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The Theory of Comparative Advantage and the Case for a Structured Network Sourcing Model

Analyst:
RICHARD DEAN

Email:
rdean@pyr.com

Tel:
+1 617 494 1515

ANALYSIS SUMMARY

- Increasing numbers of network operators as well as enterprise organizations are discovering that an unstructured network sourcing model for managing network complexity frequently fails to create a measureable competitive advantage in the marketplace.
- Forward-looking operators and enterprises, however, recognize that applying a rational blend of internal resources with external, third-party expertise to specific strategic imperatives often creates greater operational efficiencies, driving increased revenue and cost reduction.
- This Pyramid Research Perspective discusses the theory of comparative advantage and how it can be applied to the sourcing of network solutions offered by third-party professional and managed services organizations for both the operator and enterprise communities.

Pyramid Research Locations Worldwide **www.pyramidresearch.com**

World Headquarters
58 Charles Street
Cambridge, MA 02141
USA
Tel: + 1 617 494 1515
Fax: + 1 617 494 8898
Email: sales@pyr.com

Latin America
Waterford Business Park
Suite 971
5201 Blue Lagoon Dr
Miami, FL 33126
USA
Tel: + 1 305 629 3615
Fax: + 1 305 629 3100
Email: sales@pyr.com

Asia-Pacific
Suites 2701/2801, Floor 11
AXA Centre
151 Gloucester Road
Wanchai, Hong Kong SAR
Tel: +852 3752 1806
Fax: +852-3752-1860
Email: sales@pyr.com

Europe
Bloomsbury House,
Suites 17/18
London, WC1A 2RP
United Kingdom
Tel: + 44 20 7430 2932
Fax: + 44 20 7430 2933
Email: sales@pyr.com

TREND SPOTLIGHT

In today's highly complex and increasingly global operating environment, network operators and enterprise organizations alike often struggle with the most efficient way to manage assets and resources for optimal performance. As a result, in 2008 and throughout the next decade, Pyramid Research believes that organizations of all types will continue to wrestle with questions about how best to source the design, implementation, maintenance, monitoring and management of their various networks, including those that provide subscriber-based mobile broadband services as well as enterprise-wide IP-based networks.

The answer to the "most efficient way" question is that it will depend on a variety of factors, including economic, technological, regulatory and organizational culture issues. The level of technology standardization, most appropriate security layers, internal culture regarding outsourcing and financial position will also continue to influence strategic sourcing decisions.

It is Pyramid Research's belief that organizations addressing this issue with a structured network sourcing model are typically more advantageously positioned to compete effectively when capital and resources have been efficiently allocated. This Perspective offers Pyramid Research's view on why organizations that rely so heavily on their network's performance will increasingly consider the services of third-party vendors to lower operating costs and to optimize business models.

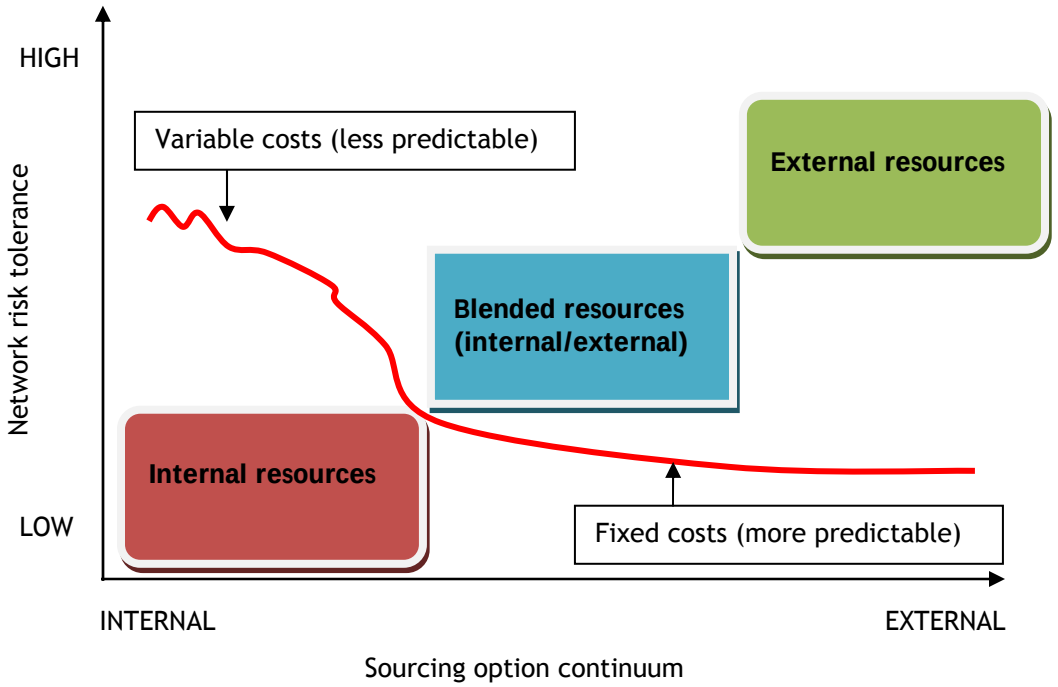
BEHIND THE HEADLINE

Pyramid Research believes that an increasing number of operators and enterprises will evaluate network services providers using a more structured sourcing model.

- **The theory of comparative advantage.** In an economic sense, the theory of comparative advantage, often attributed to the work of 19th century British economist and financier David Ricardo, suggests why it can be beneficial for two countries to engage in a trading relationship, even when one party may be able to produce goods more efficiently than the other. The theory implies that what is most relevant is not the cost of production but rather the ratio between how easily the two parties can produce different kinds of products and how this interaction can create efficiencies in the global economy. Although this theoretical model omits several factors that usually apply in today's world — such as workers and capital that may not be able to be transferred seamlessly from one industry to another — it remains very relevant in a highly complex global economy, which increasingly relies on international sourcing to accomplish domestic objectives.
- **The decision-making process for network services.** From the view of how a mobile operator or large enterprise organization makes technology decisions, comparative advantage should be considered a key assessment characteristic that determines the most efficient way to allocate resources. It is also a concept that can be extended to virtually every function of the organization. However, applying the theory, in a different sense, to the sourcing of network services demonstrates the potential to free network owners (both enterprise and operators) to focus on core competencies, instead of network management issues.
- **Cost and scale advantages for network services providers.** Occasionally obscured in the rush to source externally, however, is the process by which network operators and enterprises actually determine what functions are better managed internally and, more importantly, how to maximize the value derived from these internal resources. In fact, due to predictable cost and scale advantages, Pyramid Research believes that an increasing number of operators and enterprises will evaluate network services providers using a more structured sourcing model — one that rationalizes the sourcing question with a higher degree of forethought based on future network capacity requirements,

risks, capabilities, as well as variable and fixed-cost models (see **Exhibit 1,** which conceptually illustrates the structured sourcing model for network services).

Exhibit 1: Structured sourcing model: Network services and relative cost assessment scenario



Source: Pyramid Research

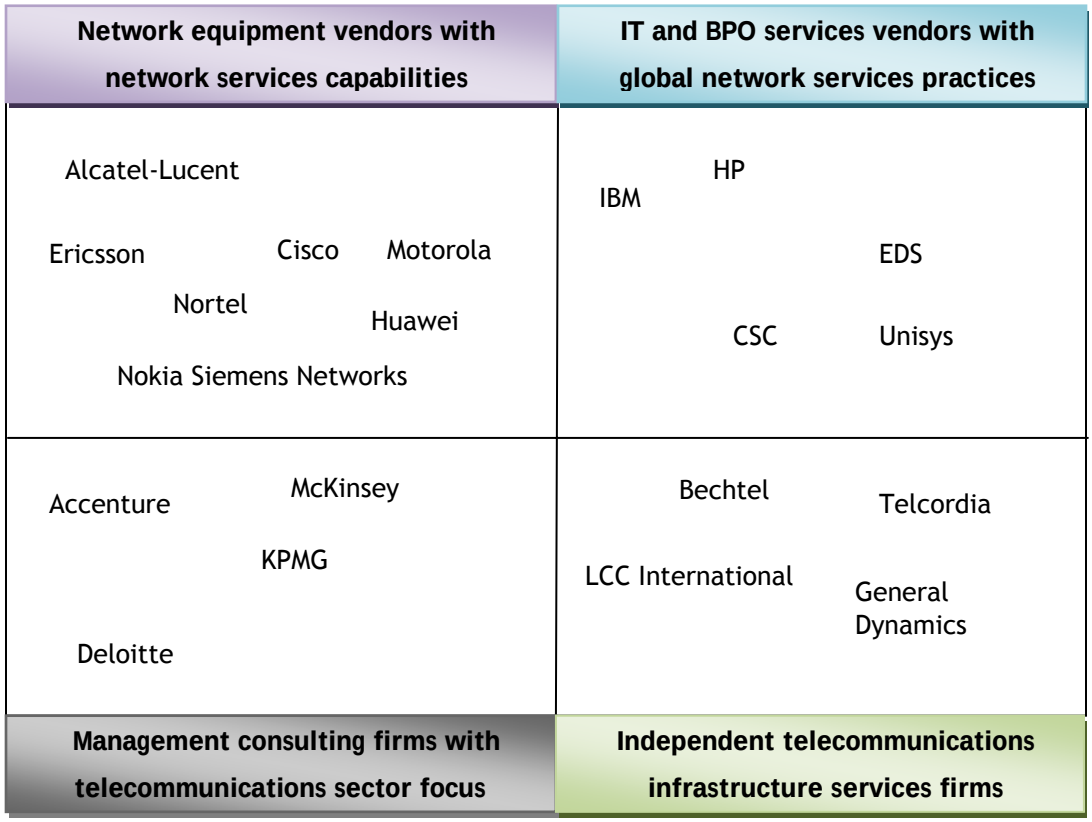
The current network services marketplace

The current marketplace for broadly defined network services (i.e., consulting, implementation, managed services and network outsourcing) is dynamic, fragmented and growing. Network equipment vendors today generally recognize both the need and the opportunity to provide a range of services to operators and enterprise organizations, and many have successfully built and continue to refine a portfolio of services designed to add value to the customer experience. In addition, other organizations seeking to participate in the market have also developed messages and services capabilities designed to take advantage of the long-term growth opportunities.

In fact, Pyramid Research sees the potential market for network services as significantly larger than the potential market for network equipment alone. For instance, mobile operators globally will spend nearly US$471bn in 2008 on Opex while spending approximately $137bn on Capex. Further, we estimate that more than 68% of network operation expenses today are managed by mobile operators using internal resources. Yet these dynamics are changing as increasing numbers of operators consider the competitive advantages and potential cost savings.

As displayed in **Exhibit 2,** Pyramid Research's network services market segmentation offers a supply-side perspective of the global community.

Exhibit 2: Network consulting, implementation, managed and outsourcing services market segmentation



Source: Pyramid Research

For organizations considering external services vendors (such as those identified in **Exhibit 2**) to help manage selected network activities or functions, there exists a set of principles for evaluating internal competencies that can assist both operators and enterprise organizations in making a rational sourcing decision.

These principles include:

- Align organizational priorities (e.g., regional growth initiatives, cost reduction, etc.) with existing and future technology (i.e., network) requirements
- Where inherently deficient (or of low priority), identify competencies of trusted and financially stable external providers that can add measurable value
- Manage all external service providers with service level agreements (SLAs) that connect directly to, and support, organizational priorities

Certainly, competition for various projects among these vendors can be intense — particularly for network equipment vendors with service capabilities who often must compete with the internal staff of operators and enterprise organizations. Despite the competitive forces within this community, however, there remains a set of business attributes consistent across the competitive landscape that will help determine true leadership in the network services marketplace through this decade and beyond.

These attributes include:

- A truly differentiated services-oriented value proposition that focuses on business enablement; not simply cost reduction
- Worldwide access to superior resources (i.e., internally controlled) and distributed assets (e.g., externally leveraged through partnerships or alliances) capable of flawless and transparent execution
- Senior management's sustained commitment to fully supporting a strategic services agenda through research and development investment and optimal resource allocation

CLIENT RECOMMENDATIONS

Pyramid Research sees a robust yet highly competitive market for network services through the next decade.

→ **Telecommunications network operators —** For the operator community, Pyramid Research suggests developing a structured network sourcing model that will allow for "rigorous flexibility" in managing a highly critical element of the operating environment — the network that delivers revenue-generating voice and data services to subscribers.

Rigorous flexibility implies that the operator should challenge conventional wisdom regarding what activities and functions are core and therefore must be managed internally yet be flexible enough to use external resources where appropriate in order to create a comparative advantage. This model must carefully analyze specifically what functions (e.g., network monitoring, equipment maintenance, etc.) are truly core to the business and what functions can be delivered efficiently though a reliable third-party provider.

→ **Enterprise organizations —** Unlike the operator community that relies on its networks to deliver services to subscribers for revenue generation, enterprises typically rely on networks to access a multitude of applications — such as finance, supply chain and human resources — that help the organization connect to disparate groups and divisions.

However, like the operator, the network is a critical link that enables organizational execution. Therefore, Pyramid Research believes that the same principles of rigorous flexibility apply, particularly as more enterprises embrace the benefits of converged IP-based networks for voice, video and data.

→ **Network equipment vendors and services firms —** As mentioned previously, Pyramid Research sees a robust yet highly competitive market for network services through the next decade. Services organizations seeking additional share of the market must be prepared to elevate their message with customers to a strategic level. Further, they must support that message by investing appropriately in the processes, tools, technologies and human resources needed to ensure that global services are delivered with precision and consistency.

Related resources

Recent reports and other products from Pyramid Research

Mobile Data Best Practices: Positioning and Revenue Opportunities in Emerging and Developed Markets
Research Report published April 2008
This report examines mobile data services, revenue trends and drivers for adoption, comparing market dynamics and opportunities in emerging and developed countries. It ranks current and projected top performers among countries and mobile operators, and draws on numerous operator case studies and industry best practices, providing invaluable insight into business opportunities for equipment and application providers as well as benchmarks for operators worldwide. The report identifies market-tested strategies for positioning, pricing and promotion of mobile data offerings in different market environments — strategies that promise to encourage end-user adoption and increase data revenue per subscriber.

Bundling Notebooks and Mobile Broadband: The Business Case for MNOs
Research Report published March 2008
This report analyzes the drivers for mobile operators to bundle mobile broadband services and PCs, as well as the effect of such bundling on performance and operations. It leverages Pyramid Research's unique Mobile Broadband PC survey, which covered more than 12,000 face-to-face interviews that explored consumer attitudes to mobile services, PCs and applications.

Social Networking Goes Mobile
Research Report published February 2008
Social networking services like MySpace and Facebook have emerged as some of the hottest Internet names, with daily news of partnerships, advertising initiatives and acquisitions. This report looks at the SNS business model and analyzes its future, forecasting the number of social networking members globally by 2012. It also assesses the future of mobile social networking and the rationale for SNSs and mobile operators to collaborate, including the revenue mobile operators stand to gain. Finally, the report profiles some of the top players in the mobile social networking world.

Market Positioning and Operator Strategies for IPTV; A Global Overview
Research Report published January 2008
In this report, Pyramid Research provides a global snapshot of IPTV adoption and analyzes market dynamics in 10 disparate countries, ranging from highly developed markets (France, for instance) to emerging markets where IPTV services are only at the cusp of being introduced (such as South Africa). In each country, we examine the shape and form of IPTV offerings and put them in the context of competing broadband and pay-TV market offerings.

WiMAX Business Models; Will New Networks Ever Become Profitable?
Research Report published November 2007
WiMAX deployments continue to increase in number, with the technology being adopted in more than 70 countries across the world. The business case, however, is yet to be proven, and the main question remains unanswered: how will WiMAX operators make money? Should a WiMAX business model resemble that of fixed broadband or 3G, a mix of the two, or something completely new? To ascertain whether WiMAX is truly worth the risk, this report analyzes the business models as well as operating and financial metrics of existing and prospective WiMAX deployments in emerging and developed markets and those for enterprise use.

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For more information or to purchase, contact Pyramid Research at:
+1.617.494.1515 or sales@pyr.com or www.pyramidresearch.com