



A Strategic Whitepaper for Service Providers

Leveraging Managed Services for Network Operations Business Success

Lucent Technologies
Bell Labs Innovations



Published on Behalf of Lucent Technologies

Table of Contents

Executive Summary.....	3
Forces Driving Service Provider Outsourcing	4
The Movement Toward Outsourcing and Out-Tasking	7
Types and Financial Benefits of Service Provider Outsourcing Today	8
Priority Telecom Cuts Operating Expenses in Half by Leveraging Lucent's Managed Services	11
Telecom New Zealand Partners with Lucent to Improve Profitability	12
Critical Success Factors for Service Provider Outsourcing	13
Key Questions When Considering Outsourcing	14
Lucent Worldwide Services' Approach to Service Provider Outsourcing.....	15
Summary: New Frontiers in Service Provider Outsourcing.....	17

Figures

Figure 1: Service Provider Financial Performance Trends	4
Figure 2: The Challenges Facing Service Providers	5
Figure 3: Wireline and Wireless Service Providers Share A Clear Set Of Strategic Priorities In Response To An Increasingly Challenging Market	6
Figure 4: Service Providers Are Considering Outsourcing Network-Related Activities Once Considered Core	8
Figure 5: Service Providers Are Already Outsourcing Numerous Business Functions	9
Figure 6: Outsourcing Can Eliminate Needless Overlaps That Cause Lost Value	10
Figure 7: The Potential Cost-Savings From Outsourcing.....	11
Figure 8: Service Providers Prefer Vendors With Strong Functional Expertise And Financial Strength	13

Executive Summary

The purpose of this whitepaper is to convince service providers of the strategic benefits of outsourcing elements of their network operations to improve their service delivery capabilities, reduce their ongoing costs, and gain a competitive advantage.

Even as the worldwide economy experiences renewed growth, the service provider industry continues to struggle to regain momentum. Rather than benefiting from an increase in demand for their services, most companies are still suffering from escalating price competition that is placing greater constraints on their capital and operating budgets. These pressures are compounded by continued consolidation within the industry that is forcing newly merged companies to reexamine their operating models, especially when it comes to deploying and managing multivendor technologies.

These trends are forcing established and emerging service providers to consider a business alternative they have been slow to adopt in the past—outsourcing.

Outsourcing is generally defined as the transfer of a functional responsibility and the related assets from an enterprise to a service company with the specialized skills and resources to assume this responsibility in a more cost-effective fashion. Companies in almost every industry have adopted outsourcing as a strategic business practice in order to focus on their core business; improve and expand their corporate capabilities; and better manage their operations and control costs.

Service providers have historically been hesitant to outsource portions of their operations because they've viewed them as core competencies or strategic assets. Today's economic and competitive realities are forcing services providers to reevaluate their outsourcing policies.

Fortunately, outsourcing is no longer an all or nothing proposition.

There is a growing array of outsourcing and 'out-tasking' alternatives that service providers can leverage. *Out-tasking is an increasingly popular selective outsourcing alternative that permits an organization to outsource a specific business function, or 'task', to an external service company.* This approach allows the organization to test an outsourcer's services and incrementally grow their relationship. Tasks in the service provider industry that can be outsourced extend from service provisioning to billing; and from 'back-office' human resources/payroll functions to front-line, network operations management.

Another common mistake is simply viewing outsourcing as a lower-cost alternative to performing a function in-house. Low-cost outsourcing usually leads to low-quality results. Instead, service providers and services should seek outsourcing arrangements that can transform their business functions and add value to their operations.

Lucent Technologies' Worldwide Services' (LWS) approach to multivendor telecom service provider outsourcing represents a collaborative model for how service providers can gain a strategic advantage from outsourcing. Lucent's outsourcing case studies provide valuable best practice examples for generating significant business benefits from strategic outsourcing arrangements.

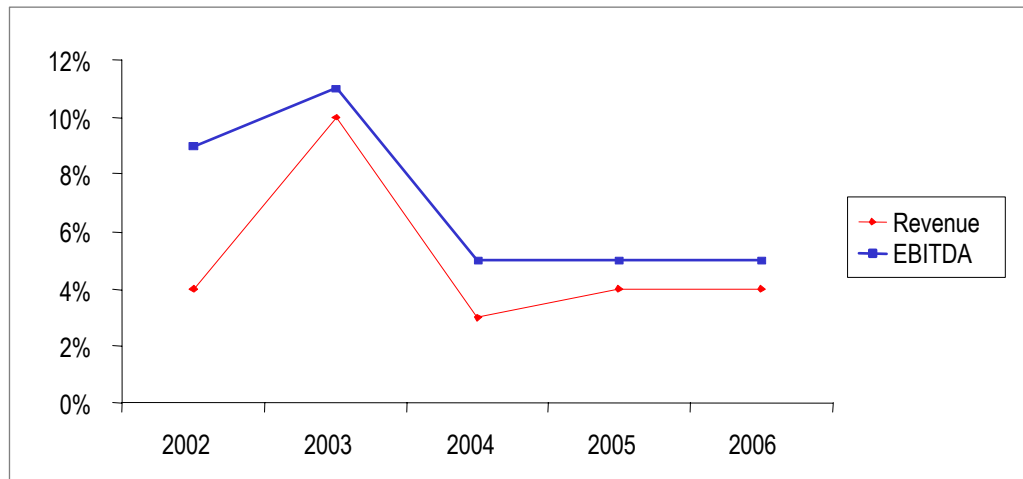
This whitepaper will examine the forces that are driving service providers to outsource; the corporate functions they are outsourcing to achieve their business objectives; and how they are benefiting from these outsourcing arrangements. We will examine Lucent Technologies' customer success stories to illustrate the potential benefits and industry best practices for service provider outsourcing.

Forces Driving Service Provider Outsourcing

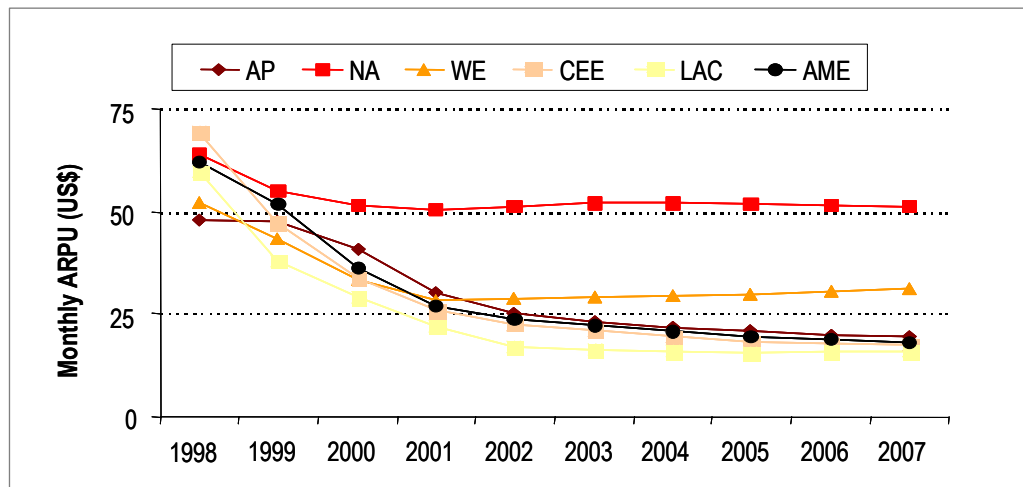
The service provider industry continues to face serious challenges. Even as the industry slowly recovers from a period of severe cutbacks and consolidation, the remaining players must still improve their service delivery capabilities and operating efficiencies to strengthen their position in the market.

While consumer and enterprise demand continues to rise, price competition still plagues the industry. Consumers and enterprise customers are demanding service level agreements (SLAs) with greater features and functions, yet are more price-sensitive and less loyal than ever. Figure 1 shows the impact of price competition on service provider financial performance, pushing down revenue growth and operating margins/profitability.

Figure 1: Service Provider Financial Performance Trends



Source: Telecommunications Service Provider Company Financials



Source: Pyramid Research

Many of today's service provider features have become commodities in the eyes of consumers and enterprise customers. Instead of focusing on the service functionality as a key differentiator, consumers and enterprise customers are concerned about the reliability of the service provider's services and quality of their customer service support. As a consequence, the service providers must place renewed emphasis on their core capabilities.

After years of retrenchment, these trends have placed enormous pressures on service providers to make significant investments in new technologies and staff to deliver competitive and cost-effective services.

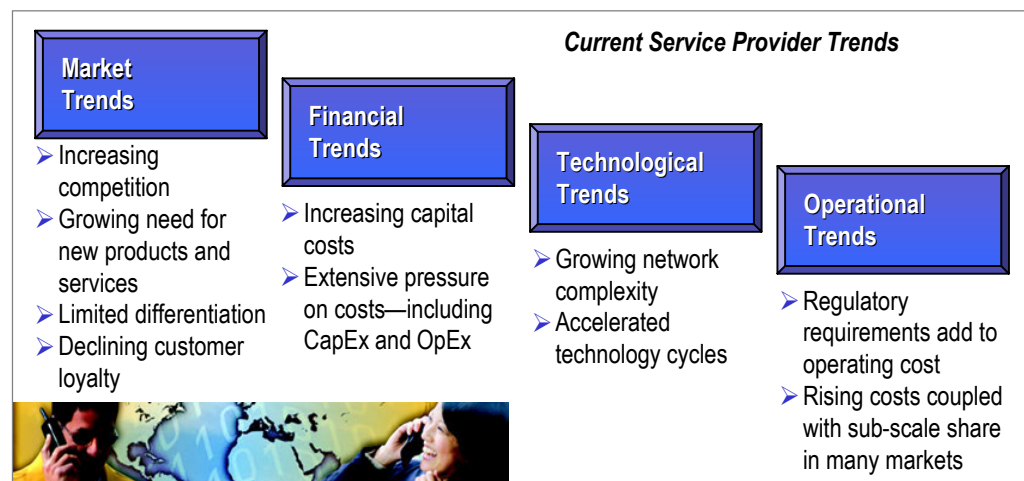
Yet, service providers have limited capital expense budgets to make these investments, and equally tight operating budgets to manage their operations on a day-to-day basis. Therefore, they must also transform their service delivery models to increase productivity and generate new revenue streams.

With many service provider balance sheets strained, they can't fully leverage equity and bond markets to finance their infrastructure investments or offset their ongoing operating costs.

Ironically, service providers are facing these obstacles at a time when consumers and enterprise customers are demanding a broader array of services. Demands for new wireless voice and data services are forcing service providers to accelerate their infrastructure build-outs. And similar demands for Internet Protocol (IP) services, such as voice over IP (VoIP) and web-based applications, are pushing established wireline carriers to upgrade their existing networks.

Figure 2 summarizes the challenges facing services providers worldwide.

Figure 2: The Challenges Facing Service Providers

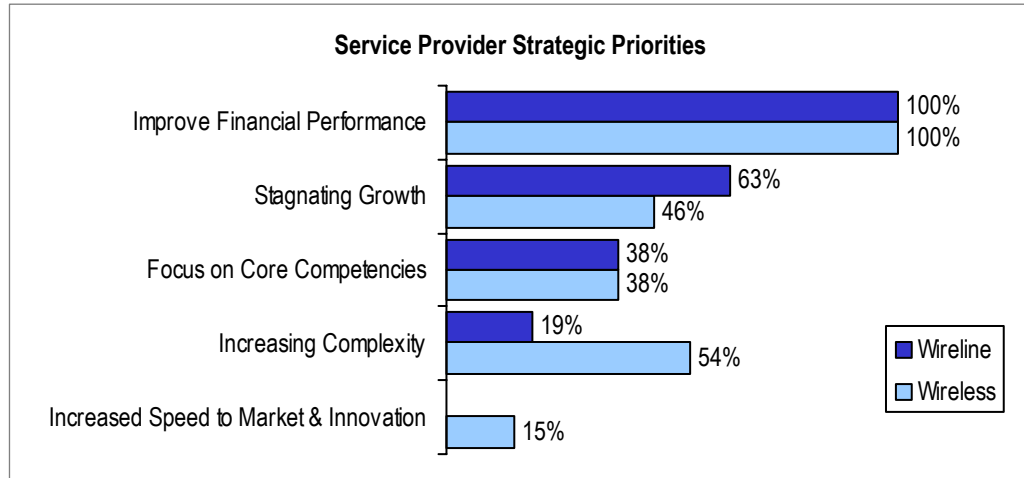


In order to respond to these escalating pressures, service providers must focus their money and energy on mission critical corporate functions and initiatives that truly differentiate them in the marketplace. A Booz Allen Hamilton survey of major wireline and wireless service providers found they generally share the same set of corporate priorities as shown in Figure 3.

For both wireline and wireless carriers this means fully integrating their infrastructures and consolidating their management systems to permit transparent information access and simplified operations management. These initiatives can significantly reduce operating costs and increase operational efficiency within tight financial parameters. But, most service providers don't have the internal skills or resources to pursue these initiatives on their own.

Instead, today's business and network challenges have forced service providers to carefully reconsider their corporate priorities and core competencies. They must make a series of difficult decisions regarding which functions they should perform in-house and those that should be turned to a skilled and experienced partner to perform.

Figure 3: Wireline and Wireless Service Providers Share a Clear Set of Strategic Priorities in Response to an Increasingly Challenging Market



Source: Booz | Allen | Hamilton

Fortunately, these choices don't have to compromise the quality and integrity of a service provider's mission critical operations. In fact, there are new outsourcing options that can not only enhance but also transform the way service providers operate. We'll examine the changing definition of outsourcing for service providers in the following section of this whitepaper.

The Movement Toward Outsourcing and Out-Tasking

Outsourcing has become a common business practice among enterprises in almost every industry. For most enterprises outsourcing means handing an internal business function to a third-party to reduce operating costs and improve operating efficiencies, and focus on their core business to create new revenue streams and competitive advantages.

In the past, outsourcing was viewed as the full transfer of an internal function and its related assets from an enterprise to an outside service company. Today, many enterprises and a growing number of services providers have recognized the strategic advantages of selective outsourcing or “out-tasking.”

In these out-tasking arrangements they assign a specific management function, or task, to a third-party that has the expertise and experience to perform that function more economically and effectively, and can often help to reshape or transform the way the function is performed.

A THINKstrategies survey of Business Communications Review readers in 2003 found that 39% of enterprises are currently outsourcing all or part of their network operations, and another 17% planned to outsource in the coming twelve months.

META Group, a major market research firm, estimates that upwards of 70% of enterprises outsource a part of their information technology (IT) or network operations today, and the researcher expects every enterprise to outsource some part of their IT/network operations by 2006.

Unfortunately, only half of the major outsourcing arrangements succeeded to achieve their original performance objectives and the others were either terminated or significantly restructured according to Gartner, a leading market research firm. These arrangements generally failed because the enterprise and outsourcer underestimated the magnitude of the existing operating issues or they set unrealistic performance objectives.

Dissatisfaction with the results of these outsourcing agreements have made some service providers apprehensive about whether similar broad-based arrangements would also result in the loss of control of their operations and failure to generate the benefits they expected. However, smart enterprises and service providers are recognizing that leveraging skilled and experienced outsourcing companies to perform specific business functions and tasks can substantially improve their effectiveness and significantly increase their operational control.

These enterprises and service providers are also working with their outsourcers to implement service level agreements (SLAs) that can ensure they achieve their business objectives.

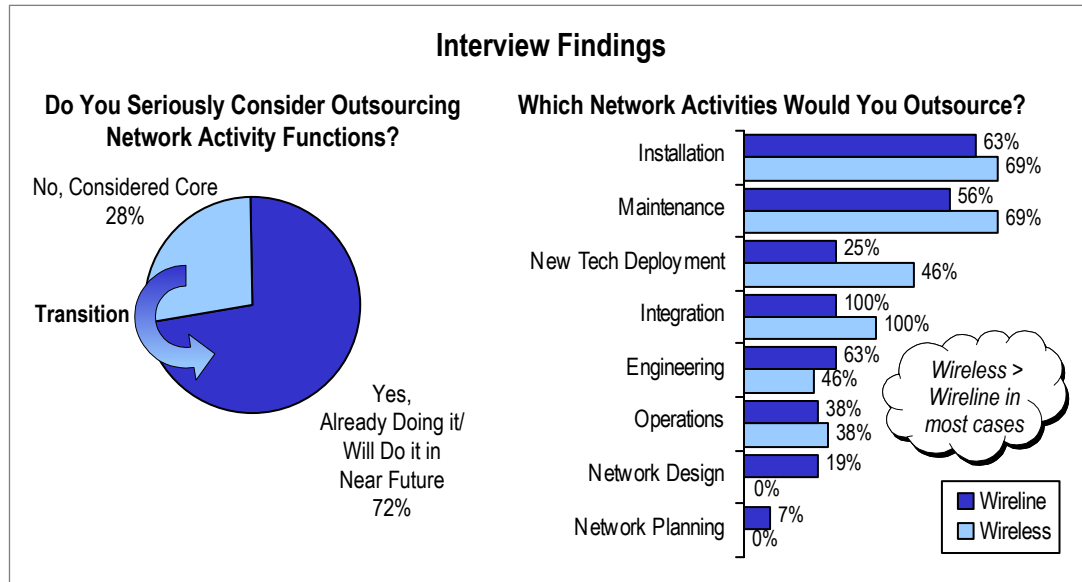
A new generation of specialized outsourcing/out-tasking alternatives have emerged that are becoming known as “*managed services*.” These services assume responsibility for a specific set of management functions, permitting the enterprise or service provider to focus on other corporate areas. The next section of this whitepaper will examine the growing array of service provider management functions that are being addressed by these managed services.

Types and Financial Benefits of Service Provider Outsourcing Today

Service providers are recognizing the business value of outsourcing and out-tasking. In fact, three-quarters (75%) of service providers surveyed by Booz Allen Hamilton view outsourcing as an important or critical business lever to reduce operating expenses and optimize capital spending, better control headcount and permit greater flexibility in their operations.

The Booz Allen Hamilton survey also found that 72% of service providers are already out-tasking or planning to outsource part of their network operations in the near future. Figure 4 shows some of the areas most likely to be out-tasked by the survey participants.

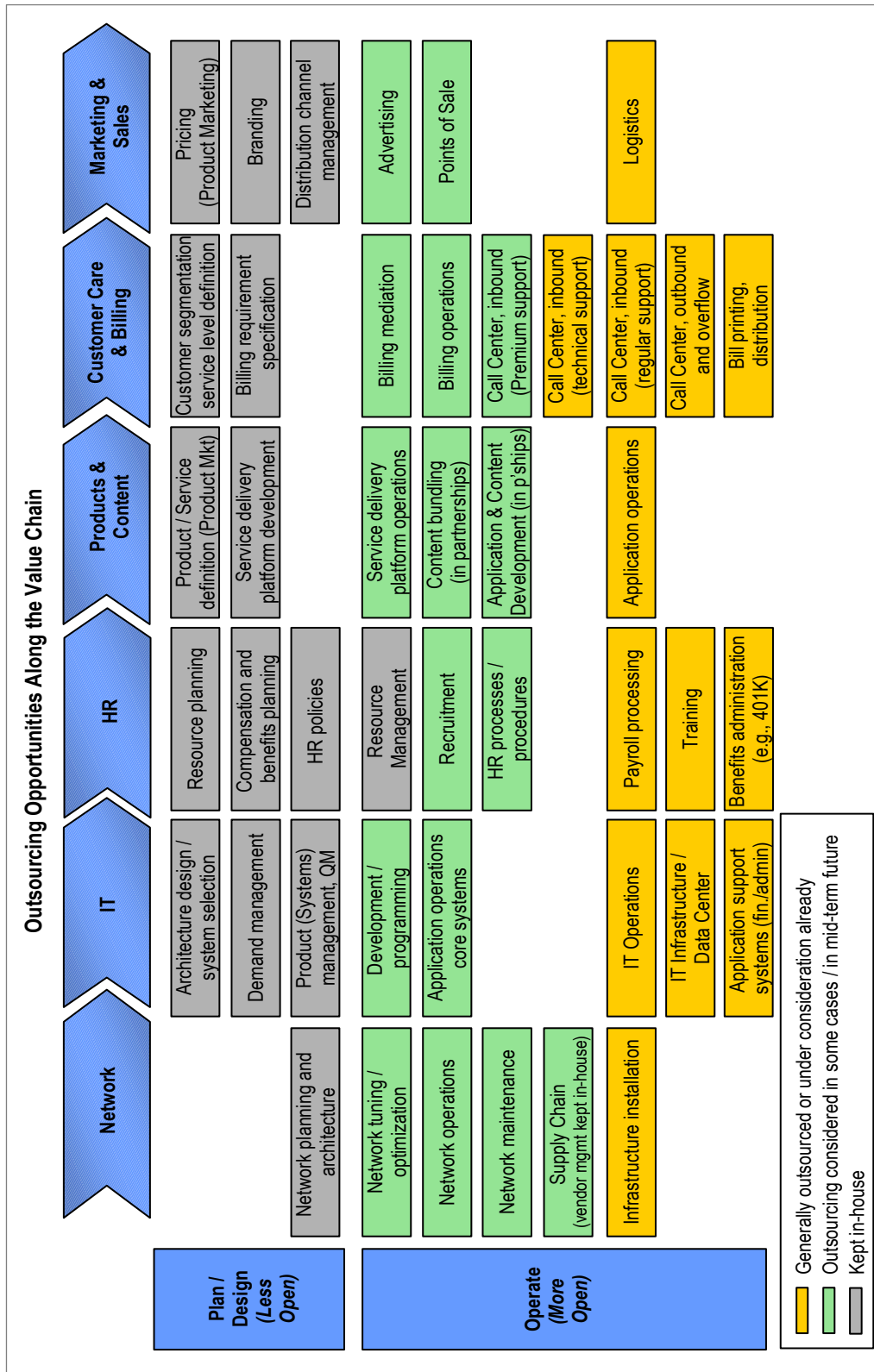
Figure 4: Service Providers are Considering Outsourcing Network-Related Activities Once Considered Core



Source: Booz | Allen | Hamilton

The networking activities mentioned by the Booz Allen Hamilton survey participants are a fraction of the full range of service provider activities that could be out-tasked. Figure 5 illustrates the spectrum of outsourcing opportunities that extends across a ‘value chain’ of corporate service provider functions which include network; IT; human resources; products and content; customer care and billing; and sales and marketing areas.

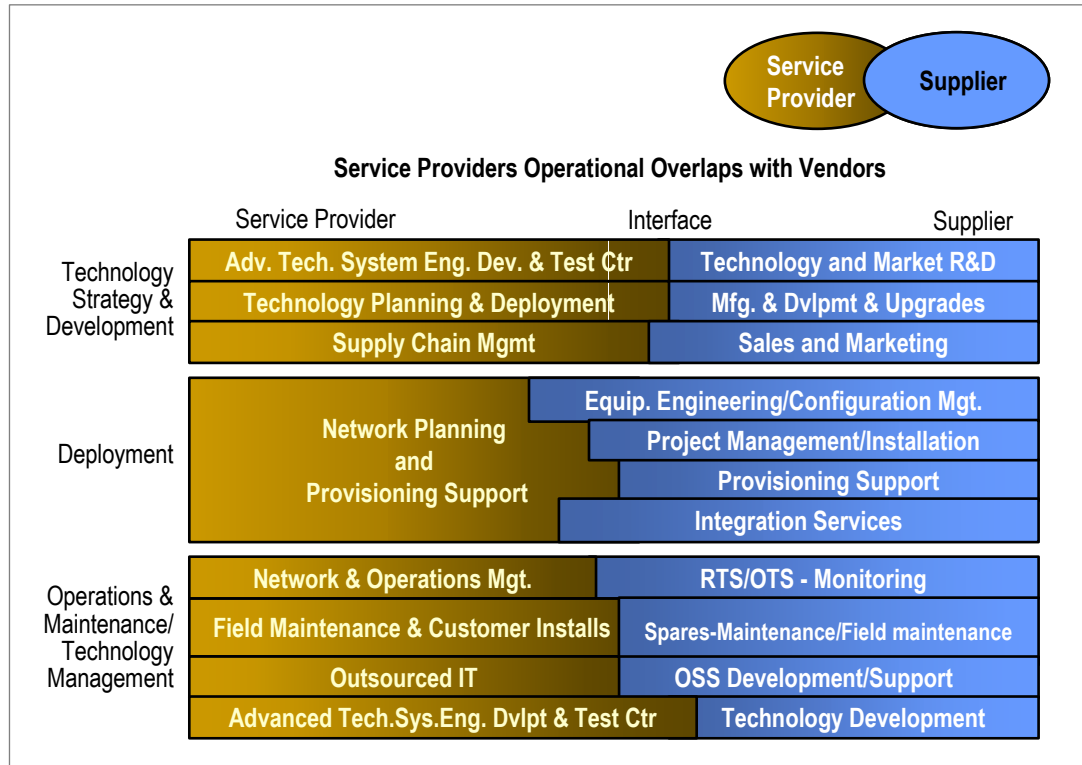
Figure 5: Service Providers are Already Outsourcing Numerous Business Functions



Source: Booz | Allen | Hamilton

As Figure 6 shows, in many cases out-tasking these functions can eliminate needless duplication of effort and resources within a service provider, or between the service provider and its other business partners. Rectifying this overlap can create cost and operational efficiencies.

Figure 6: Outsourcing Can Eliminate Needless Overlaps that Cause Lost Value



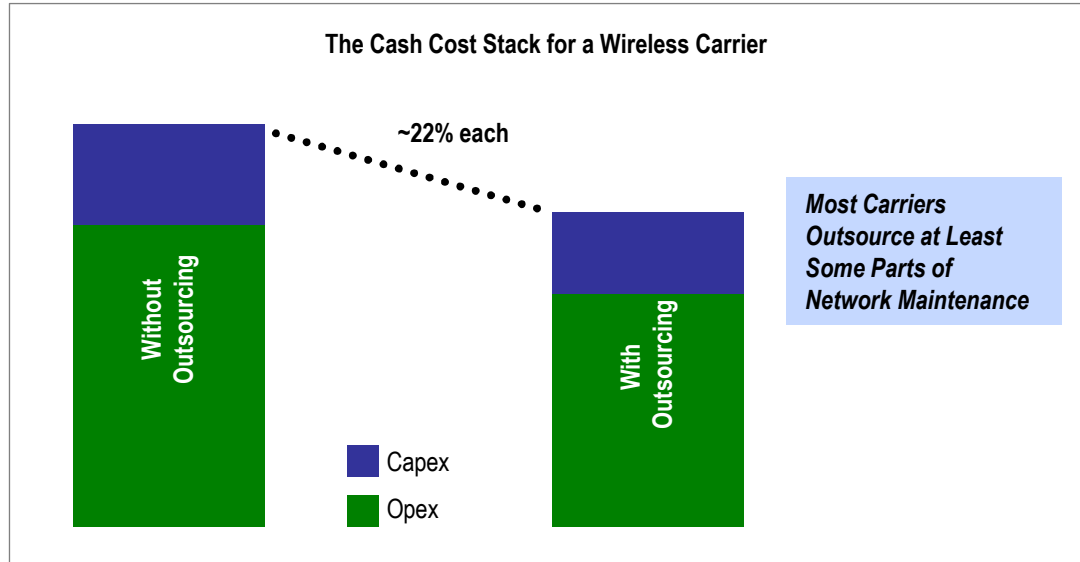
The range of telecom service provider network and business functions already being outsourced or out-tasked is significant. In total, Pyramid Research estimates that 14% of service provider network budgets are currently spent on external, out-tasking services, and expects this figure to rise to 27% by 2007.

The cost-savings from outsourcing and out-tasking for both wireline and wireless carriers are also clear, according to Pyramid Research. As Figure 7 shows, the research firm estimates wireless carriers can reduce their operating and capital expense budgets 22% by leveraging outsourcing.

Pyramid Research’s estimates are primarily focused on the potential cost-savings from outsourcing all or part of a telecom service provider’s network operations. The financial and operational benefits from outsourcing can be even more dramatic as service providers leverage strategic partners to perform other business functions.

The following case studies show how Telecom New Zealand and Priority Telecom are leveraging Lucent Technologies’ outsourcing and managed service capabilities to achieve these business benefits and meet their corporate objectives.

Figure 7: The Potential Cost-Savings from Outsourcing



Source: Pyramid Research

Priority Telecom Cuts Operating Expenses in Half by Leveraging Lucent's Managed Services

Priority Telecom (PT) needed to reduce its operational costs after spinning off from United Pan-Europe Communications (UPC) to become an independent service provider. It also needed to maintain quality network management support to its corporate customers in order to survive and succeed in an increasingly competitive market.

As a part of its divestment from UPC, PT needed to assume responsibility for monitoring and managing the network operations, without incurring the facility and staffing costs associated with building its own 24x7 operation management center.

PT decided to investigate outsourcing alternatives and asked LWS to design an outsourcing solution that would provide operational flexibility, reduce operating costs and permit PT to retain full control and ownership of the network management facilities.

Lucent Worldwide Services (LWS) responded with a proposal to have its European Global Network Operations Center (GNOC) provide first-line network monitoring and surveillance support for PT's customer base during off-hours. This managed service solution allowed PT to reduce its operating costs and avoid the risks associated with building its own out-of-office hours monitoring and fault management services functions.

In its first year of deployment, LWS' outsourced managed service solution enabled PT to quickly establish an around-the-clock monitoring capability that reduced PT's operating expense by 50% and increased customer satisfaction significantly.

"Outsourcing our network operations to Lucent means we can offer our customers outstanding 24-hour service, while maintaining tight cost control. Lucent is an experienced supplier and already has proven expertise on our systems," according to Brian Burleson, Senior Vice President of Engineering and Network Operations, Priority Telecom NV.

Telecom New Zealand Partners with Lucent to Improve Profitability

Telecom New Zealand (Telecom) needed to rapidly expand its CDMA network to respond to escalating customer demand, but needed to carefully manage its network expansion to meet its stringent network performance standards and maximize the financial performance of its expanding operating. Telecom was seeking a strategic partner that could help it deploy new technology, deliver services, and manage its ongoing operations while the service provider focused its energies and resources on sales, marketing and other customer-facing activities.

LWS was asked to provide a full range of planning, design, deployment, operations and maintenance services to launch Telecom's 1XRTT network and optimize the performance of Telecom's 027 CDMA network on an ongoing basis.

LWS has assumed responsibility for a large portion of Telecom's mobile network operations, including operational responsibility for Telecom's 027 CDMA network; the development of Telecom's network assets; and monitoring and management of all applicable Telecom infrastructure.

The Telecom/LWS managed service outsourcing agreement produced both technical and business benefits in its first year by:

- Consolidating ongoing network operations and management operations to a single vendor
- Optimizing and enhancing network performance
- Creating new revenue opportunities utilizing its high-speed data services
- Accelerating speed-to-market by enabling Telecom to focus its resources on sales and marketing initiatives

Telecom New Zealand is now generating an increasing proportion of its mobile data revenue from its new high-speed, CDMA network. Total mobile average revenue per user (ARPU) increased by 7.9%. And, Telecom New Zealand announced in November 2003, that it had increased its first quarter 2003/04 profit 11% over its previous first quarter results.

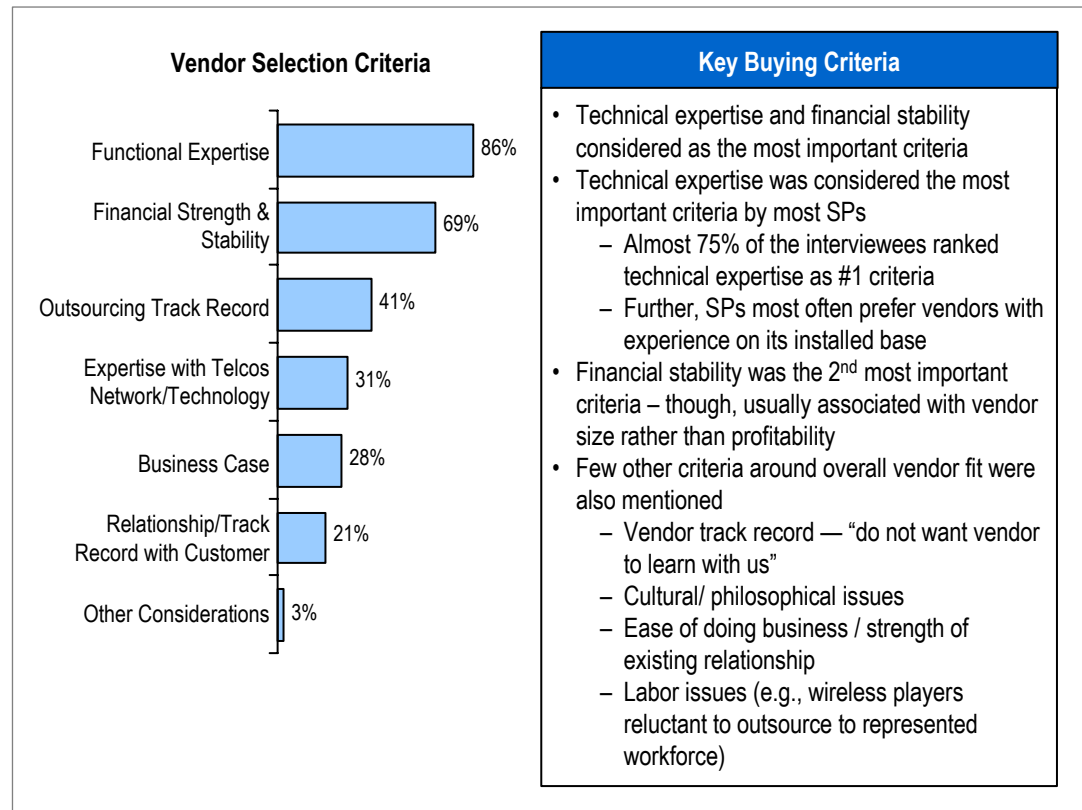
"Globally, telcos want to lower costs, focus on core business and swiftly provide top quality new services to customers. Our agreement with Lucent delivers all this," states Stephen Crombie, Telecom New Zealand's general manager, network investment.

Critical Success Factors for Service Provider Outsourcing

Choosing the right outsourcing partner is an important decision that should take into account the outsourcing company’s understanding of the service provider’s business, and its technical expertise and experience in service provider operations.

Figure 8 shows that functional expertise in the service provider industry is the most important criteria for selection of an outsourcer, according to the Booz Allen Hamilton telecom service provider outsourcing survey.

Figure 8: Service Providers Prefer Vendors with Strong Functional Expertise and Financial Strength



Source: Booz | Allen | Hamilton

THINKstrategies recommends service providers struggling to achieve their corporate objectives should seriously consider outsourcing or out-tasking portions of their network operations so they can focus on their strategic business requirements.

When considering the growing array of outsourcing alternatives, seek solutions that can help reduce costs *and* generate new revenue opportunities. Choose an outsourcing partner that knows the service provider industry; is expert in network operations; and offers a combination of products, people and processes to produce network and financial performance improvements.

The outsourcer should have proven methodologies that encourage collaborative and creative business solutions, and generate measurable results. The tangible benefits experienced by Lucent’s service provider clients should serve as an example for other service providers seeking to solve their business challenges.

Key Questions When Considering Outsourcing

Here are a few questions that should be asked to determine how a service provider could benefit from outsourcing, out-tasking and the latest managed services:

1. Are our existing platforms being properly utilized to proactively manage our network infrastructure and optimize the performance of our services?
2. Can we improve customer satisfaction and increase our network operations management effectiveness by augmenting our skills or fine-tuning our business processes?
3. Can we measure the quality of our current services and generate performance management reports that help ensure we are meeting our customers' service level expectations?
4. Do we have the skills and resources to rollout and manage new technologies and services?
5. Do our business processes permit us to achieve the greatest cost-efficiencies, and maximize the revenue and profitability of our new and existing services?
6. Which aspects of our network operations are truly core to our business?
7. Which aspects of our network operations can we improve by partnering with a specialized outsourcing company?
8. Can we gain a greater competitive advantage by redirecting our skills and resources toward creating new services and improving the quality of our customer care?

Lucent Worldwide Services' Approach to Service Provider Outsourcing

Lucent Technologies' Worldwide Services (LWS) is an industry leader in service provider outsourcing. Based on its decades of experience supplying equipment to service providers worldwide, LWS has combined the extensive expertise of its network engineers and consultants with the research and development capabilities of its Bell Labs division to provide a unique combination of skills and resources to service providers who are seeking to reduce costs and create new revenue opportunities.

LWS has over 10,000 network engineers and consultants worldwide; three major Global Network Operations Centers (GNOCs); and a growing array of sophisticated networking products, including network monitoring and Bell Labs network analysis tools that help established and emerging service providers design, deploy, operate, maintain, optimize and manage their multivendor networks.

LWS is helping service providers fine-tune their management platforms; streamline their business processes; strengthen their networking skills; and uncover new revenue opportunities. LWS has capabilities and is working with service providers in the following areas:

- **Operations support and cost control:** LWS has technical consultants, business processes and platform tools that help ensure service providers operate at "five nines" availability across multiple networks and shared resources. LWS' staff and centralized operation centers offer economies by proactively identifying and resolving potential fault conditions to minimize the risk of costly network outages. LWS consultants can also correct process inefficiencies to improve network quality and permit cost reductions.
- **Revenue expansion and recovery:** LWS provides products and services that help service providers better package and provision new and existing services. LWS' resources can help service providers open new markets and increase the productivity of existing services by improving billing cycles and streamlining operational processes, and can work with service providers to identify new service opportunities.
- **Network performance enhancements:** LWS consultants can Bell Labs and third-party tools to identify network and business constraints, and critical issues that adversely effect network performance. LWS specialists can recommend and implement technologies and processes that reduce network downtime and service degradation; optimize application performance and network utilization; improve the security and reliability; and increase customer satisfaction and loyalty.
- **Streamline business models:** LWS engineers and consultants help service providers to focus on strategic market initiatives, and develop and deploy new services.

For example, LWS currently offers the following managed services to help service providers satisfy their business requirements:

- **Build, Operate, Manage or Transfer (BOM/BOT):** An end-to-end solution targeted toward Service Providers who are building a new Network Operations Center (NOC) or re-engineering an existing NOC and who are looking for a vendor to assist them in launching the center as well as performing on-going operations and management.
- **Field Operations And Maintenance:** LWS assumes responsibility for the service provider's multivendor field operations and maintenance functions including all or part of their remote and on-site technical support.

- **Transport Optimization:** Helps wireless service providers looking for a partner to optimize and manage their transport network. Services may include circuit audits and re-grooming, database and records management, remote network management and provisioning, line code conversions and billing reconciliation.
- **Supply Chain and Inventory Management:** Leverages Lucent's integrated supply chain infrastructure to reduce capital and operating costs, and gain a competitive advantage utilizing a flexible supply chain that can adapt to changing customer demand.

An indication of the value of Lucent's services is that the company signed more than 30 major contracts with service providers in Europe, Australia, Latin America and North America in 2003.

Summary: New Frontiers in Service Provider Outsourcing

Service providers are under escalating competitive and financial pressures to find new business models that can enable them to reduce costs and increase revenues. These pressures are forcing service providers to focus their limited internal resources on their primary business objectives and core competencies, and adopt new outsourcing approaches to running their telecom networks.

Out-tasking aspects of their network and service operation via a variety of managed service alternatives is permitting a growing number of service providers to reduce their overall business costs, improve their service quality and focus on new revenue opportunities to fulfill their corporate objectives.

Service providers can generate value by utilizing proven experts like LWS to outsource functions across the four major areas of network operations, platforms and tools, business processes, people, and revenue generation and assurance.

THINKstrategies has found that the best way for service providers to achieve these cost savings and create new revenue opportunities is to build strategic partnerships with companies that thoroughly understand their network operations and business requirements. These companies must have a combination of networking technology and technical expertise; consistent methodologies and workflow processes; and collaborative and creative consulting skills to develop and deliver outsourcing solutions that generate measurable business results.

Lucent Worldwide Services has built a portfolio of customer success stories with a variety of service providers that demonstrate the value of outsourcing and its ability to produce rapid meaningful results.

Lucent has leveraged its products, people, and processes to meet its service provider clients' business objectives. The company's determination to establish itself as a leader in the telecom outsourcing sector is illustrated by the fact that Bell Labs has quadrupled its spending on research tied to services over the past two years. Lucent is also focusing on growing its professional services offerings to help service providers optimize the performance and reliability of their networks, and develop new business opportunities.

For more information regarding Lucent Technologies' Managed Service capabilities, visit www.lucent.com/solutions/lws-ms.html.

About THINKstrategies

THINKstrategies is a strategic consulting services company formed specifically to address the unprecedented challenges facing IT managers, solutions providers, and investors today. Our mission is to help our clients re-THINK their corporate strategies, and redirect their limited resources to achieve their business objectives.

For more information regarding our unique services, visit www.thinkstrategies.com, or call us at 781-431-2690.