Vendor Analysis

A Future Scenario for Telecommunications Vendors

Abstract: The recession and changing demands from carriers will result in significant changes to vendors’ skill sets.

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Strategic Planning Assumptions

By 2004, consolidation among telecommunications vendors will have reduced the current number of global companies by 20 percent (0.7 probability).

Telecommunications vendors will be forced to cut production costs by 15 percent per year in 2003 and 2004 to remain competitive (0.8 probability).

Until 2004, smaller telecommunications vendors will have opportunities in many markets, as global vendors focus on relatively high-volume product lines (0.8 probability).

Until 2005, successful telecommunications vendors will be those with solutions that reduce carriers’ operating expenses by at least 15 percent per year (0.7 probability).
Executive Summary

During a period of telecommunications liberalization and privatization, incumbent carriers are transforming themselves into purely market-driven businesses focused on services, profit margins, preventing customer churn, time to operation, outsourcing of nonstrategic business areas and cost reduction. The market consolidation that eventually follows any market expansion, window of opportunity or market shift, in this case created by liberalization, coincided with a severe recession that has affected the global marketplace.

Prior to this consolidation, liberalization had allowed alternative players into a previously monopolistic marketplace. Too many players thought they could succeed, oversupply occurred, followed by "survival of the fittest" and consolidation. This is a global market, in which local conditions are largely synchronized with those in other regions. Its "go and stop" nature is particularly challenging for vendors.

In the early stages of liberalization, vendors struggled to meet demand from incumbents preparing for competition and competitive carriers preparing to take advantage of the newly opened markets. Now, vendors must reduce supply as quickly as possible and adjust their organizations as carriers consolidate and individual carriers' capital expenditure decreases. Vendors need to be increasingly flexible and adapt to the changing nature of carrier demand.

Gartner Dataquest forecasts a further period of telecommunications vendor consolidation until 2004. The key near-term issue for carriers is cost reduction, because they need to be more profitable, but are unable to grow revenue from new services at a sufficiently fast rate. Carrier consolidation will also continue, and these trends mean generally weak equipment sales prospects. The result will be an accelerated implementation of necessary business changes, and change management will be a critical success factor. For vendors, high-volume production will become increasingly important; standardization and low margins will result in a need for further consolidation, as well as specialization and a strong corporate strategy.

Carriers will need increasingly complex infrastructure solutions. To cope with this need, vendors must reconsider their value proposition, market strategy and positioning. Likely changes for vendors are increased R&D (as a percentage of revenue), outsourcing to subsuppliers, increased partnering and "ecosystem" thinking, mergers, acquisitions or, alternatively, a focus on a narrower product portfolio. The most likely short-term outcome is a period of partnership agreements from 2002 to 2004, with more long-term strategic repositioning of businesses to 2006.

In the future, telecommunications vendors can be split into the following three segments:

- Systems integration and solutions vendors
- Niche vendors
- Component vendors

Carrier Demand Will Drive Changes in Vendor Skill Sets

As carriers improve their core business by focusing on service provision, and climb the value chain by addressing content provision, they will require vendors to display a new or improved skill set. Figure 1 illustrates how carriers can climb the
value chain and how vendors can adapt and take advantage of new business opportunities. An extreme example of this business model is the virtual network operator, which outsources the network to a third party and is fully focused on service provisioning.

The market of the future will be global, synchronized to some extent and subject to free market forces. Vendors must be able to implement changes very fast in order to survive. Vendors’ skills, products and organizational characteristics will have to adapt.

Carriers will focus more on strategic vendor relations and flexible, future-proof solutions and less on specific products. They will tend to outsource the following types of task to vendors or third-party providers:

- Network planning
- Training
- Network installation, testing and commissioning
- First-tier customer support
- On-site maintenance
- Outside plant construction
- Turnkey projects
- Managed network services

The more complex and the more labor-intensive the task, the more likely carriers are to outsource it. Examples of such projects include turnkey access network deployments and the upgrade of mobile infrastructure.

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**Figure 1**

Telecommunications Carrier Value Chain

![Telecommunications Carrier Value Chain](image)

Source: Gartner Dataquest (September 2002)
Insufficient Standardization: A Driver of 'One-Stop Shopping'

Standardization should benefit at least the carriers but also smaller niche vendors, which cannot achieve and sustain a market-leading position if their products will not interoperate with the rest of the network. However, standardization is still not efficient enough, as follows:

- It is not fast enough for leading-edge vendors.
- The first installations will often be with vendors' proprietary solutions or with a subset of the full standard specified by a large carrier.
- It is still not possible to integrate commodity products from multiple vendors into complete systems without encountering many problems.
- Leading vendors will try to protect their markets with more-advanced, but proprietary, solutions.

A multitude of smaller, more-specialized vendors could probably supply the most cost-effective hardware solution, but the financial gain for a carrier would be wasted on increased project administration and systems integration costs. The risk of current and future integration problems would remain with the carrier; no single vendor could be expected to manage the systems integration solutions of future releases from different vendors. As a result, systems integration and solutions vendors often offer carriers the lowest total cost of ownership.

Gartner Dataquest believes that most carriers will choose one or two systems integration and solutions vendors to integrate multiple leading-edge applications from niche vendors. By choosing a systems integration and solutions vendor, the carrier can leave all the integration problems to this vendor and concentrate on customer-related problems, rather than infrastructure issues.

As competition intensifies and telecommunications infrastructure becomes increasingly complex, the risk of choosing a less-than-optimal vendor or solution could be fatal for any carrier. Sharing some of the risk with a large, commonly employed strategic vendor will ensure that both vendor and carrier have an incentive to reach a workable solution and that some of the carrier’s competitors will be in the same situation. Choosing large, leading vendors is also a "safe harbor" solution (few CTOs have been fired for choosing the world’s leading vendors even if they have failed to deliver the specified solutions). Additionally, during the current tough economic times, vendors’ staying power is a real concern. Multinational Tier 1 suppliers are unlikely to disappear completely.

Future Telecommunications Vendor Segments

As outlined above, telecommunications vendors of the future can be segmented as follows:

- Systems integration and solutions vendors
- Niche vendors
- Component vendors
Most of the systems integration and solutions vendors will change from an in-house product strategy to one of outsourcing (via an OEM agreement) or partnering. They will do so simply because these options do not divert their focus and because they minimize the risk of choosing a less-competitive solution or technology. They can simply determine which solution and vendor tends to be the most successful in a specific technology area and choose to cooperate with or acquire that vendor.

Vendors in the niche and component segments will have an opportunity to enter the OEM segment, as has been seen in other industries where large vendors outsource as a way of improving their core business while still supplying a full product portfolio. With the right focus, strategy and market intelligence, vendors will be able to place themselves in the right segment and improve their overall business.

Systems Integration and Solutions Vendors
A systems integration and solutions vendor provides a telecommunications “supermarket” for one-stop shopping on a worldwide basis, via sales offices, local manufacturers, local partners and so on. Vendors in this category will tend to have regional, centralized R&D divisions, local production (if necessary) and decentralized sales and marketing centers (centers of excellence). This organizational structure achieves synergies between R&D divisions, while also supporting customer preferences at a local level.

These vendors' product strategy will be to concentrate on core business products and to establish OEM or part-ownership agreements with companies that provide the remaining products.

Systems integration and solutions vendors are most likely be found among the current global top 10 vendors, which already have the large organization required in this segment and long-term, multilevel relations with a large customer base. Newcomers to this segment may be found among leading IT companies merging with or acquiring the necessary telecommunications companies and products to enter the public network infrastructure arena.

Outsourcing of managed network services is a new trend, in which a carrier outsources operations and maintenance of a network to a subsupplier on a time-limited contractual basis. This enables systems integration and solutions vendors to move up the value chain to managed network services, and the carriers to concentrate on value-added services and end-user relationships. The first contracts have been signed and Gartner Dataquest predicts more business in this segment.

The systems integration and solutions vendor is characterized as having:

- Financial strength to invest in new growth markets and to survive if they do not develop as expected
- Open core-technology platform to attract world-class application developers
- Full-service network integration capabilities
- One-stop-shopping capabilities
- Turnkey capabilities
- Agreements with leading OEMs
- Excellent capability to manage complex global relationship networks
- Understanding of the "big picture" of carriers
Niche Vendors
Future niche vendors are highly specialized, leading-edge equipment vendors. They have a narrower product portfolio focused on core business in order to achieve the necessary volumes and low cost.

Their leading-edge R&D within core business segments is of the utmost importance to survival, because their customers — systems integration and solutions vendors and carriers — will tend to buy the best technology or the least-costly solution, making them quite disloyal as long-term customers. If vendors in this segment fall behind and cannot market new products that differentiate them from the bulk products of the systems integration and solutions vendors, they will find it hard to compete on price alone.

Niche vendors are smaller, more-flexible, dynamic and faster-responding organizations than systems integration and solutions vendors. They will often have centralized R&D activities and flexible production facilities, and a few direct sales channels, which are necessary for the retrieval of up-to-date end-user information for new solutions.

The niche vendor is characterized as having:
- Innovative organization and leading-edge R&D performance
- Strong channel management
- Strong product management
- Outstanding logistics system
- Clean, standardized software interfaces, for easy network management integration with third-party products
- Hardware-independent network management systems

Component Vendors
Vendors in this segment are subsuppliers of components and part products. They are highly focused on outsourcing and have no direct relationship with the end-user customer (that is, carriers). Their strategy is to gain as many large customers (other vendors) as possible in order to finance R&D activities and produce in the high volumes necessary for competitive prices.

The future component vendors are most likely to be found among today’s largest component suppliers. They will have the opportunity to enter the market for part products, or even module supply, to systems integration and solutions vendors that are outsourcing to focus on core business.

The component vendor is characterized as having:
- OEM partnership agreements in place
- No direct sales channels to end users
- Generic product platforms with standardized hardware and software interfaces for easy integration with third-party products
- Strong focus on high-volume and low-cost production, leaving a minimum 20 percent margin for solutions vendors
- Strong product management
- Strong channel management
- Outstanding logistics system
Telecommunications Vendors by Segment

On the basis of past and present performance, financial and organizational strengths, the vendors in Figure 2 are examples of vendors typically found in the three segments of our scenario. The number of systems integration and solutions vendors is expected to remain quite low (and may be limited to the examples), while the number of niche vendors and component vendors is expected to be quite high.

Not all current vendors fit directly into the segment definitions. For example, Cisco Systems does not have systems integration and solutions capabilities, but is working with a number of local systems integrators under its Ecosystem initiative. Some vendors appear in more than one segment, reflecting their capabilities in multiple areas.

Figure 2
Examples of Future Telecommunications Vendors by Segment

Source: Gartner Dataquest (September 2002)

Gartner Dataquest Perspective

The telecommunications market will change dramatically in the next four years, owing to the continuing liberalization of developed markets and the privatization of carriers. To survive in the long term, carriers will need to transform rapidly from the more investment-driven strategy followed during the period of monopoly to a purely market-driven business strategy.

Changed carrier behavior will have a strong influence on vendors. Vendors will have to adapt to the new demands of carriers focusing on their core business — telecommunications services — rather than less-strategic issues. Carriers will outsource more activities and will be increasingly interested in buying total systems.
Total cost of ownership will be increasingly important. As carriers need to be more profitable and continue to "squeeze" their suppliers, vendors respond by demonstrating lower total cost of ownership for their products, by creating operational savings and by enabling new market opportunities. For telecommunications vendors, understanding their customers' business is of paramount importance.

The winners will be innovative and flexible companies that understand not only their place in the market, but also the needs of their customers and even those of their customers' customers.

**Key Issue**

How do equipment manufacturers and suppliers provide capital expenditure and operating expenditure savings to carriers?