Arthur D Little

Managed Services

A new Telecom operating model to extract value in B2B

Content

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Executive summary

"Managed Services" refers to managing business customers' technology environments on an ongoing basis through offerings that are governed through standardized SLAs. Managed Services are typically offered to cover business-critical services functions that are at the heart of a business. They enable customer productivity increases due to communication and IT advancements while removing the related complexity.

Managed Services are becoming increasingly popular with businesses around the world; the global market for Managed Services is expected to grow from USD 160 billion in 2014 to USD 286 billion in 2019, at an estimated CAGR of 12% over the next few years.

Businesses are willing to pay for these benefits. Benchmarks indicate that customers are willing to pay up to five-times-higher prices for Managed Services over their unmanaged counterparts. By contrast, worldwide prices for unmanaged or best-effort connectivity are likely to remain under price pressure, as competition between Telecom operators remains undifferentiated.

We believe that Telecom companies remain best positioned to offer Managed Services as they possess all the capabilities and processes to manage their networks and assets. Thus, Managed Services could represent a natural extension to their existing capabilities.

However, providing Managed Services to customers brings its own set of challenges. The required capabilities, both for go-to-market and for designing service delivery, represent a significant departure from the traditional best-effort model operators typically deploy to their customers. Solution-based sales (as opposed to product-based sales) and delivering services to client specification become the new norm. As a result, in order to succeed in Managed Services, Telecom operators must open their internal operating models up to customers and take customer applications seriously when designing their Managed Services operating models. They will also need to have seamless collaboration between commercial, technical and operational units.

For many Telecoms this could mean an in-depth transformation of the mental model currently at work: On the commercial side, for instance, a multi-phase sales process addressing the needs of the clients' business, technical and commercial buyers is a must. Customized solutions need to be planned and built based on standardized delivery elements. On the technical side, mass customization of highly individual service needs is required to keep delivery efficiency at a high level. And finally, individual client solutions need to be monitored end to end and the response and repair times need to be under control.

Managed Services takes complexity off the customers' shoulders

Adding a management layer to basic services helps growth beyond best-effort, unmanaged services and enables tapping into servicing business-critical applications

"Managed Services" refers to managing customers' technology environments on an ongoing basis through standardized offerings designed to deliver on standard or agreed-upon target SLAs. Managed Services are typically offered to cover business-critical services – functions that are at the heart of a business. Those critical services range from a key-card computer at a hotel that is needed to hand out room keys for guests arriving on weekends (exactly when traditional call centers cannot deliver expert support), to SAP modules that control the supply chain of just-in-time manufacturing facilities, all the way to management of the data center of the stock exchange or flight control systems. While it is clear that the latter ones must not fail, even the smaller or seemingly insignificant services should not be interrupted from the perspective of the respective businesses.

Current Telecom offerings for Managed Services can be broken into six main product groups, as depicted in Figure 1.

Managed Services also entail the ability to manage the customer solution "end to end" by offering active-monitoring features to the provided solution and proactively reporting faults and incidents, while ensuring that restoration happens within the communicated SLAs.

The challenge of maintaining "end-to-end" SLAs that are relevant and beneficial from a client point of view grows exponentially as the complexity of the solution increases. An example: It is very different to promise your customer that a) he and his employees will send and receive emails on their mobile phones and, b) it will all be synched to their PCs from selling a phone, a SIM and an Office 365 license.

If you work for an operator, ask yourself the following question: would you trust your own company to supply services securing the stock exchange or air-traffic control? If not, what makes you think you can sell connectivity for payment systems of supermarkets? Your company is really operating on a "best-effort" basis, and you are allowing your clients to buy services that are not sufficiently secured for the purposes your client intends to use them for.

Figure 1: Managed Services offerings

Voice & Data	Enterprise Networks	Security	Equipment	Data Center & Cloud	Applications
Managed Voice & Data ■ Managed fixed and mobile voice & broadband ■ Managed VoIP ■ Managed audio/video conferencing ■ Unified communication	**Managed LAN/WAN** ■ WAN/LAN consulting, design & integration ■ Managed LAN ■ Managed WAN ■ Managed WAN (Layer 2–3) ■ FMI data ■ Managed international networks ■ Managed enterprise routers & switches	**Managed Security** ■ Firewalls & IP concept ■ Managed VPN ■ Security maintenance ■ Security consulting ■ Security policy development ■ Virus and spam protection ■ Risk & compliance assessment	**Managed Mobility** ■ Enterprise mobility management ■ Device management (Handsets, tablets, field force devices.)	**Managed Housing/ Co-location** ■ Managed housing ■ Managed co-location **Managed Hosting/ IaaS** ■ Servers hosting ■ Managed servers ■ Managed storage ■ Web hosting ■ Server virtualization ■ Desktop virtualization	**Managed Software** ■ Applications management and troubleshooting ■ SAP, CRM, BI and ERP consulting, design & integration
Managed Voice Systems and Call Centers ■ Managed PBX ■ Managed call centers ■ Call recording ■ PBX/call centers consulting, design & integration		**Managing Disaster Recovery** ■ Backup & disaster recovery systems ■ Business continuity services	**Managed Office/ IT Equipment** ■ Managed desktop ■ Managed print services ■ Printing & scanning management software ■ Printer & scanner device management ■ Reselling	**PaaS** ■ Deployment environment ■ Runtime environment	**Industrial Solutions** ■ M2M ■ eHealth, ■ Other vertical solutions
				SaaS ■ Application hosting (software, app store, web shop) ■ Deployment environment ■ Workflow management	
Non-standard solutions (e-health, vertical solutions, etc.)					

Managed Services is an attractive growth opportunity

Telecoms, in emerging and mature markets alike, are facing challenging times as unmanaged connectivity prices have been declining and can be expected to further erode in the future, driven by a range of global and local trends, including:

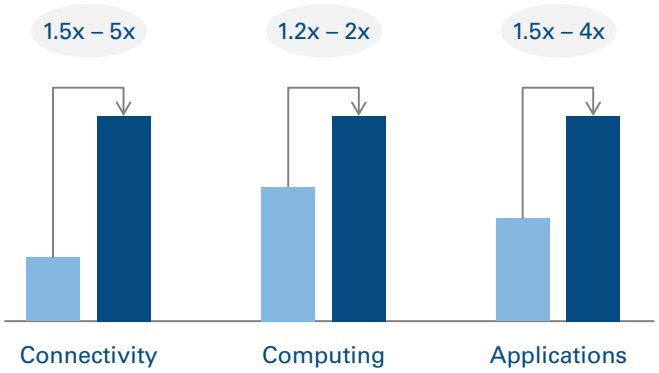
a. Capacity is still abundantly available and continues to grow faster than demand.

b. Incremental cost for the utilization of that bandwidth is minimal compared to incremental revenue, and incremental operating costs are often negligible.

c. Technological advances reduce the cost of upgrading capacity on existing assets for all network asset classes: copper, HFC, fiber and over-the-air technologies

The transformation of the – once-praised – connectivity services into undifferentiated commodities makes the case for Managed Services all the more compelling for Telecom. Businesses depend on constant up time for services such as connectivity (voice and data), security, managed equipment, cloud and software applications, as all are major lifelines. This is the core reason that, if they are sold properly, businesses are willing to pay a substantial premium for services that come with performance guarantees.

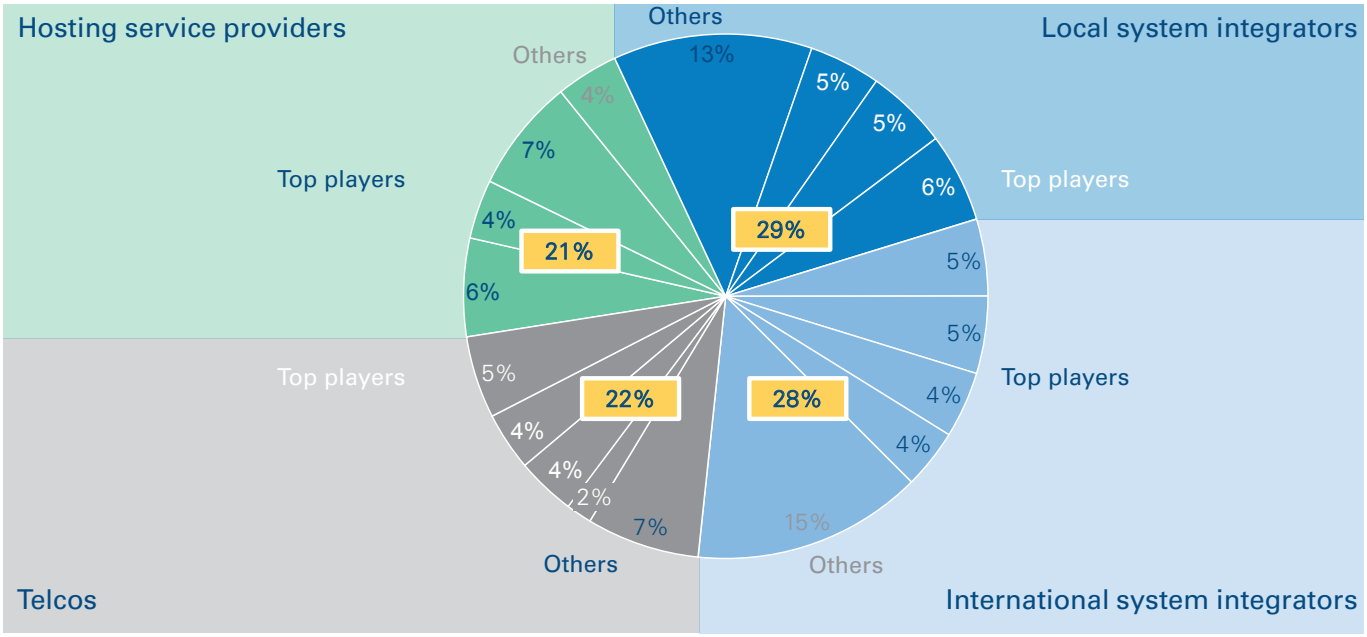
Figure 2: Pricing of Managed Services versus Unmanaged Services



Our benchmarks of leading Telecom operators indicate that premiums paid for Managed Services range from 20% to 400% depending on the nature of services (Figure 2).

While demand is growing, supply is still fragmented. The competition for Managed Services is still developing; no one vertical has yet won the game of delivering business-critical services to enterprises – a lot of the computing and storage are still done in self-managed environments.

Figure 3: Overview of Managed Services competitive landscape



Interestingly, the major web-scale companies are not competing in the Managed Services space. The reason is simple: Amazon, Google and Microsoft so far are mostly only available through a best-effort internet connection – a classic breach in the end-to-end chain of Managed Services. Furthermore, enterprises are very prudent in trusting international players. Local suppliers and their own IT are simply more trustworthy and dedicated than global players.

This, along with the absence of credible suppliers, has forced clients to build critical applications in house, while selecting service providers of choice, whether local IT consultants or specialist service providers and system integrators, to support them. While SMEs turn mostly to their local IT consultants, enterprises and governmental entities are more prone to turning to specialist service providers and system integrators to design and build the services needed to operate their business-critical applications.

With robust growth prospects and fragmented competition, the Managed Services market represents an attractive opportunity for Telecom (Figure 3).

Telecom operators have been holding back on fully seizing the opportunity

Telecom operators are actually well positioned to play a leading role and deliver on the demanding requirements of Managed Services. Think of how they operate their own network and IT. Also, their capabilities span most of the prerequisites to deliver most Managed Services, such as planning, building and running ICT solutions.

However, operators typically keep infrastructure running client services strictly separate from infrastructure used to run their own services. Usually, infrastructure used to host cloud services for customers is separate from the infrastructure hosting the carrier's own virtualized servers; the same is true for the operating teams. Although there are teams looking after the operator's own mass-market services 24/7, individual client services are often not supported to the same extent.

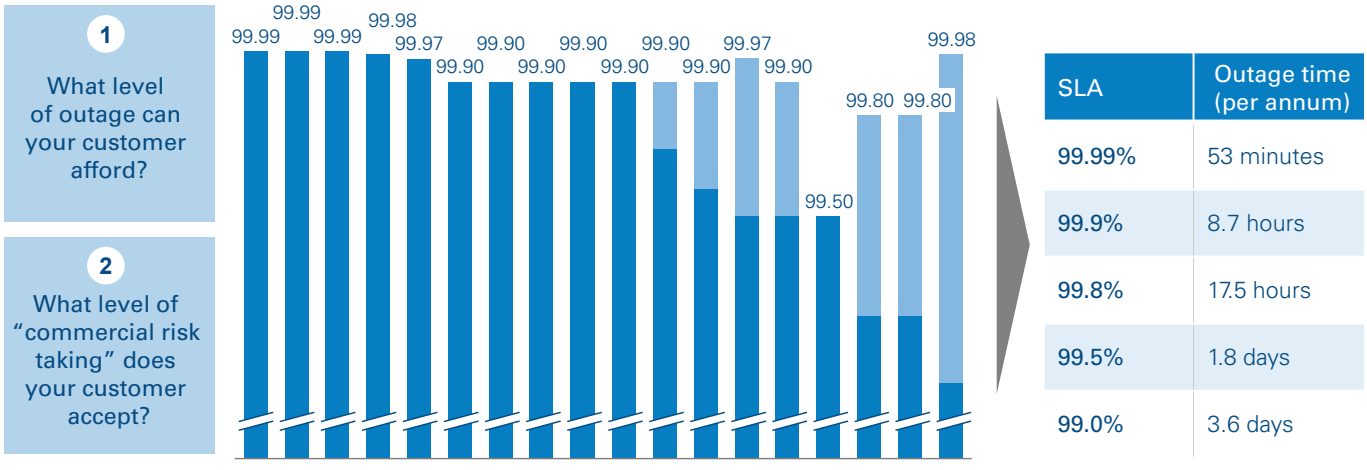
As a result, client services are run on a best-effort basis only. The SLAs offered by most telecom operators for their connectivity services – even their "professional connectivity" services – indicate an average SLA of 99.9%. Seemingly high, this means an unplanned eight-hour outage every year (Figure 4).

Now consider that Managed Services reach beyond the connectivity bit. As each service element carries its own risk of failure – not to mention an overarching risk of incompatibility – the end-to-end solution could indeed suffer even longer downtime before these standard SLAs carry any meaning. And the penalties for these SLAs are typically limited to the monthly fee, rather than the business impact of the downtime.

A recent study conducted by Arthur D. Little surveying leading Telecom operators in Europe and the Middle East reveals a lack of internal capabilities for selling Managed Services, developing marketable Managed Services products and maintaining the associated processes. Operators more often than not lack proper documentation of their network assets and configurations and incident management, as well as adequate service definitions. Moreover, the majority are hesitant to take commercial risks based on their SLA promises.

Thus, taking rudimentary connectivity services to a level at which they can be used to support business-critical applications or provide end-to-end service management requires a significant departure from today's operating model – a journey that we can only recommend interested Telecom companies embark on.

Figure 4: Benchmark of Telecom offered SLAs for Managed Services



SLA	Outage time (per annum)
99.99%	53 minutes
99.9%	8.7 hours
99.8%	17.5 hours
99.5%	1.8 days
99.0%	3.6 days

Source: Arthur D. Little analysis

Telecom operators need to clearly articulate the ambition level

The Managed Services strategic option space is complex, and any decision needs to rely on the company's overarching ambition, a careful selection of the playing field and a structured executional approach. Telecom operators are faced with key strategic questions in terms of "what and where", as well as "how", to address Managed Services offerings.

Ambition: What is your ambition regarding Managed Services?

- What are the strategic guidelines?
- What do you want to achieve?

Playing field: What type of player do you want to become in the next five years?

- In which geography do you want to play?
- Which business model is your core?

Execution: How do you want your enterprise business to achieve growth?

- What needs to be done to reach ambition?
- How have others done it?

Historically, Telecom operators have adopted different approaches towards Managed Services; possible options range from pure organic acquisitions to big-bang acquisitions across wide or differentiated product portfolios. To reach its goals, any Telecom operator needs to start building credibility and develop capabilities close to core areas (connectivity) before tackling further growth opportunities that satisfy higher revenues and margin ambitions (Figure 5).

Figure 5: Five business models for Managed Services

	Business model	Value proposition	Benchmarks
Advanced connectivity	■ Focus on several connectivity-related services ■ Based on secure, flexible & capable network ■ APIs for 3rd parties to leverage the connectivity assets & capabilities	Ease of integration	■ Colt in its early days ■ Former GTS
ICT supermarket	■ Leverage customer access to cross-sell own & 3rd party services ■ Efficient partner integration (back-2-back SLAs) and onboarding ■ Efficient marketing & sales setup to integrate partner offers	Customer reach	■ Deutsche Telekom ■ Verizon ■ Google Apps for Business
Problem solver	■ High customer intimacy and trust ■ Highly skilled in understanding business issues and offering efficient solutions to them (process & systems consulting)	Customer intimacy	■ T-Systems ■ OBS ■ NTT Docomo
Global business	■ Leverage differentiation of self-developed products with global relevancy ■ Requires means to protect such differentiation (e.g. IP protection)	Best in class solution	■ BT Global ■ AT&T ■ PCCW ■ Amazon
Virtual service provider	■ Leverage own products in own online channels ■ Focus on low-cost, high standardization, high self-care services	Innovation and agility leader	■ Rackspace ■ Salesforce

Source: Arthur D. Little analysis

Managed Services requires a significant uplift in capabilities

Numerous audits have revealed that operators do not properly manage their inventory or configurations. They pay for long-decommissioned lines; they cause outages due to faulty configuration and assume redundancy on non-disjoint or congested links. For the above reasons, it is not surprising that network faults due to construction make up only 10–15% of all faults.

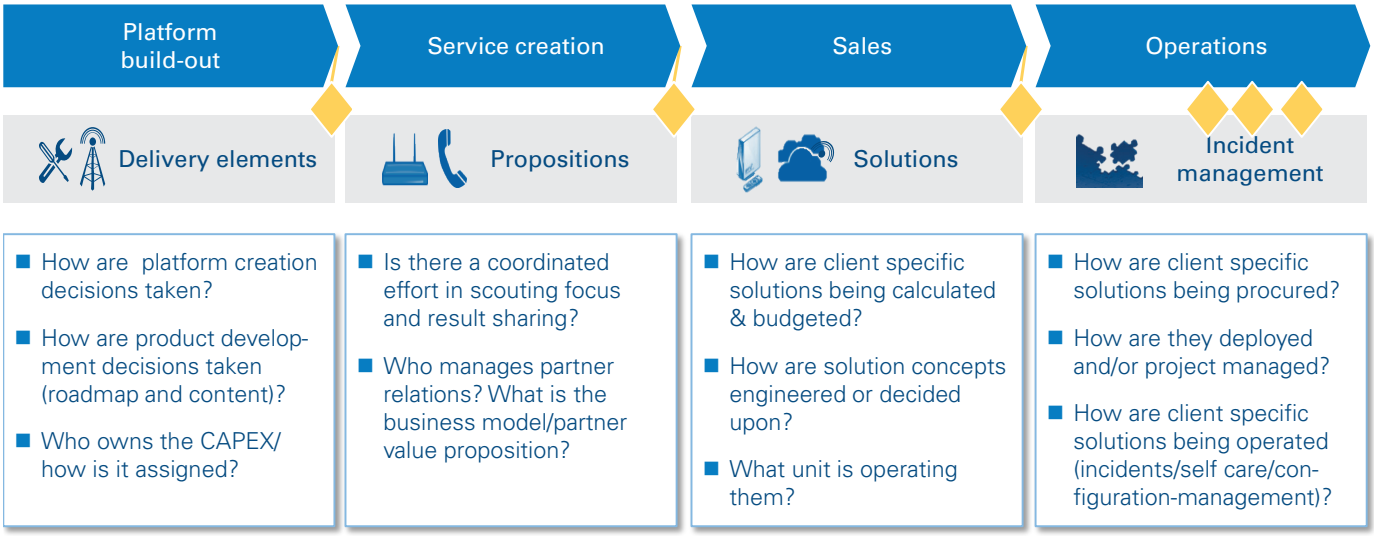
On the incident management side, few operators offer accessibility to the client and expose their technical administrators to a direct communication channel with the client's service responsible (Figure 6).

Consequently, operators most likely need to enhance their asset management and configuration management tools, as well as their incident management and release management processes. Transforming current approaches into a fully transparent, client-accessible entity that manages assets, configurations and incidents well is comparable to turning an industrial kitchen into an open-view kitchen: it first requires some clean-up.

Once the basics have been fixed, a customer-centric operating model needs to be established, integrating six key activities: product development, campaigning, demand generation, proposal development, delivery and operations (Figure 7). Obviously an operational set-up dictates dedicated support functions centered along providing, ensuring and maintaining strict SLAs and constant quality support.

Figure 6: Telecom operators' typical capabilities across the Managed Services cycle

Figure 7: Operating model principles along simplified Managed Services value chain



A transformation is required to meet the standards of Managed Services

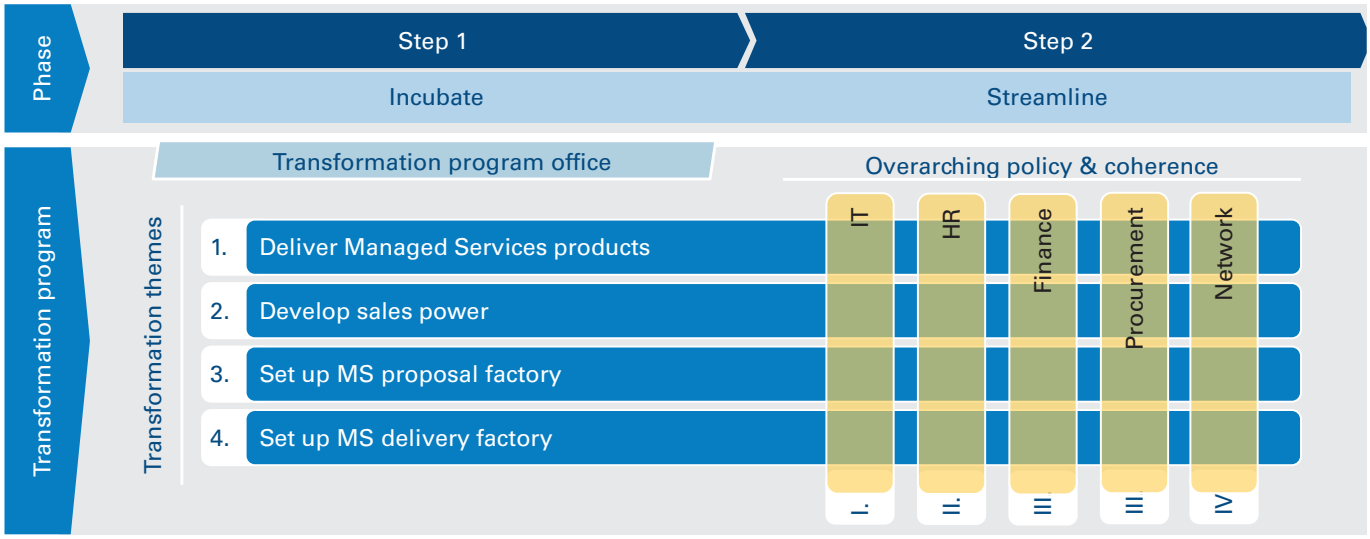
Moving into a Managed Services environment should be regarded as a natural progression that adds professionalism to Telecoms' operations. Multiple case assignments have enabled us to assemble a list of key criteria to become a Managed Services provider:

Managed Services key criteria

- Client services are end-to-end technically planned, including the core
- They are built as planned and documented as built, including the applied configuration
- The solution is tested prior to going into production and formally handed over to operations
- Technical support is available during business-critical hours, up to third level
- Any redundant services confirmed to be delivered are disjointed from other third-party network suppliers to avoid single points of failure
- Any used network equipment (on operator side as well as client side) is actively monitored, patched and release managed
- Formal incident/change management is installed and alive
- A formal demand-review process with the client exists

Integrating Managed Services into an operator's DNA requires building up internal capabilities and an extensive internal transformation, a topic most operators fear due to legacy, size and processes.

Figure 8: Arthur D. Little Transformation Program for a successful Managed Services execution



The few that have succeeded have:

- Opened their own technical environments up for customers to run their applications on
- Proactively and operationally manage third parties' solution contributions
- Been transparent on any incidents impacting the production platform, regardless of whether an incident has had client impact
- Allowed client administrators to be in direct contact with their own technical staff
- Had transparency regarding their own access networks, the client on-site gear and the end-to-end network configuration

To achieve those goals, a phased approach is often necessary to successfully implement the new operating model and start a gradual shift from core services to Managed Services.

Arthur D. Little has devised a cross-functional transformation program that has helped many Telecom operators facilitate this transition.

As with any transformation, full organization buy-in to the promise of Managed Services is required to give this much-needed transformation the momentum and energy it needs to succeed in a world in which Telecom operators are searching for new areas of revenue that go beyond rudimentary connectivity solutions. The good news is that this additional level of professionalism will also reveal numerous cost savings opportunities and remove internal inefficiencies in production.

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