Embracing new enterprise opportunities

Successful strategies for mobile network operators to target the enterprise segment

September 2013
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1. Introduction

Today enterprises are driven and challenged by a growing need for globalization, operational and capex efficiencies, and convergence across multiple devices. The inherent requirement for enterprises to connect with partners, suppliers, customers and employees is leading to newer forms of connectivity solutions. Ubiquitous connectivity solutions are fast turning out to be a service differentiator that enables companies of all sizes to fulfill customer requirements better.

The enterprise market segment has traditionally been dominated by fixed-network operators. With high capacity transmission and the ability to stretch across geographies, these operators have been the choice of multinationals seeking secure and diverse communication alternatives. However, with the advent of high-speed mobile networks, rapid improvement in handset capabilities and significant competitive pressure in the retail segment, this space has become a key opportunity for mobile network operators (MNOs) seeking to grow profits.

A suite of new mobile-based service launches is expected to influence the dynamics of the telecommunications landscape by giving rise to newer business models. Services such as machine-to-machine (M2M) communications, cloud computing, big data, telematics and enterprise mobility are creating new opportunities for MNOs.

The intersection of mobility, social and cloud computing continues to significantly influence enterprise communication, along with the underlying trends of consumerization of IT and emergence of big data.

MNOs need to pick a relevant portfolio of services that complement their existing capabilities and lead to sustainable profitability growth. Targeting the right segment of customers with customized service offerings should also help unlock significant value.

Source: IBM, Lightspeed, EY analysis.
2. Challenges faced by organizations are creating new opportunities for MNOs

Business communication needs differ across industry verticals and also depend on the size of business. The business environment of small and medium businesses (SMBs) is undergoing considerable change, when compared to large enterprises, resulting in unique requirements.

Figure 2. Enterprise and SMB needs are transforming

<table>
<thead>
<tr>
<th>SMB</th>
<th>Enterprise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Traditional needs</strong></td>
<td></td>
</tr>
<tr>
<td>• Flexibility</td>
<td>• Secure and fast network</td>
</tr>
<tr>
<td>• Control</td>
<td>• Reliable service delivery</td>
</tr>
<tr>
<td>• Ease of use</td>
<td>• Robust service level agreements</td>
</tr>
<tr>
<td>• Scalability</td>
<td>• Flexibility to accommodate changes</td>
</tr>
<tr>
<td>• Standardized offerings</td>
<td></td>
</tr>
<tr>
<td><strong>Evolving needs</strong></td>
<td></td>
</tr>
<tr>
<td>• Productivity enhancements</td>
<td>• Support for a growing mobile workforce</td>
</tr>
<tr>
<td>• Increased responsiveness</td>
<td>• Social media and collaboration</td>
</tr>
<tr>
<td>• Empowered sales force</td>
<td>• As-a-service consumption</td>
</tr>
<tr>
<td>• Information shared more quickly and easily</td>
<td>• Customers served through different touch points</td>
</tr>
<tr>
<td>• Social media leveraged to get in touch with customers</td>
<td>• Better customer processes developed</td>
</tr>
<tr>
<td>• Move from capex to opex</td>
<td>• Consumer insights used to customize services</td>
</tr>
</tbody>
</table>

Source: Amdocs, EY analysis.

Enterprise offerings need to address these specific challenges, with customized communication solutions, based on industry requirements.

A rise in the mobile workforce – employees working on the move, working from remote locations (home or client sites) and working in cross-border offices – is blurring the lines of the conventional office. It is estimated that by 2015, there will be around 1.2 billion mobile enterprise workers worldwide.1 Employees require real-time access to content and applications on devices that vary in form factor and operating systems. Enterprises can find it challenging to provide a seamless experience to this new generation of workforce, and legacy communication systems are unable to keep pace with the enhanced mobility, flexibility and agility requirements of users.

Faster time-to-market of services and real-time decision-making are the key requirements for businesses that are adopting new tools for improved productivity, greater collaboration and better communication tools for enabled business processes.

While enterprises are open to adopting new tools and technologies, cost is a concern often cited. With growing macroeconomic uncertainties and competitive pressures, companies are carefully evaluating their cost structures and looking at ways to minimize expenditure. Enterprises are favoring flexible technology deployment options that convert up-front capex to opex, and shortening technology life cycles add to the case for flexible deployments.

SMBs and start-ups functioning on low-cost models are adopting new technologies that overcome challenges around high material costs, changes in structure, size and location of business and cash flow shortages.

The proliferation of mobile devices as a preferred communication mechanism and the consumerization of IT are raising questions about control, security and support. Storage and security of sensitive data in external environments carries risks, especially in multiple access environments.

3. The mobile network operator differentiator

MNOs are gearing up for opportunities in the enterprise segment by leveraging their core competencies to build winning service portfolios. Mobility-based communication is becoming critical for enterprises with multi-geography footprints and diversely spread workforces, and most believe that MNOs are well suited to address their concerns about security, cost management and device control.

Enterprise mobility services facilitate:
- Collaboration
- Enhanced productivity benefits
- Reduced product and service time-to-market
- Flexible working
- Optimized operations, including logistics
- Enhanced customer relationships
- Streamlined supply chain management
- Solutions for security issues

The key issue for MNOs is balancing the investment needed against potential revenue opportunity. Operators need to evaluate internal capabilities to determine which can be leveraged most effectively to deliver the new portfolio. Choosing many services may result in straining existing capabilities, while too few may jeopardize the potential returns. Partnership and cooperation with other industries and players in the value chain also pose significant challenge to their existing business model.

3.1 Mobile cloud: a growing area of service differentiation for MNOs

The market for cloud computing is rapidly expanding and the coming together of cloud and mobility services is likely to further strengthen the case for enterprise adoption of mobile cloud. The move toward long-term evolution (LTE) networks could accelerate mobile cloud adoption by offering enhanced bandwidth of up to 100Mbps and access to an all-IP network on mobile devices.

Operational excellence, services for customer retention and potential revenue opportunities are the focus areas for operators. Many can build on their key advantage of having a local presence in the market, which could be a significant differentiator when compared to the bigger technology players offering cloud services.

While mobile cloud computing services for the enterprise are evolving, MNOs are initially targeting the SMB and consumer segment with customized offerings. The SMB market offers monetization opportunities for operators, as SMBs require similar enterprise-level technology solutions in a simplistic and cost-effective package. In addition, operators can bundle professional services for implementing, managing, migrating and integrating various services. Traditionally, the SMB market has been underserved by operators due to a range of issues, including fragmentation both geographically and vertically. In addition, many small businesses opt for consumer services such as free/low-cost cloud storage, as they do not require the complex functionalities of a business package.

One of the fastest growth segments for operators is value-added software as a service (SaaS) solutions for SMBs that include custom office applications accessible on smart mobile devices. In trying to address the unique requirements of SMBs, MNOs are offering cloud-based storage, mobile device management (MDM) and mobile security solutions that are easy to use and intuitive. For example, operators offer cloud-based mobile workplace solutions that include storage, enable users to edit documents, are accessible from different mobile devices and offer synchronization. Services are available from as low as US$6 per month, with cloud storage of between 25GB and 100GB.

Many cloud experts believe that it is time for operators to move away from the obvious infrastructure services and offer value-added services based on their existing infrastructure. This would enable them to move beyond the traditional walled-garden approach by opening up application programming interfaces (APIs) to third-party developers. This would help MNOs to develop new applications for businesses, offer a differentiated user experience and develop greater levels of personalization for customers.

Cloud services for enterprise device provisioning and management — utilizing intelligent network information such as type of access device, location and bandwidth — is a possibility through strategic partnerships with software companies.

Figure 3. Mobile cloud services: overcoming enterprise challenges

- Helps organizations be more productive and mobile while using less resources
- Allows greater collaboration and sharing of real-time information among mobile workers
- Improves customer responsiveness and enhances worker flexibility and ease of working due to ubiquitous access to key business applications
- Addresses the need to access data from a common cloud platform due to multiple device ownership
- Reduces substantial capital investments through pay-per-use opex model
- Improves cash flow especially during economic uncertainties
- Acts as a key enabler for start-ups and new businesses with no legacy technologies
- Lowers total cost of ownership of services and better security
- Outsourced processes managed by third-party experts
- Data is secured in a centralized location; password-protected user rights to access data; better enforcement of security procedures

Source: EY analysis.

Although the window of opportunity for mobile cloud computing has just opened up, MNOs need to overcome some specific challenges:

- The absence of clear security policies in enterprises for mobile cloud, making security and privacy risks a major impediment to adoption
- That the interdependence of mobile and cloud has not yet been established, and cloud and mobile are generally viewed as separate functionalities in enterprise, assigned to different teams
- The limited scalability and the unavailability of mobile cloud resources, which are contributing to a lack of preparedness to adopt mobile cloud
- The need to develop APIs that are simple and agnostic of underlying network technologies
- The risk of commoditization by being only an enabling platform or cloud broker
- The lack of interoperability between devices and platforms
- An unproven return on investment (ROI), with the benefits of mobile cloud yet to trickle in
3.2 M2M: MNOs leading shift to a connected world

Mobility has come a long way from the days when it was just restricted to a mobile handset. Today it has expanded to a point where almost every machine in our vicinity can be connected via a mobile network. The M2M phenomenon can be seen as one of the most potent technological advancements affecting the day-to-day functioning of organizations across industries.

Enterprises are conscious of the changing communication ecosystem, where it could become commonplace to see smartphones and smart devices interacting with other machines in the physical environment. As the ecosystem starts to grow, the potential as well as complexity of these services is expected to rise.

Figure 4. M2M as an enabler for various industries

<table>
<thead>
<tr>
<th>Automotive, transport and logistics</th>
<th>Smart metering and utilities</th>
<th>Health care</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Notifies emergency services in case of accidents</td>
<td>• Improves demand estimation and management</td>
<td>• Enables remote monitoring for more cost-effective services and reduced pressure on infrastructure</td>
</tr>
<tr>
<td>• Enables use-based insurance, vehicle tracking, driver safety and location-based services</td>
<td>• Improves fault detection and allows self-healing of network</td>
<td>• Allows real-time information sharing between physicians and patients to reduce visits and lower costs</td>
</tr>
<tr>
<td>• Allows fleet management to use real-time information</td>
<td>• Lowers cost</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturing</th>
<th>Retail and consumer goods</th>
<th>Security and surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Enables remote management and monitoring of manufacturing processes, which increases operational efficiency and reduces costs</td>
<td>• Allows real-time stock information, which reduces out-of-stock instances in stores and increases consumer satisfaction</td>
<td>• Improves access and mobility control</td>
</tr>
<tr>
<td>• Allows remote diagnosis to carry out repairs, reducing field visits and machinery downtime</td>
<td>• Reduces shrinkages from asset loss</td>
<td>• Allows better alarm management</td>
</tr>
</tbody>
</table>

Sources: EY analysis.

While the potential opportunity is great, MNOs would need to constantly upgrade their capabilities and know-how to adapt to the dynamics of M2M, and are adopting various strategies to build a winning service offering.
Figure 5. Strategies adopted by operators for successful M2M deployment

Establishing M2M platform capabilities
- This includes building functional capabilities for connection provisioning, usage monitoring and fault resolution by leveraging their core competencies.
- Some operators have partnered with third-party providers of M2M platforms to offer consistent interfaces, while others have opted to build the platform in-house.

Establishing M2M sales forces
- M2M sales are often a complex process, requiring MNOs to understand and integrate with a client's business-critical processes.
- Many MNOs have established M2M-specific sales forces and employee bases with specialized technical capabilities. For instance, operators hire M2M customer support personnel with knowledge of specific industry verticals.

Engaging partners
- M2M projects are highly specialized and specific to particular industries, requiring knowledge of each sector and of general systems development issues. MNOs are entering partnerships to bring in experts to address sophisticated verticals with complex structures (such as OEM automotive and mhealth).
- Mobile operators define their target markets, then define the partnerships required to compete in these markets before they establish these partnerships.

Partnering to extend reach
- Operator alliances are commonplace in the world of M2M, driven by the often multinational needs of potential M2M clients, and also the typical homogeneity of M2M applications across international borders.
- Alliances with as many as seven operators have been witnessed to support a single, global platform.

Establishing M2M competence centers
- MNOs have established M2M competency centers to lead the development of an overall M2M proposition and to facilitate the exchange of best practice and application-specific knowledge between local operating units.
- For instance, a European operator established an international M2M Competence Center to drive the internationalization of the business. The Competence Center draws upon the global know-how of the operator to develop its M2M product offering.

Picking the right industry verticals
- MNOs are judiciously choosing the industry verticals to focus on while building their M2M portfolios. Operators are gauging the market opportunity based on factors such as geographical preferences, their core competencies and the expected payouts from the services.
- For instance, operators in the Middle East are focusing on the oil and gas vertical, while in Europe, the demand for telematics is driving automobile M2M growth.

Source: Machina Research and EY analysis.
Case study

Telenor

Forming a separate business entity to create greater flexibility for M2M offerings3,4

Telenor offers connected services for industries such as automotive, fleet management, security, utilities and eHealth. The M2M solution offerings include productivity gains, cost management, environmental improvement and customer service expansion.

Considering M2M as a significant revenue generator and aiming to develop a robust M2M business offering, the operator split off its M2M business into a separate subsidiary, Telenor Connexions. The creation of a separate subsidiary could help the operator unlock shareholder value in the future should investors want a higher growth profile. It also helps Telenor maintain a clear demarcation in the risk characteristics of its existing line of business and the M2M venture.

Further, Telenor has transferred its M2M technology platform to a leading network equipment provider. The move was aimed at expansion and development of a dedicated M2M platform using an outsourcing model, while the operator itself could focus solely on sales, service delivery and marketing. Telenor leases back the required M2M services from the network equipment provider. This can be seen as a risk since an effective M2M platform could be a significant competitive advantage.

To enhance its global footprint, Telenor provides cross-border coverage for M2M services using a single SIM and single service provider model. SIM cards are customized depending on the industry or the use case. The operator also provides flexible pricing plans for different businesses, including international flat rates, M2M bulk traffic rates and one-time billing models. A separate customer support division has been incorporated for M2M with personnel possessing extensive knowledge and experience of different M2M solutions.

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3.3 Telematics: MNOs poised to tap into the potential of in-car connectivity

While M2M is gaining traction in almost all industries, telematics and in-vehicle entertainment has emerged as a key focus area. The rapid transformation of the in-car experience, coupled with advancements in mobile technology and regulatory changes, has fuelled the growth of telematics. With connected car already being mandated in the European Union, Russia and Brazil, penetration of global integrated telematics is likely to touch 88% for new cars by 2025.5

Telematics is seen as a significant growth area by MNOs that already possess the core competencies necessary for the deployment of connectivity and infotainment services. Operators can support carmakers in a number of areas across the value chain, including service enablement and support, which automakers are not traditionally well positioned to address. However, operators need to judiciously choose their service offerings and progressively move toward a more complex telematics portfolio.

Figure 6. Steps towards successful telematics service deployment for operators

1. Ensuring ubiquitous network coverage
   - Telcos need to ensure that connection is available everywhere at all times to allow a seamless user experience.

2. Leveraging core competencies to offer value-add services to automakers
   - Support for customized charging and billing services
   - Access portal integration
   - Content and application integration
   - Security services

3. Offering solutions for anchor services
   - Emergency call (eCall services)
   - Stolen vehicle tracking
   - Diagnostics services
   - M2M portal services for embedded applications such as emergency call, stolen vehicle tracking, diagnostic services, etc.

Source: The quest for Telematics 4.0, EY, 2013.

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5. The quest for Telematics 4.0, EY, 2013.
MNOs are expected to emerge as a one-stop-solution provider for multiple service use cases, which are:

- **Billing:** MNOs have invested heavily in IT solutions to manage their billing solutions. Unlike carmakers, who deal with a limited level of pricing complexity, MNOs are proficient in managing varied and complex billing plans.

- **Customer relationship management:** MNOs have a stronghold in the area of customer resource management. Their existing systems, which can be extended to automobile telematics, include customer support, customer service, spending behaviors analysis and call center automation.

- **Device management:** MNOs have developed device management interfaces to help them manage multiple handset models. This competence can help automobile players to manage their embedded telematics solutions by allowing the automated update of systems over the air, increasing the utility for customers.

- **Service management:** subscription management allows operators to activate/deactivate services, upgrade plans and supply new service-related information to customers. This is in line with the subscription management needs of automobile telematics.

- **Network security:** MNOs are subjected to stringent guidelines for network security. These secure networks can act as a firewall for automobile telematics as well, preventing the leakage or misuse of a customer’s data, especially location-based information.

- **Big data:** telecoms operators can enhance driver data with customer information to create a range of information streams for various third parties including automotive dealers, insurance companies and retail chains.

### 3.4 Big data: a nascent revenue stream for MNOs

Big data presents a new monetization opportunity for MNOs. In addition to enhancing value for in-house business intelligence and analytics tools, MNOs are in a position to offer meaningful customer insights to businesses across a range of industries. More often, big data analysis is about extracting valuable insights from a smaller data-set at the individual customer level and a micro-level view of customers finds interesting results.

#### Table 7. MNOs can analyze a number of individual consumer behavior dynamics

<table>
<thead>
<tr>
<th>Mobile internet browsing habit</th>
<th>Mobile content consumption pattern</th>
<th>Type of device used to access content</th>
</tr>
</thead>
<tbody>
<tr>
<td>When – preferred time of access</td>
<td>Which app store visited and what type of apps downloaded – paid or freemium</td>
<td>Smartphones</td>
</tr>
<tr>
<td>Where – on-the-move or at home</td>
<td>Type of content accessed – entertainment, education, business, finance health</td>
<td>Tablets</td>
</tr>
<tr>
<td>How long – duration of access</td>
<td></td>
<td>Laptops</td>
</tr>
</tbody>
</table>

Source: EY analysis

As primary custodians of subscriber location data, MNOs are privy to information such as the demographic makeup of people visiting an area or retail store visiting habits. Advanced real-time analytics tools can help MNOs to decipher meaningful data attributable to specific customer segment behavior. The insights are useful to gauge the propensity for targeted mobile advertising campaigns and organizations can benefit from focused marketing and realize better ROI.

However, MNOs face a number of challenges in realizing the full potential of service offerings around big data. Privacy issues arising from the use and sharing of customer information – with or without explicit consent – is a concern. In addition, legal aspects of sharing this information with third parties needs to be looked at. To address privacy concerns, MNOs are using anonymous and aggregated data through which individual customers cannot be identified. Operators are also seeking to revamp internal security processes to prevent invalid access to this highly sensitive data.

Other challenges relate to the disparate and fragmented nature of customer data present in operator systems. It needs to be mined and collated before being used, requiring significant investment in newer technologies and enterprise architectures. Critical to this process is identifying the most relevant data and revamping KPIs and metrics to align with a rapidly changing industry. Historically, operational decision-making has been made in the offline mode or in the specific business support system (BSS)/operation support system (OSS). Operators need to conduct real-time analysis due to the rapid proliferation of data silos. Lastly, business models are still in the nascent stage with only a handful of operator announcements around big data. Operators need to build flexibility into their big data services to ensure that changes in business model can be rapidly integrated into the organization.
Global Operator

Identifying and leveraging network data to create revenue opportunities

The operator created a separate business unit to specifically identify opportunities in big data. The new unit is part of the company’s focus on innovation in the digital space. A separate unit relieves pressures from the core business and shortens time-to-market of new products/services. The operator plans to target companies across different verticals and provide analytical customer insights by using anonymous and aggregated data from its own networks, including M2M. The aim is to identify collective customer behavior as opposed to individual data.

Case study

The operator partnered with a market research company to jointly develop products and services around big data based on changing consumer behavior due to the impact of technology, especially mobile.

The first product focuses on monitoring the footfall of people in a particular area with respect to time, gender, and age.

The collected data is analyzed using data analysis tools and techniques to generate meaningful insights from crowd movement. Customers are provided with an interactive online tool for accessing the information. Some key customers that would benefit from this information include sporting venue owners, retailers, local council and public safety organizations.

Client benefits

- Test marketing campaign effectiveness and modify accordingly
- Enhance understanding of target market for effective and customized marketing solutions
- Improve managerial decision-making by taking into account external factors (e.g., weather)
- Improve view of customer behavior – before, during and after location visit
- Customize products according to an area’s true economic potential
- Enhance property investment decisions based on footfall trends and socio-demographic profile
3.5 Enterprise mobility and unified communications: rising mobile workforce fuels demand

By the end of 2011, mobile workers accounted for more than 60% of the total workforce in Brazil, Germany, India and Japan, and over 70% of the total workforce in the US.6 More than 25% of organizations around the globe rated mobility to be either their top priority or a very important priority in 2012.7

This growth of the mobile workforce and the multi-geographic footprints of organizations are driving them to adopt enterprise mobility. With the global enterprise mobility market expected to exceed US$173.9b by 2017, the business model for operators needs to change from selling “connectivity” to selling “customized connectivity solutions.”8

Operators have started offering services such as managed mobility, device management services and unified communications to help enterprises handle the growing cost and complexity of mobility services.

Enterprise mobility

Enterprise mobility adoption is on the rise as it enables organizations to improve employee performance, mobilize business processes and deploy applications that enhance customer service. Employees are also demanding a better user experience and greater choice of the device and applications they can use at work. The growing acceptance of the consumerization of IT has made an enterprise mobility strategy indispensable for enterprises.

Enterprise mobility solutions encompass end-to-end security; networking; hosted and managed email and messaging solutions; mobile broadband and private branch exchange (PBX); and mobile extensions facilitating a single number reach. These service offerings from MNOs are helping enterprises increase workforce productivity and reduce human latency. Consequently, they are being rapidly incorporated in the enterprise communication strategies of most of the companies.

MNOs can pursue a three-pronged strategy of mobility services, by offering mobile services and workforce support as well as business process management solutions.

<table>
<thead>
<tr>
<th>Services</th>
<th>Support</th>
<th>Business processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Mobile voice</td>
<td>• Managing a mobile workforce</td>
<td>• Mobilizing business applications and processes</td>
</tr>
<tr>
<td>• Mobile data</td>
<td>• Empowering flexibility and ease of use for a mobile workforce</td>
<td>• Driving efficiency through mobilizing services and supply chains</td>
</tr>
<tr>
<td>• Email services</td>
<td>• Managing the enabling infrastructure</td>
<td>• Supporting PC software suits on a mobile platform</td>
</tr>
<tr>
<td>• GSM, GPRS, 3G and 4G services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Public Wi-Fi &amp; W-LAN</td>
<td></td>
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</tr>
</tbody>
</table>

Source: EY analysis.


Mobile device management

As organizations are embracing mobile working, they are also keen on providing enhanced flexibility and convenience to the workforce. Employees are permitted to use different devices at the workplace and companies are increasingly adopting BYOD policies. BYOD enables cost savings for enterprises, increases employee responsiveness to customers, helps in attracting and retaining talent and boosts worker productivity. Companies can save as much as US$1,300 per year per mobile user after launching a BYOD strategy. In Australia, a majority of businesses have a favorable view of BYOD, with 61% of businesses supporting BYOD. In Europe, the Middle East and Africa, 69% of organizations allow some form of BYOD. It is estimated that by 2015, 80% of all global enterprises will adopt some form of BYOD.

Against this backdrop, CIOs managing enterprise mobility are faced with managing a range of mobile devices including feature-rich smartphones, tablets and netbooks. To mitigate the risks of BYOD and enjoy the benefits, enterprises are creating policies and implementing the necessary enterprise mobility management tools, as early as possible.

CIOs are turning to MNOs who supply the devices, applications and services to help them manage the devices and the data on them. MNOs are perceived as the service providers for aspects such as device procurement, remote monitoring, and training the staff on how to “work mobile” effectively and securely.

Mobile security

The growing use of connected mobile devices is leading to increased data security threats, with incidents of identity threats, malware and botnet attacks, SMS fraud, phishing and spyware on the rise. Enterprises are most affected by mobile security vulnerability, and BYOD and mobile cloud have initiated a fundamental change in mobile security and mobile device management strategies. The scope of mobile security coverage has increased significantly, with a multitude of personal devices being used interchangeably for accessing enterprise applications.

Currently, mobile data security measures are inadequate when compared to the strong security features on a fixed-line enterprise network. The implementation of security features is much more complex on mobile networks and policy managers have far less control. Apart from the internet security aspects, smartphones also need to be protected from misuse of information due to theft. Adequate device tracking features should be installed and sensitive corporate data should be erased. The provision of mobile end-point security – created through remote access to the corporate network by mobile devices – is becoming a fundamental IT security function for organizations.

Unified communications

With an abundance of communications technologies and devices, employees want to be accessible at any time and through any preferred media. This has amplified the demand for tightly integrated mobile unified communications (UC). From an enterprise perspective, UC delivers seamless integration of telephony, video, messaging and collaboration with office-based applications such as email and instant messaging, and workforce applications such as customer resource management and enterprise resource management.

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Figure 9. Key services under the UC umbrella

Collaboration (web collaboration, application and document sharing)
IP telephony calling and management
Unified messaging (email, fax, voice messaging)
Presence management
Conferencing: web, audio, video
Instant messaging

Unified Communications

Consequently, UC is likely to gain stronger traction among business users. IT decision makers within organizations show that they expect MNOs to deliver UC services more than the competition (including IT service providers and over-the-top players).13

Figure 10. Percentage of customers preferring MNOs over other service providers for various UC solutions

n = 200 IT decision makers, % of respondents

Source: EY analysis.

MNOs offering UC can enable business communications to be geographically independent, device agnostic and closely integrated with business processes. This helps in streamlining business processes and improving productivity and profitability. UC contributes significant ROI when the organization’s workforce is mobile. For instance, integrated presence can help a mobile worker use a 10-minute time slot more efficiently between meetings.

Source: Broadsoft.

Case study

A top-down approach encompassing people, applications, technology and infrastructure was adopted to address the changing communication needs of organizations. A comprehensive portfolio was built to bring together the business, culture, technology and tools needed to introduce solutions that allow enterprises to execute flexible working arrangements while ensuring security.

Various elements of enterprise services were brought together and packaged into an enterprise mobility solution, leveraging the combined synergies of individual services in fulfilling customer needs. The new mobile working portfolio encompasses the following solutions:

| Managed mobility services | • Combination of IT, human resources (HR) and property (end-to-end management)  
| • Services include mobile device management, mobile application management, mobile expense management and mobile security |
| Enterprise broadband and connect | • Secure, flexible, centrally managed broadband services; with support for broadband usage, management of service and support infrastructure  
| • Enterprise connect service directly connects to MPLS network (ensuring security) |
| Learning solutions | • E-learning solutions based on commercial and open source platforms  
| • Offerings include initial consulting to identify training needs, anywhere anytime accessible training modules, integration with HR and training evaluation reports |
| MobileXpress | • Enables a virtual work environment for mobile employees connecting to the enterprise network via fixed or wireless network  
| • Protects corporate information and applications with multi-layered security |
| Conferencing | • Audio, video and web conferencing solutions  
| • Enables flexible communication between employees, business partners and suppliers; saves time and money by reducing the need for travel |
| Unified communications | • Communication through various platforms, networks and access mechanisms  
| • Services such as voice, email, instant messaging, presence, voice and web conferencing, and file and application sharing |

4. Critical success factors

**Partnerships**
Forming the right partnerships is crucial for operators to gain access to niche technologies and capabilities that are outside their competencies and allow them to focus on core capabilities. Partnerships offer advantages such as cost optimization, faster implementation, faster time-to-market and the additional brand value of the partner.

Operators need to select specialized partners that bring more experience in expanding to adjacent markets. For example, in M2M, operators can form partnerships across the entire value chain, but identifying partners across categories that align with specific focus areas would be key to success. Striking optimum partnerships and defining service level agreements that are productive in the long term is a key challenge for these services. Operators need to decide whether to build internal capabilities or partner in areas such as application development and management platforms. With multiple partnerships the norm across service offerings, operators need to implement an effective partner management program.

**Risk assessment**
While enterprise presents a wide array of opportunities to MNOs, several risks also need to be considered by operators. Regulatory certainty is important in weighing up the opportunities, especially for services such as M2M, big data and mobile cloud. Also, new forms of customer centricity are needed, as businesses have low awareness of business challenges that can be solved by these new enterprise offerings.

In cloud computing as well as UC, enterprise concerns around security and compliance pose major risks. Operators need to realign existing capabilities to support more flexible distribution means, such as cloud-based service delivery models that may be perceived as less secure. This involves close collaboration among internal network teams, IT teams and partners. As MNOs are seen as primary data guardians, they need to extend their capabilities in vulnerability assessment, while customer needs will vary considerably according to industry verticals, regulatory environment and geographic footprint. For example, in big data services, privacy risks are paramount to government and consumers. Operators need to protect the privacy of customer data to reassure end users and satisfy compliance demands.

**Organizational change**
Changes are expected in organizational structures as MNOs broaden their enterprise service portfolios. Whether it entails the formation of a new business unit or the creation of a separate subsidiary company, a detailed plan and support is required to manage this change. Some operators have already created separate units to specifically focus on newer businesses. Decision makers, aware of the changing dynamics, are taking steps to ensure that synergies are maintained with the existing organization and that new business processes are efficiently integrated. Transparent and detailed communications around the new organization’s design, HR and remuneration policies, and a clear definition of new roles are seen as critical to ensure smooth transition.

**Project management/execution**
Project management in telecommunications encompasses a number of disparate functionalities ranging from infrastructure and network to application and content. It involves coordination between different technology vendors, suppliers and, above all, customers. With the time-to-market of service launches shortening and pressure to reduce cost, timely and efficient execution of projects is likely to be a differentiating factor among operators. The challenge for operators is to strike a balance between different projects running simultaneously by managing uncertainties better, use limited resources efficiently and reducing complexity at all stages.

**Changing metrics**
Operators are shifting from conventional performance measures as they move into new enterprise service offerings. As enterprise services require different types of connectivity, their usage metrics differ more when compared with the legacy customer bases of MNOs. For instance, while operators see customer acquisition as a valuable indicator for consumer services, a more account-based view is taken for enterprise services. Similarly, to gauge financial performance and profitability, a year-on-year comparison may not be relevant, as enterprise deals often span five to seven years. A longer time frame is considered to measure success.
5. Key questions for MNOs seeking enterprise expansion

Forming partnerships
Operators are faced with the challenge of investing in strategic partnerships.
- In what instances should operators consider a partnership versus building/utilizing internal capabilities?
- What parameters should determine the selection of a partner?
- How can partnership risks be mitigated by the company?
- How does working with multiple partners impact the organization (e.g., having a different partner for fixed and mobile cloud)?
- How do you implement an efficient partner management mechanism?
- How should partnership SLAs be defined for dynamic new services such as M2M and telematics?

Developing brand and marketing
Mobile has not always been a key component of the enterprise offerings. However, the trend is changing and MNOs are moving into this space.
- Building a brand as an enterprise carrier requires focus and investment. How should an operator go about achieving this in the least capital intensive manner?
- How should the operator position its mobility service offerings to different segments of business customer base?
- In case of a global MNO, should it adopt a global-level branding approach, or leverage the existing mobile brand?
- In what instances should operators consider allowing “white labeling” of services, with potentially no brand value?

Leveraging additional services
Operators are looking at expanding their service portfolios with an aim to augment revenue.
- What criteria should be used to determine which services can be included in the portfolio?
- Currently, enterprise deals are driven around a WAN management solution, with additional services including mobility being offered on top. How can MNOs reverse this and make the mobility offering the central theme with WAN management capability as the add-on?
- Should operators venture into enterprise IT services competing directly with traditional players?
- How should vertical-specific strategies evolve for operators – transportation, healthcare, utility, manufacturing, financial services, etc.?

Augmenting internal processes and networks
Internal processes around IT and network will have to be redefined to include the requirements of business customers.
- How can operators meet SLA levels with minimal financial consequences?
- How should operators model the complex contract constructs to ensure billing accuracy and prevent revenue leakage?
- How can solution architecture become a key piece of the network and IT management process?
- How can time-to-market be reduced by streamlining development, IT and finance governance processes?
- Enterprise requires more out of the network in terms of contingency and resiliency. How should operators consider the cost of moving into this space?

Critical resource management
Offering new enterprise capabilities requires the transformation of existing processes.
- How should HR, recruitment and remuneration change to ensure critical talent can be attracted and retained for these new services?
- As with most new businesses, operators have to be aware of the cultural shift that servicing enterprise customers entails. How can new skills in network architecture, solution design and sales cycle management be brought in and managed?
- How can the synergies of integrated fixed and mobile assets be leveraged to offer converged services?
Customer centricity

A focus on delivering value to the customers is important to build a strong customer connection

- How can operators align sales literature and activity with IT and network capabilities to ensure that SLAs are adhered to?
- What measures are required to ensure the privacy and security controls around the services? Should operators consider generating assurance reports for customers?

Quality of service

- Quality of service (QoS) plays an important part in an operator’s service provisioning for business customers.
- How can operators define QoS parameters for newer services such as M2M and big data?
- How can QoS be used to reshape pricing proposals to clients?
- How would cloud delivery affect QoS parameters?
- How important is it to offer tiered QoS parameters?
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