

The Coming Carrier Network Infrastructure – A Very Different Landscape

New Partnerships, New Business Models for Tomorrow's Telcos

Both fixed and mobile telecom operators are facing new competitive challenges as they shift their focus from the network to developing retail business and content partnerships. Among the strategies they can adopt are: invest in fiber to the home in order to offer quadruple play services; converge their current and future customer offerings; and separate their network and service operations. In addition, the fierce competitive environment will drive increased merger and acquisition activity as well as the formation of partnerships between organizations that previously viewed themselves as separate entities – for example, fixed and wireless companies.

To compete in this new environment, operators are rethinking their business models and are turning to outsourcing arrangements as a way to enhance their competitive positioning. Ownership of the network infrastructure is increasingly being viewed as outside their core business.

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Introduction

Declining revenues combined with the need for strong growth is forcing telecom operators to consider new business models that will subsequently change their role in the telecom's value chain.

These models include, but are not limited to:

- Network operations outsourcing
- Managed capacity
- Network assets outsourcing
- Network sharing agreements
- Split between wholesale and retail business (virtual operators)
- Partnerships with media groups and internet leaders

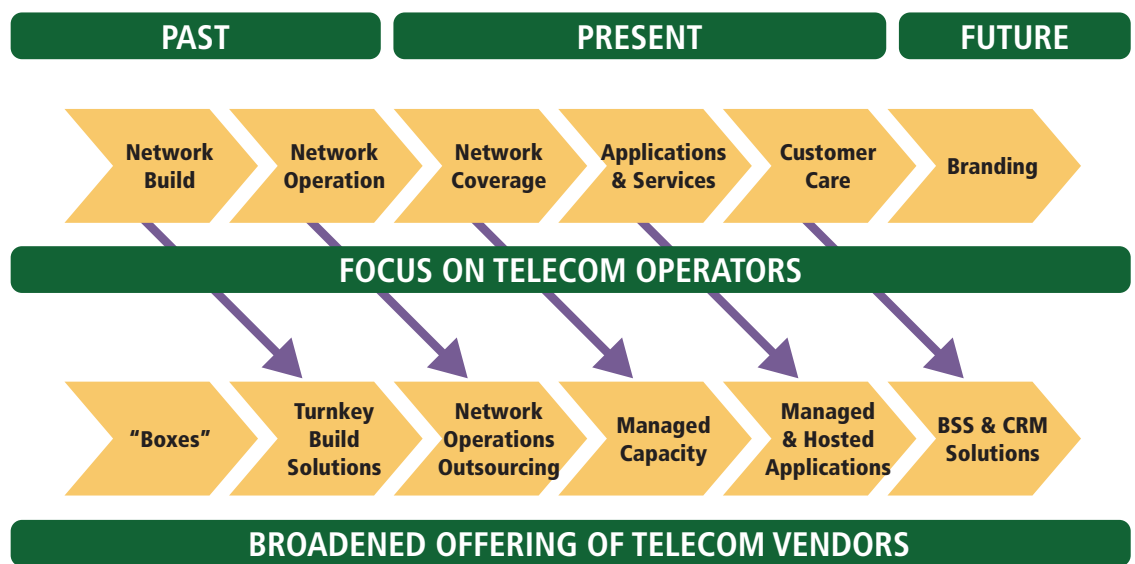


Figure 1: Telecom Operators Changing Roles

Outsourcing and infrastructure sharing can increase the carrier's operating free cash flow by up to 10 %, according to Arthur D. Little.¹ And by concentrating on retail business and content partnerships, the carriers can stimulate their top line growth. However, this shift is not without its risks. Moving in this direction will bring today's carriers and operators into head-to-head competition with Internet leaders such as Google.

The telecom companies can address this competitive challenge in a number of ways. Just a few of the strategies are mentioned below.

- Incumbents can invest in fiber deployment to the home in order to offer quadruple play services. They can also converge their services. In addition, fixed-line incumbent operators are increasingly separating the network and services (i.e. BT Openreach, an initiative to ensure that the UK telecommunications industry, including other parts of BT, has fair and equal access to BT's local access and backhaul networks). This trend is in line with former developments in the utilities sector, and is being strongly pushed by the European Commission.

¹ Telecom Operators: *Caution Work Ahead*, Arthur D. Little and Exane BNP Paribas, March 2007, p.3

- Mobile operators need to form strategic alliances with operators offering fixed services and broadband by partnering with or acquiring companies in the DSL and/or cable segments.
- By investing in FTTx and convergence capabilities such as IMS, leading alternative carriers, such as Tele2 in Europe and DCI in Canada, can establish strong positions in this emerging marketplace
- As always, an era of heightened competition will trigger accelerated merger and acquisition activity and the telecom industry is no exception. We can also look for a ramp up in outsourcing and infrastructure sharing among the mobile and fixed line operators that are struggling to stay afloat.

All these challenges and mitigation strategies are forcing the operators to rethink their business model and value chain. Specifically, the operators are investigating turning to managed services as a way to strengthen their competitive position. Among these services are:

- Adopting a build-operate-transfer or build-operate-manage approach to projects
- Full and/or selective outsourcing
- Managed capacity
- Managed and hosted applications and content

Outsourcing and RAN (radio access network) sharing can have a positive impact on an operator's financial position:

- Outsourcing can improve EBITDA (net income before interest, income taxes, and depreciation and amortization) by about 1.5 % and OpFCF (Operating Free Cash Flow) by about 6 %².
- Analysis by Alcatel-Lucent has shown that sharing infrastructure will deliver healthy savings in capital (10% – 20%) and operational expenses (20% - 40%) over a five-year period.

Network and services separation also has several advantages:

- Improvement of leased line unbundling model
- Evaluation as a utility (EBITDA x 8) instead of as a telecom (EBITDA x 5-6) increases the market value of an operator – Network infrastructure sharing will improve time-to-revenue by enabling the faster delivery of services to a greater number of subscribers.
- UK, Italy and Sweden are leaders in this trend.

² Ibid. p. 60

Increasingly telecom operators are viewing ownership of the network infrastructure as outside their core-business. Driving this trend are the increased speed of innovation cycles, and the pressures of time-to-market. In this new environment, the operators are attempting to mitigate the risk of making upfront investments in new technologies before the technology has proven itself in the marketplace.

The fact is that the network is no longer a unique selling point to their customers – rather it is the services offered over the network that is of primary interest. So the service providers must walk a tightrope of implementing a broad set of technologies in order to offer state-of-the-art services to end-customers, but at the same time being careful not to overload those customers with new offerings and technologies.

A clear indication of this trend is the increasing demand for solutions that include outsourcing, or at least the sharing of telecom network infrastructure. Just a few of the indicators that the network is no longer a commodity includes the specialization of telecom carriers into a variety of wholesale segments, such as backbone service providers. Other indicators include the increase in co-locating and sharing mobile sites and a trend to leased line unbundling. The use of managed and hosted applications is on the rise, as is the trend on the part of the telecoms to look to an outside firm to manage capacity. In fact, the entire legacy network can be outsourced. This can occur in a selective fashion – e.g. the transport network of a mobile operator; or full outsourcing of the operation of a legacy network to an independent 3rd party vendor.

It is apparent that the ownership of network assets can increasingly become a burden to today's telecom operators rather a competitive advantage. Network sharing will become more and more important in the overall telecom business model and will include all network elements – core, access, transport and service platforms, the legacy network, and new extensions and technologies.

Future Business Model for Telecom Operators

In the future, service providers will hardly resemble the companies they were in the late 20th and early years of the 21st century. For example, they may position themselves as your friendly “Telecom Services and Content Sales Company.” They will no longer own or operate a telecom network infrastructure, and will focus exclusively on customer acquisition, interaction and retention.

Tomorrow's service providers will diversify by offering unique services and content in combination with attractive pricing. They likely will offer these services and content via hosted platforms they do not own, and will bring their products to the end-customers via a fully converged shared network infrastructures. One of the biggest shifts in the transformation of today's operators will be their evolution from an organization focused on engineering and technology to becoming a nimble marketing brand that delivers innovative and sophisticated cutting-edge services to its customers.

The telecom operator landscape will take on a different appearance as indicated in figure 2.

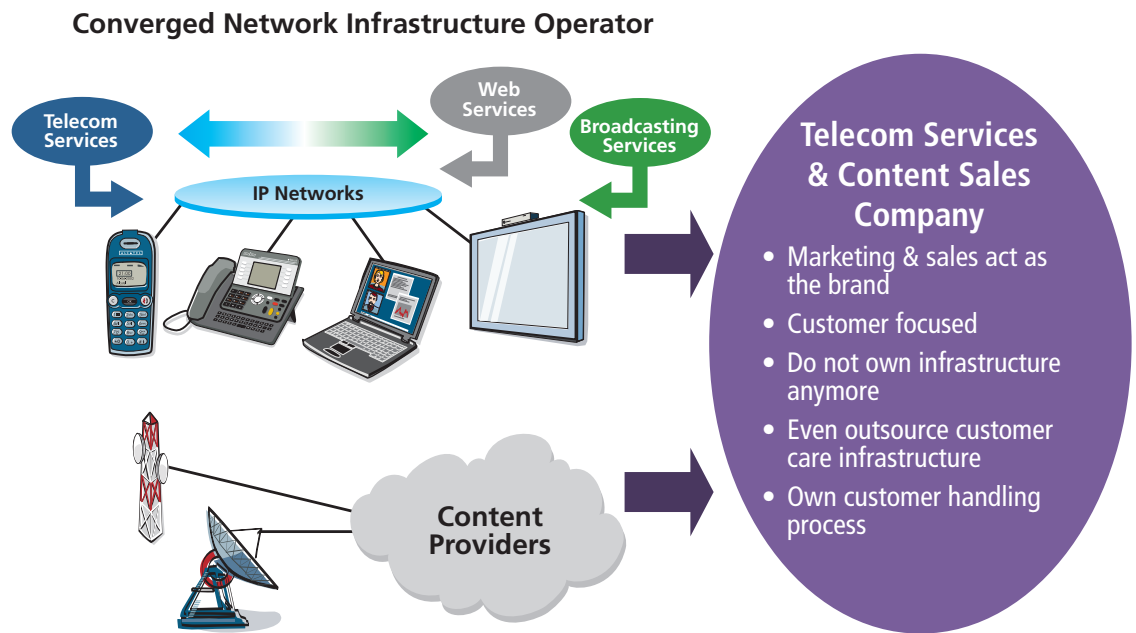


Figure 2: The New Telecom Landscape

In any country, there will be one or a just a few network infrastructure operators that provide fully converged capabilities that include fixed, mobile and broadband as well as a platform for convergence between telecom and IT. These infrastructure operators will supply the connectivity with end customers needed to deliver the telecom services and content provided either by specialized content providers, application service providers (ASPs), or by the network infrastructure operator, who may also host applications and content.

Impact of Partnerships on the Carrier Ecosystem

These network infrastructure operators will prefer long-term agreements rather than short-term, single supply contracts. The quickly changing demands and challenges they face require continuous cooperation with partners in order to react quickly and effectively. Long tenders and contract negotiation cycles will no longer be possible. Frame contracts will secure and support this cooperative approach. Terms and conditions will generally be fixed and not refer to individual projects, but the relationship over time. Prices will be defined via global benchmarking processes. Clear indications of this trend can be found in the recent partner selection programs of European Tier 1 operators.

This new model between vendors and infrastructure operators will have its share of problems, but these will be outweighed by the potential benefits and opportunities. The long-term relationship requires vendors to cover a broad range of telecom products, solutions and services that includes fully converged fixed, mobile and broadband infrastructures. Also part of the package is the convergence of telecom and IT via technologies like IP.

Vendors that are not successful in establishing these kinds of long-term agreements will eventually fail as demands for their products dries up and their profit margins erode.

Strategic Positioning for Success

To successfully negotiate these forthcoming agreements, telecom vendors not only have to increase the value of their portfolio to the partnership by broadening its coverage, but take strategic positions in its various target markets.

The first obvious move in their strategy to become the long-term partner to the telcos in their role as future network infrastructure operators, is to be one of the primary equipment and solution suppliers today in their target markets. Because future converged, unified networks will grow in phases from the sharing and merging of existing networks, the vendor must have a close relationship with today's strong telecom operators. And they must maintain this position over time –as the telco's requirements change, the risk is that it may negotiate a new shared network agreement that swaps the existing vendor completely out of the picture.

There is a high probability that the future network infrastructure operator may not be the successor of one of the existing telecom operators, but rather grow and develop from operations and network assets outsourcing contracts.

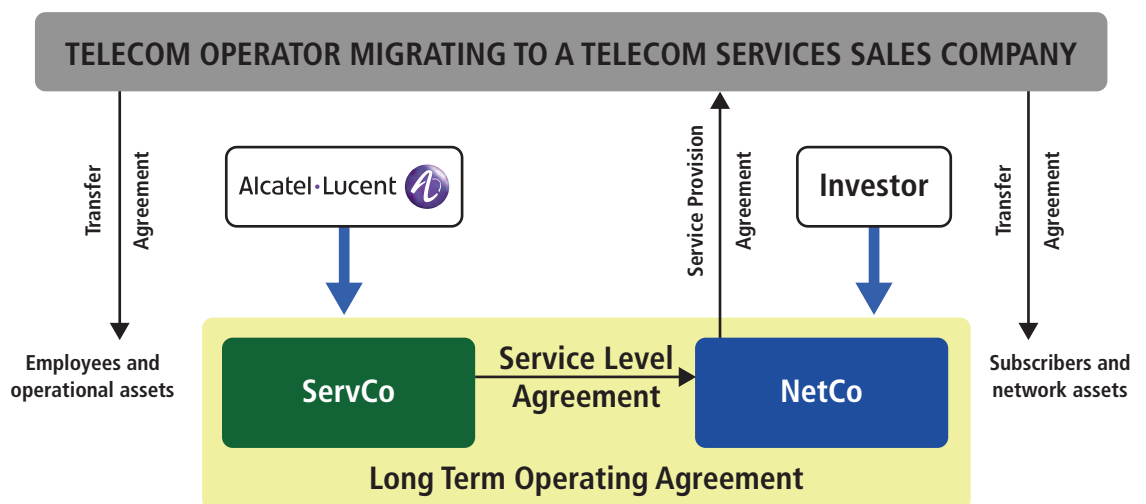


Figure 3: Cooperation with a Network Outsourcing Vendor (in this case, Alcatel-Lucent)

This example illustrates full network operations outsourcing on the part of the transformed telecom operator including a network assets transfer to a network infrastructure company, NetCo. The role of the services organization – identified here as ServCo – is to manage the network operations. In addition, the services organization will have a significant influence on NetCo's investment decisions.

We believe that this will be the model most preferred by future network infrastructure operators. It consists of a long-term cooperative arrangement in which each player performs its role based on its core business capabilities and competence.

About the Author

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Andreas Herzog heads the Carrier Network Operations Business Unit within Alcatel Lucent's Network Operations Division. In this role, Andreas has the worldwide responsibility for network operation projects in the segment of telecom operators whereas outsourcing projects are a major part of it.

Previous to his current role, Andreas had a similar function in Alcatel's Integration and Services Division (2004-2006) after having served as General Manager for Integration and Services Division in Alcatel Austria (2000 – 2004). In this role Andreas developed the service offering from a small market position of Alcatel to become #1 on the telecom network services market in Austria contributing 50% to the business of Alcatel in this country in 2004.

Andreas Herzog has also held a variety of other positions at Alcatel since his entry in 1986, including Chief Technical Officer of the only European fixed network operator owned by Alcatel, United Telecom Investment in Hungary (1993-1997).

Andreas received a Master of Computer-Science from Johannes Kepler University in Linz, Austria.

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