



How to improve telecom network business performance

By Clarence Mitchell and John A. Wallace

Network optimization is a crucial early step in restoring the vigor of the telecommunications industry. Given the key role the sector plays in the economy, this company-by-company effort will be watched closely by customers, suppliers and investors.

Only twice in the history of the telecommunications industry has the number of access lines fallen—in 1931, in the depths of the Great Depression, and in 2001, when one of the greatest periods of investment and expansion any industry has ever seen came to an end.

That fact neatly captures a basic truth about the bursting of the communications bubble, which had wiped out \$2 trillion in stock market value by the end of third quarter 2002.

There is a profound mismatch between what the service providers were hoping to achieve with the networks they built and the market realities today (see box, page 55). Unprecedented capital had been invested to try to capture new services revenue and to change the service providers' cost structures—goals that have not been realized.

This mismatch is the underlying reason why service providers today are grappling with tough, even life-threatening, issues: low revenue growth, high operating costs, alarming debt ratios and returns on investment that often fall below their cost of capital. Their problems affect their suppliers as well. The consequences—record losses, falling stock prices and impatient investors—mean service providers suddenly have no choice but to rethink and dramatically improve their operations.



Now, as the service providers try to fight their way back to a healthy profitability, they are taking a fresh look at their goals for the networks. Their focus has shifted from rapid expansion to optimizing the operational and financial performance of the existing infrastructure.

Depending on the service provider, their new objectives may range from improving the performance of an individual network function to fundamentally restructuring their cost structure and business model. In any case, to be successful, the service provider will need to realize the operational efficiencies the new infrastructure was intended to deliver, including more flexible service creation and delivery, integrated network operations, and less expensive network maintenance and support.

New challenge

Clearly, optimizing the operational and financial performance of the network represents a crucial early step in restoring—company by company—the industry’s vigor. But for telecommunications companies that have historically focused more on growth and technology deployment, refocusing regularly on cost improvement is a new and continuing challenge. And given the key role the sector plays in the economy, this effort will be watched with keen interest by players beyond telecommunications, including customers, suppliers and investors.

Telecommunications networks are complex, and network optimization can take many forms. Not all companies should approach it in the same way. Each network environment presents specific opportunities for operational and financial improvement. Each service provider has its own needs. For example, a European wireless operator with a large debt and a commitment to build a third-generation infrastructure has one set of needs; a US Regional Bell Operating Company with steady but declining cash flow and a DSL network that it wants to market more widely has quite another.

For some service providers, network optimization will translate into a need for new or modified business models that require access to a broader set of operational and managerial skills than are available within their own organizations. Other companies will seek new options for managing implementation risk and structuring investments. In some cases, service providers will find that the best way to realign financial and operational structures is to run their network operations as independent businesses.

These wide-ranging challenges create a need for an equally broad range of tools and tactics. The Accenture Framework for Network Optimization incorporates four distinct approaches to the task (see chart, page 56). The

approaches provide for a range of financial and business outcomes as well as different levels of risk.

Enabling capabilities

The most traditional approach to network optimization focuses on bringing new or improved capabilities to targeted functional areas of network operations—for example, the provisioning function of a carrier's consumer unit or IP network. The goal is to boost the unit's efficiency and effectiveness and thereby shrink its capital needs and operating costs.

Simply working within the boundaries of their existing business

and network structures, most companies find plenty of things they can do more efficiently. Improving forecasting and capacity planning, automating service delivery and assurance, increasing the effectiveness of network supply chain management—all can pay significant dividends.

Sharing network services

This approach involves taking efficiency-enhancing measures (like the ones just described) and applying them across business unit and network boundaries. Sharing capacity planning and other services in this way represents a first step toward breaking down the silo structures

What went wrong?

Telecommunications service providers everywhere are grappling with tough, even life-threatening, issues—low revenue growth, high operating costs, alarming debt ratios, returns on investment that often fall below their cost of capital, and investors who are shunning the industry. There are two main causes of this situation.

The first is overcapacity. Telecoms miscalculated demand and rushed to create vast networks that were not desired by the marketplace. But equally problematic was the ad hoc manner in which the service providers grew their networks during the expansion years. Back then, speed to market was everything; companies built as fast as they could, adding network layers and duplicating functions without paying too much attention to how the infrastructure they were building would support their business objectives.

The telecom boom saw many engineering choices made without sufficient commercial context—as was the case, for example, when companies incurred extra costs by needlessly applying voice-network reliability standards in their new data networks. Many service providers created separate business units to drive their expansion into broadband or wireless, which further complicated the picture. The result is an industry rife with networks that are ill suited to the current marketplace.

And current market predictions are not encouraging. While overall demand for communications services in North America is projected to grow 52 percent between 2000 and 2005, revenue is expected to increase just 7 percent. Most of the models used to justify recent network investments predicted significantly higher revenues.

many service providers used as they organized their businesses and infrastructure. These relatively autonomous units were created when rapid growth was expected, but the redundancies and functional limitations they produce are increasingly hard to justify.

It makes sense, then, to look for common solutions to challenges that exist in many parts of a service provider's organization—whether in business or consumer units, ATM or IP networks, voice or data services. The benefits of this integration can be substantial.

In one case, a global service provider saved \$111 million in capital expenditures—45 percent of its investment budget—by applying enhanced and standardized forecasting and capacity planning tools across its business units. Contributing to these savings were a dramatic reduction in standard inventory, better links between forecast demand and capacity deployment, and a reduction in capacity shortages, which cut order delays and thus increased revenue.

Open sourcing

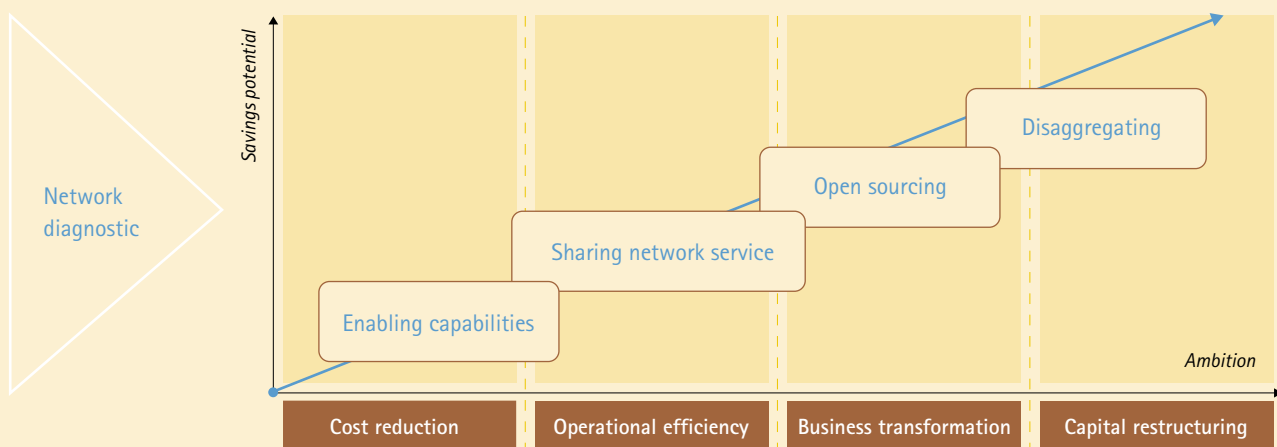
The first two approaches to network optimization offer solid improvements for service providers. But for some carriers, it is not improvement but transformation of the cost and capability base that is required. Hence this next approach on our continuum.

As the name implies, open sourcing calls for a service provider to transform its capabilities and reduce its cost base through increased collaboration with other parties. This might mean transferring the people, processes and systems involved in selected network services to a third party (a shared services organization, for example) and buying those services back at lower cost. Or it might mean organizing those resources, together with operational and managerial talent from a third party, under a distinct management structure within the service provider's existing organization.

In either case, the outsourcing or co-sourcing vendor assumes respon-

The Accenture Framework for Network Optimization

Network optimization can take many forms. What is right for a particular company will depend on a number of factors, one of which will be the amount of savings it wants to realize.



SOURCE: ACCENTURE ANALYSIS

sibility for transforming the capabilities and reducing the cost base within a set contract period. At the end of the period, the areas may be reintegrated into the service provider's operations, or the contract may be extended.

Why would a service provider choose such a course? For four key reasons.

Risk transfer. Major transformations pose significant implementation risks; open sourcing lets service providers assign these risks to a third party.

Financial flexibility. Innovative financial options can reduce or even eliminate the upfront capital associated with optimization initiatives, and operational improvements can actually help fund the transformation. The operating structure can take a variety of shapes—joint venture, independent company or subsidiary.

Sharper focus. Service provider management can remain tightly focused on core business objectives like revenue generation and customer relationship management. While the services provided through open-sourcing arrangements are likely to be key to the business, managing their transformation seldom is.

Reduced costs. Open sourcing can deliver rapid, significant and sustainable improvements in network operations.

Disaggregating

The improvements achievable through open sourcing are significant, but for some service providers they still won't be enough. For more than a few telecom companies today, network optimization will mean a fundamental restructuring—in some cases to allow investment in operations, new services or revenue growth, and in other cases simply as

a matter of corporate survival. A comprehensive and aggressive overhaul of this sort is extremely difficult to manage. It requires tremendous management attention and time, not to mention organizational tolerance for change.

To achieve a successful transformation, a company must be willing to eliminate organizational barriers, be able to apply new sets of operational and managerial skills, and be ready to reorganize to manage the network as a business organization. Decision-making and performance metrics must change radically. The new reality will call for a relentless focus on increasing efficiency, reducing costs and managing investments for total return.

Such an effort may produce strains beyond what a traditional service provider's operating structure can stand. In those cases, it may be best to transfer the considerable implementation risk, together with the responsibility for day-to-day management of network operations, to an experienced third party, particularly when the existing network is not a source of competitive advantage. This is what disaggregation can accomplish.

Disaggregation involves outsourcing, transferring or selling all or part of the network business. Physical network assets, along with processes and systems and the people responsible for them, all become part of a new, separate entity, created in partnership with investors and other product and service vendors.

The original company becomes a more tightly focused retail service provider, probably retaining an equity stake in the network business. The new entity, meanwhile, commits to running network operations and delivering guaranteed

For more than a few telecom companies today, network optimization will mean fundamental restructuring.

network capacity to the retailer at a variable cost.

Both the retail business and the new network company derive important financial benefits from the arrangement. The retail company is able to reduce its existing capital base and ongoing capital commitments.

By selling network assets, it is releasing capital, which can be used to reduce debt or support growth. The retail company is also lowering debt service and depreciation and capital charges. And it is transferring responsibility for capital investment to the network business.

For the network business, the capital benefits derive from the freedom it enjoys in optimizing the existing infrastructure, rationalizing the capital plan and improving capital efficiency.

For both businesses, a purer, more focused capital structure should make it easier to attract investors looking for clearer risk and return profiles. Investors may also respond positively to the other benefits both businesses are likely to enjoy, which include:

Tighter organizational focus. As a separate entity, the network business can concentrate on transforming network performance. Pricing contracts and performance metrics, specified in agreements with the retail service provider, encourage operational efficiency; they also create a platform for delivering value-added services and growing wholesale revenues. The retail service provider, for its part, can focus more on developing new service offerings and planning investments to support innovative services and improve customer relationships.

Higher network utilization. The network business can rationalize the network architecture and capacity

supply across network platforms. It may also be able to sell capacity and shared services to other retail operators, increasing traffic volume and wholesale revenue. Retail service providers will share in the resulting benefits via more competitive network costs—and through the stake they retain in the network business.

Enhanced operational performance. As a separate organization with its own management, the network business can implement the organizational, operational and management changes across boundaries that translate into lower-cost, more flexible operations. These efficiencies fund the network organization's debt service and reduce total network costs for the retail business.

Stronger financial performance. By spinning off its network, the retail service provider will reduce its total revenue and earnings. But its return on capital employed and return on equity will increase significantly, as capital-intensive infrastructure disappears from the balance sheet. Finally, sharing exposure with the network business mitigates the risks associated with future capital requirements.

New model, healthy future

Disaggregation is more than just strong medicine for an overburdened capital structure. Versions of it are already being applied in different pockets of the communications industry. For example, some wireless service providers use a kind of disaggregation in their tower businesses, and the wholesale capacity model is firmly established among wireline carriers and mobile virtual network operators such as Virgin Mobile. Throughout Europe, mobile carriers are proposing to collaborate on building and sharing third-generation wireless networks.



Other industries have gone further down the path of disaggregation. Much of the gas and electricity industry, for example, is chartering separate organizations to run generation, distribution and retail businesses. In banking, third-party organizations such as Visa and MasterCard own and manage most credit-card network infrastructure, offering greater efficiencies and lower costs.

In fact, communications is one of the few industries where the major players have largely resisted such separation and the focus it allows on specific functions of the value chain. Disaggregation may thus represent not only a network optimization approach for some service providers but also a fundamental restructuring of the industry's operating model.

Even in the aftermath of the telecom bust, it's possible to envision a healthy future for the industry as new offerings—especially next-generation broadband services—take hold in the market. (For a related article, see page 44.) But for many service providers, the question is how to get there from here. Many of them remain committed to high levels of spending. In the United States, for example, some predictions for industry capital expenditure still exceed \$100 billion per year to 2005.

Finding investors to fund these capital requirements poses a huge challenge. So does servicing the hundreds of billions of dollars in debt that the industry took on to build what turned out to be an overambitious, under-planned infrastructure.

Some companies may be able to put their piece of that infrastructure on a more businesslike footing with a fairly traditional approach to network optimization. Others are candidates for a major restructuring. But in both

cases, by showing a willingness to apply the remedies at hand, they may just win the backing they need. ■

Clarence Mitchell, a New York-based partner in the Accenture Communications & High Tech operating group, is the strategic lead for the company's network unit. His principal work is in assessing market conditions, key customer requirements and competitor dynamics to define distinctive business strategies, product offerings and operational plans.

clarence.mitchell@accenture.com

John A. Wallace is a partner in the network unit of the Accenture Communications & High Tech operating group. He specializes in business and technology strategy as well as deployment of business systems, telecommunications and network solutions. Mr. Wallace also has extensive experience in business system design and implementation; e-commerce; communications strategy planning; and network analysis, design and implementation. He is based in Manchester, England.

john.a.wallace@accenture.com