White Paper

A Forward-Thinking Approach to Managed Services

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Pain Points Driving Managed Services Demand

Today's subscribers are more demanding as the proliferation of devices such as smartphones, tablets, Internet-enabled TVs and gaming devices have created a climate where subscribers want service anytime, anywhere and how they want it, as well as quality of service (QoS). Not only do subscribers want service availability and quality, but they also want continuity and access across all their devices, as well as a superior customer experience across all channels. In other words, market dynamics have set the bar very high in terms of a superior, seamless customer experience. With these market pressures, operators are looking more and more to outsource various operational needs as they do not have the in-house resources to keep up with such demands.

Figure 1 shows research conducted by Heavy Reading where operators were asked their drivers in turning to a managed services model. The survey indicates that cost (98 percent), expertise (85 percent), faster time to market (85 percent) and transformation were the top reasons for operators to look to outsourcing.

The results from Figure 1 are strong indications of operators' pain points today, which are motivating them to turn to a managed services model as they realize they cannot do it on their own and need help. The following are operators' current pain points in more detail.

Insufficient Resources, Knowledge & Experience

Operators today often do not have in-house resources to handle new technologies or services. This is not necessarily due to an operator's negligence, but more due to that the fact that residential and business customers needs are constantly changing. For example, enterprise customers are finding more and more that their employees want to bring their own device to work. But for operators, their staff may not be up to speed to provide bring-your-own-device (BYOD) services where they must have knowledge in outside security risks. There may also be a lack of resources or knowledge when it comes to areas such as machine-to-machine (M2M) where operators would like to provide more value-added services but are limited to their current in-house resources.
Customer Satisfaction Problems Due to Poor Performance

Trying to satisfy and retain subscribers while managing the volume of data over the network is easier said than done as operators grapple with disparate, siloed legacy systems that are not modern enough to support the real-time needs of today’s subscribers. Therefore, a lack of an end-to-end view of the customer creates a disjointed customer experience. For example, a customer may have to repeat his problem to a call-center agent after already explaining it to an employee at the retail store. This inefficiency further magnifies the issue the subscriber is already having, and the delay in resolution further contributes to poor customer satisfaction.

Need to Rapidly Introduce New Technology & Services

There is no doubt that operators face the increasing challenge of sharing the market with over-the-top (OTT) players. Not only are operators seeing their traditional voice revenues shrinking due to OTT players, but services such as SMS are taking a hit, as well. OTT players are able to circumvent the operator network by offering free communications services via a user’s Wi-Fi connection. Traditional OTT providers such as Google, Skype and Facebook have always been a threat, but now small app-based players (such as WhatsApp and Nimbus) are increasing-ly present, especially as WhatsApp has just been acquired by Facebook. With this market pressure comes the pressure for operators to rapidly introduce their own new technologies and services in order to survive.

Pressures to Reduce TCO

Operators have found that it has become more costly to maintain and manage their own facilities and staff. As costs of equipment and all that comes with maintain-ing buildings and employees increase, operators are finding that it is cutting into their profitability. The result is that operators are feeling pressure to reduce total cost of ownership (TCO) so that they can, instead, invest that money into more directly strategic, business-oriented efforts versus facilities/staff-based expenses.

Struggles With Cost-Effective Operations

Another spending concern for operators is the overall cost-effectiveness of their operations. If operators are dealing with various generations of legacy systems that cannot communicate across lines of business, the outcome is unnecessary errors such as order fallout, redundancies, etc. The end result is that operations are not effective whatsoever and, in short, unproductive and costly. Operators are aware of this pain point and openly admit that transforming these legacy systems is their biggest challenge. Operators have also found they are not well-equipped to seamlessly and cost-effectively transform their own operations infrastructure, while simultaneously upgrading their networks to next-generation technology.
Operators' Scenarios & Changing Needs

In addition to their current pain points, operators are looking to a managed services model simply because their needs are changing and they want to keep their business resources focused on their customers and delivering service. Below are some examples of changes operators are experiencing today.

Convergence of Fixed & Mobile Networks

In today's connected society, customers want seamless connectivity across all channels and all touch points. This means accessing the Internet, their email and other applications on any device from anywhere. In providing this seamless connectivity, operators must be prepared to handle this convergence of fixed and mobile networks. This means they must have end-to-end visibility into the transactions that are flowing through all the physical and virtual layers. Operators must also be able to collect granular-level data in real time and enable preemptive and proactive actions over these multiple domains. Their back-office systems must enable them to do all of the above.

Cumbersome Legacy Networks With a Need to Transform to IP

Legacy, circuit-switched networks no longer work when it comes to next-generation products and services, and these dated networks primarily lack the flexibility and scalability needed for offerings such as HD video, music, gaming, IP telephony, mobile TV, unified communications, cloud and M2M services. Operators acknowledge they must build flexible, intelligent, all-IP networks that will enable them to deliver such services to meet customer demands. These new networks will also allow faster time to market of such services, while operating more efficiently and ultimately reducing cost. And the common goal of all operators will be the convergence of voice and data networks into a single IP network.

Demand to Introduce New Technology or Service Offerings

The data-intensive services and products previously mentioned will continue to be a strain on operators as they try to accommodate bandwidth and provide QoS while rolling out innovative offerings to their subscribers. Operators are looking to a managed services provider in hopes of bringing new offerings to market as rapidly as possible to help them keep up with, and meet, customer demands. Rather than relying on slower, in-house planning and processes, they look to experienced outsourcers that can plan and execute in an agile manner. Ideally, this will help service providers gain new revenue faster and in a cost-effective way. As in any trend, operators that see their peers turning to managed services may feel that they will be left behind if they do not do the same.

Costly Disparate Network Architectures & Operations

Older, disparate back-office systems hold non-related data over multi-generational architectures and do not have the service management capabilities to accommodate the needs of next-generation services. The reason for these disjointed systems is old software from various vendors and antiquated home-grown systems that have been highly customized. As operators look to transform these networks, many of them have had an unorganized and fragmented approach, resulting in inefficiencies and causing high operating costs, and making the ultimate goal of having an all-IP network seem further and further away.
Greenfield Operator Entering a Competitive Market

In today’s market, many greenfield operators are popping up more and more, and some for very specific niche services such as M2M. No matter the case, these operators are looking to enter the market quickly and time to market is critical as they are new to the space and putting a lot on the line. A “build-operate-manage” managed services model is ideal for greenfield operators as they can outsource the planning, design, engineering, installation, as well as the full operations and management of the new network, and they do not have legacy systems to grapple with. At the same time, the longer term pricing of an outsourced model saves them money versus making heavy, initial, upfront investments in facilities and staff, hardware, software, etc. With more greenfield operators emerging in the market, this is driving the need for a managed services model.

Existing Operator Expanding Onto a New Market Segment or Geography

Many established operators are now looking to expand in new markets such as Africa or Latin America. In this case, they are looking for someone to help them with end-to-end operations. In many cases, these operators look to work with current vendors, but for those that have had poor experiences, some are looking for new partnerships. This is where expertise and quality of the partnership (such as making the operator feel that the vendor cares) will be key. Many operators are counting on an outsourced model in new geographies for quick implementation and immediate roll out of new services.
Vendor Profile: Alcatel-Lucent

Alcatel-Lucent is a vendor that has been providing managed services to operators for over 20 years. The vendor reports it has more than 100 wireline and wireless engagements globally that serve more than 240 million subscribers. What makes Alcatel-Lucent unique as a managed services vendor for operators is its core philosophy and approach to managed services, which is based on its Managed Services Blueprint Model (Figure 2).

Through its Managed Services Blueprint model, Alcatel-Lucent delivers:

- Accelerated time to market, time to delivery and time to profit through efficiency and getting it right the first time
- Lower TCO through avoidance of costly errors, mistaken attempts and re-dos, and through efficient, proven methodologies
- Improved end-user quality and experience through fewer failures, errors and outages, faster fault resolution, trouble avoidance techniques and a focus on service quality
- Managed risk through predictable performance and cost results that are tracked and manages with effective KPIs and SLAs

Alcatel-Lucent’s Managed Services Blueprint model has:

- Predictable performance with continuous quality improvement
- Exclusive intellectual property
- A robust and flexible delivery model
- Lean Six Sigma and Statistical Process Control (SPC)
- Innovation with best-in-class tools and proven methodologies

Figure 2: Alcatel-Lucent's Managed Services Blueprint Model

Source: Alcatel-Lucent
- Continuous improvement based on root-cause analysis
- Shortened time to market to implement and operate
- Aligned with eTOM and ITIL frameworks
- Includes an accurate real-time management dashboard
- Efficient leveraging of partners (i.e., field operations)
- Job skills catalog and professional development framework
- Optimization for cost-efficiency
- Ability to yield measurable improvements as a customer reports:
  - Service impacting events drop rate by 40 percent
  - Fault rate per subscriber drop rate by 85 percent
  - Mean time between failure (in hours) up by 64 percent
  - Mean time to restore (hours) down by 50 percent

Alcatel-Lucent believes the cost of poor quality and inefficiency is huge. The vendor attacks the cost of non-quality with its best-in-class approach to managed services, leveraging the latest technology with proven methodologies and tools. Alcatel-Lucent also sees managed services as a key enabler for operators to adopt new next-generation IP transport and ultra-broadband technology in their networks.

The past two years Alcatel-Lucent has also made a point to listen to its managed services customers all over the world and focus its managed services approach on what operators really need and want. The vendor has found that customers are fundamentally looking for two types of outsourcing models: (1) Build, Operate, Manage and Transfer (BOMT) where Alcatel-Lucent helps operators implement new products and technologies faster and with less risk, then operates and manages the network with their Delivery Blueprint Model; and (2) Operations Transformation where Alcatel-Lucent transforms the operator’s existing network and operations applying the Blueprint Delivery Model (Figure 3).

### Figure 3: Alcatel-Lucent’s Managed Services Offerings

<table>
<thead>
<tr>
<th>BUILD, OPERATE, MANAGE AND TRANSFER (BOMT)</th>
<th>MS OPERATIONS TRANSFORMATION</th>
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<tbody>
<tr>
<td>Help customers implement new Alcatel-Lucent products and technologies faster, with less risk</td>
<td>Move customer’s in-scope network operations under Alcatel-Lucent control</td>
</tr>
<tr>
<td>Operate and manage the network with our Standard Delivery Blueprint Model</td>
<td>Transform the customer’s multi-vendor network operation functions applying the company’s Standard Delivery Model</td>
</tr>
<tr>
<td>Transfer-back the operations to customer at the contract end, with options to license Alcatel-Lucent intellectual property</td>
<td>Manage legacy infrastructure, adapting transformation pace to customer requirements</td>
</tr>
<tr>
<td>Improve time to market and reduce risk when introducing innovative end-user services and new Alcatel-Lucent technologies</td>
<td>Transfer-back the operations to customer at the contract end, with options to license Alcatel-Lucent intellectual property</td>
</tr>
<tr>
<td>Source: Alcatel-Lucent</td>
<td>Improve our customers’ network operations efficiency and quality through transformation to the Alcatel-Lucent Standard Delivery Model</td>
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Since these managed services models are flexible and can accommodate a wide array of network technologies, they have been successful at meeting operators’ needs. The vendor no longer wants customized "like-for-like-for-less" outsourcing arrangements where they cannot apply value through innovation and transformation.

A prime example of Alcatel-Lucent’s BOMT managed services model is its work with Airtel Africa. In this case study, the vendor helped Airtel Africa design, build, deploy and operate a Pan African IP/MPLS network backbone to accommodate the exploding growth of mobile broadband data and video services in Africa. The network spanned across 17 African countries serving over 65 million customers for both corporate and commercial needs. Airtel looked for a single reliable partner able to operate and manage the end-to-end network seamlessly across all of the African countries. Airtel concluded that Alcatel-Lucent with their Managed Services Blueprint and global delivery team was the right partner to achieve their goals. As part of the engagement, Alcatel-Lucent centralized many the network related operations and business processes, yielding a faster time to market and improved QoS. Alcatel-Lucent was also able to lower the operator's TCO by leveraging the Blueprint’s cost-effective approach and by consolidating organizational and network related operations and functions. Airtel Africa attests that Alcatel-Lucent enabled them to meet their goals and effectively handle the high volumes of a variety of mobile broadband data and video services. The operator reports that the new network implementation provides a substantially improved QoS for their current customers, and that they feel prepared for future international expansion opportunities.

An example of Alcatel-Lucent’s Operations Transformation model is its use case with KPN as it helped the operator upgrade to next-generation network technology across its wireline network. The result was a 17 percent TCO savings driven by energy and IT cost reductions, reduced footprint and improved economies of new operations technologies and process and organization optimizations. Alcatel-Lucent also helped KPN eliminate business continuity risks and enable quicker availability of new revenue-generating services. The vendor also took over day-to-day operations, freeing KPN to focus on growing its business and providing customer service. In both these examples, Alcatel-Lucent proves they are readily able to help operators in transforming and improving their business and, at the same time, reducing cost through improved efficiency.

Alcatel-Lucent’s vision is to deliver managed services with the focus on service quality and end-user experience, rather than just on network performance, with a pragmatic three-step approach that it has defined: (1) Monitor, (2) Assist, (3) Managed Service. As the industry moves closer to virtualized telcos through software-defined networking, Alcatel-Lucent is planning to deliver managed services that meet the new paradigm of operations challenges that will occur.
Conclusion & Operator Recommendations

As operators face the challenge to update their back-office systems to keep accommodating network upgrades, increased data usage and new products and services, the choice will be to handle internally or outsource their needs. Operators are turning more and more to a managed services model as a means for cost savings and to delegate the skillset to a third-party outsourcer.

The following are key points operators must consider when looking for a managed services vendor.

Choose your vendor wisely. Operators must shop for their managed service provider wisely as expectations must be matched, otherwise inefficiencies will lead to a self-defeating effort. Operators must make sure the outsourcer maintains ongoing communication, expected level of expertise, maintenance and support.

Consider the state of current systems. Operators must consider the state of their current systems. Can they easily be handed over to an outside vendor for management or is there too much inefficient and disparate legacy that the outsourcer will not be able to handle it properly? If the current system is in such a state of disrepair than turning to a total next-generation solution in a managed service model may be the answer, versus transformation.

Learn from past mistakes. As some five- to seven-year managed services are expiring, operators claim they have learned from their mistakes. Previous partnerships with outsourcers were seen as unsatisfactory because the results never met expectations. Overall communication, expertise and support were disappointing, and as they shop for a new provider, they will be choosier in who they select. This also puts pressure on vendors to live up to their collateral.

Consider the alternative. If operators do not want to turn to managed services to improve their operations, then what are the operators’ other options? Rip and renew or continue to work on the transformation of legacy systems in-house. The decision will come down to cost and time. If an operator is willing to make further in-house investments, then it will be a gamble on the time it will take for such transformation, and whether the operator will be able to do it in a timely enough manner to keep up with competitors that are outsourcing such needs.

All of the above points must be considered by operators when looking to managed services. Whether they are looking to transform their current legacy systems or start fresh with next-generation technology, managed services, when executed methodically, can help an operator reduce cost, rapidly deploy and offer next-generation services and products, and ultimately increase overall customer satisfaction. Alcatel-Lucent is a vendor that has the established, proven history and forward-thinking approach to managed services to provide such a model.