Privacy and security—level of concern about privacy/security issues imposed by new services

Logical combinations of these 16 key drivers yield the four scenarios portrayed below. Cisco developed these scenarios based on an extensive global survey of more than 4,600 Cisco employees in December 2008, in addition to supplemental research and interviews with industry experts.

Figure 1. Scenarios for the Future



Source: Cisco IBSG Service Provider Practice, 2009

Digital Explosion

In the world of the Digital Explosion, innovation and opportunities abound in what may be the digital equivalent of the Industrial Revolution. Regulatory and technology openness, coupled with large consumer demand for value-added services, means that multiple, non-network-based providers of applications and services flourish. The availability of multiple, fast ways to access the web drives down network prices and commoditizes network transport.

In addition, inexpensive connectivity, computing and storage, and general comfort with security cause many businesses to use cloud services. Value shifts from core SP assets to new applications, services, and customer experiences. Devices are innovative, unique, and integrated with other parts of the value chain to deliver differentiated service and experience. Regulatory openness and customers' willingness to share their personal information allow new business models to develop beyond traditional, fee-based models.

Gilded Cage

In the Gilded Cage scenario, incumbents sit comfortably in their "closed" worlds, happily collecting money from customers that have an insatiable demand for new digital services. With high customer demand and effective barriers to entry, large, integrated SPs and a few big OTTs dominate. Regulations favoring larger providers and less technology openness allow most companies to charge higher prices and control their portion of the value chain through "walled gardens." Each portion of the value chain consolidates to a few providers, who obtain growth through access to new markets and improve margins through economies of scale.

Limited openness favors "coopetition" between different industry segments, such as OTTs and network providers, to share market growth. Device manufacturers can command higher prices for uniqueness, value-add, ease of use, and exclusive deals with other providers. Less pressure on competition limits the rate of product innovation, resulting in slower, more orderly evolution of the digital economy.

Battle of the Titans

In the Battle of the Titans environment, industry giants slug it out in a stagnating market featuring price-sensitive customers with little appetite for new, innovative services. Large, integrated SPs and a few leading OTTs dominate this less-open regulatory and technological world, which is characterized by reduced customer demand. In this scenario, the industry does not favor alternative business models. As a result, network-based SPs become "connectivity utilities," seeking scale through vertical consolidation within their part of the value chain to reduce delivery costs.

Network expansion and development are greatly slowed to align with customer demand. In addition, OTTs and non-network-based providers consolidate to a few companies to reduce all costs, including CapEx. Device providers are forced to focus on price, utility, and lowest total cost of ownership by limiting their product lines, using low-cost components, and radically reducing manufacturing and marketing expenses. Value in this world ultimately migrates to a few trusted brands.

Meltdown

The openness of both technology and regulations in the Digital Explosion and a decrease in customer demand in the Battle of the Titans collide to create a worst-case scenario where multiple providers chase limited market demand. Customers buy less-expensive bandwidth, devices, and applications, showing little interest in adopting innovative services, such as collaboration, cloud, and alternative business models. Initially, multiple non-network providers flourish, but they are challenged with getting customers to adopt their services and with making money. Excess network broadband capacity commoditizes network transport and halts further network build or development.

Cost optimization is the order of the day, as providers struggle for survival in a world of reduced customer demand and increased supply options. Basic, inexpensive devices rule, as manufacturers focus on open technology and interoperability to attract customers. The disastrous Meltdown is unstable in the long term, as companies stop investing, bankruptcies and consolidations increase, and governments likely step in to "reregulate" the industry.

New Value, New Competition

Each of the four scenarios has its own approach to defining value, along with a unique competitive landscape.

In the **Digital Explosion**, value rises across all parts of the value chain. Intense competition, however, drives down prices, especially for basic transport. As a result, real value migrates to unique services, solutions, and advertising. In this scenario, players compete to acquire new subscribers, sell new services, and expand wallet share. A strong, differentiated brand—based on innovation and value-add—is essential as providers fight to "own" the customer and gain a disproportionate amount of the newly created value.

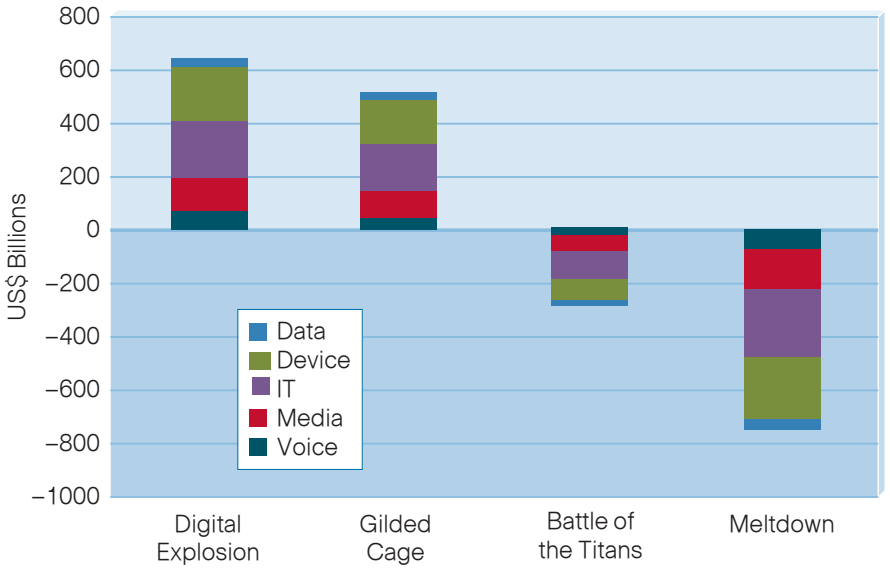
In the **Gilded Cage**, increased value is shared among large, semimonopolistic providers across all parts of the value chain. Limited competition preserves healthy pricing and margins. Advertising and device segments of the value chain do not receive as much value as network access providers due to limited market power—unless these segments can demonstrate specific value and innovation to customers and other parts of the value chain. Competition is based on acquiring new subscribers from the growing market and expanding wallet share of existing customers. Given their secure market position and sufficient growth in their respective pieces of the value chain, traditional SPs, OTTs, and content providers collaborate to grow the entire market. Geographic expansion is also an important way to tap new markets.

In the **Battle of the Titans**, industry value ultimately migrates to a few large, trusted brands. Competition is based on gaining wallet share by promoting brand value based on competitive prices for "basic" services. Cost efficiencies, a critical means of competition, are gained by reducing costs extensively and by seeking economies of scale through vertical and geographical consolidation.

In the **Meltdown**, all segments of the value chain suffer, as value is spread thinly across multiple providers. A pricing bloodbath for most services destroys margins, although providers of unique content and advertising may be able to maintain some value. Competition is based on survival, with reduced operations costs, decreased customer pricing, and frantic attempts to promote a unique proposition to acquire customers. Ultimately, governments may step in to subsidize or regulate the industry to ensure the survival of a viable communications infrastructure. Meltdown is an unstable and ephemeral world, as the industry ultimately migrates to one of the other scenarios.

Cisco forecasts that the SP industry will exceed $5.5 trillion globally by 2015. This baseline growth projection could be altered significantly as the industry evolves to one of the preceding scenarios. Further estimates indicate that moving toward the Digital Explosion would add an additional $650 billion in revenue across five broad product categories: media, IT, device, data, and voice. Conversely, a Battle of the Titans world would remove $300 billion in revenue from the industry. In the worst-case scenario—Meltdown—more than 15 percent of the industry's value in 2015 could be destroyed.

Figure 2. Impact on Global SP Revenues in 2015



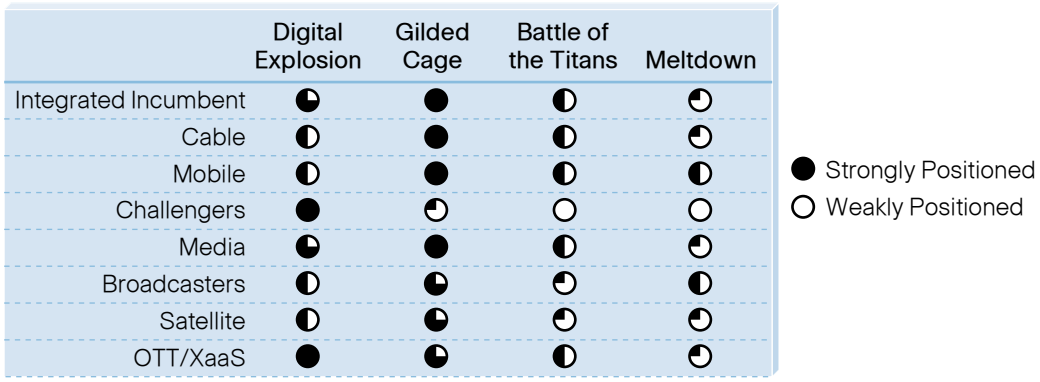
Source: Cisco IBSG Service Provider Practice, 2009

Of course, these scenarios will not evolve evenly throughout the world. We anticipate significant variation in how the industry evolves, given large differences among countries' stages of development, regulatory environments, and economic situations, among other factors. Although difficult to generalize, our analysis indicates a greater tendency for Europe and North America to evolve toward the Digital Explosion. On the other hand, many countries in both Asia and emerging markets appear to be moving toward a Battle of the Titans scenario.

Strategies for Success

Without changes in SPs' current strategies and market positioning, Cisco foresees clear winners and losers emerging under different scenarios, with all segments of the industry suffering in the Meltdown.

Figure 3. Industry Winners and Losers Under Different Industry Scenarios



Source: Cisco IBSG Service Provider Practice, 2009

The picture painted in Figure 3 does not necessarily reflect the way events must unfold; service providers have the opportunity to shape and influence their own destiny. Cisco believes SPs should consider a number of strategic imperatives to address these potential, future worlds.

The optimal **strategic position** for operators is the Gilded Cage—SPs should look for opportunities to influence the realization of this scenario. Companies should consider placing **bets** to shape and profit from this strategic positioning. Operators should bet on the importance of scale by seeking opportunities for geographic and horizontal consolidation. Equally, building exclusive partnerships with other network operators and parts of the value chain—focusing on unique content, applications, or devices—will allow SPs to exploit and influence the realization of the Gilded Cage. Betting on the importance of network-IT convergence by creating new services that exploit network assets and end-to-end control will help shape the industry's future.

Operators should cover these bets by creating **hedges**, or strategic options, to minimize the effects of less-desirable outcomes, and by making nimble changes in strategy as conditions change.

- Collaborating with OTTs can provide an important hedge against the Digital Explosion. SPs should use their channels to sell OTT offerings, and apply their network, billing, and operational infrastructures to enhancing OTTs' services.
- Moving to some form of a NetCo-ServeCo operational and organizational model could provide SPs with greater flexibility in a highly competitive and innovation-intensive world, and also help create economies of scale.
- Building out cloud delivery models and content distribution will provide SPs with a competitive advantage in delivering a differentiated service and experience.
- Creating the ability to take advantage of customer information and insights will allow SPs to "own" the customer relationship and compete with new business models.

Lastly, a series of **table stakes**—a set of strategic actions—should be taken regardless of which scenario unfolds. These include investments in mobility and interoperable network capabilities, such as fixed-mobile and cloud services. Optimizing cost structures—for example, by creating synergies among network assets and by sharing resources across the organization—will be a critical basis of competition. Other competitive differentiators will include taking advantage of network intelligence (through content distribution and storage, for example) and creating organizational and network flexibility and agility.

Charting a Path to the Future

How can SPs use these industry perspectives and scenarios to ensure future success? Cisco recommends they be used as a valuable tool to help SPs determine what their businesses would look like under each scenario. How will they make money? How will they compete? What are their strengths and vulnerabilities?

Cisco firmly believes that some variant of the SP industry's future is described by these scenarios. They provide tools and insights to help SPs become better informed and more prepared for the future, and to respond more quickly to conditions as they deviate from the industry norm. The scenarios' true value comes from encouraging SPs to map out a strategy that helps them shape the future, rather than having it shape them.

"All of our knowledge is about the past, but all of our decisions are about the future."

—Anonymous

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Notes

More Information

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