



Trends, Opportunities and Use Cases for Mobile Data Monetization in Mature Markets

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Introduction

The US Mobile Telecoms market has seen a seismic shift in recent months, with the Trump administration setting a very clear agenda of “low-touch regulation”. Politics aside, the recent about face in the US Telecoms’ regulatory environment has thrown open the doors to a new wave of opportunities in how we price, package and sell mobile data.

Innovative operators such as the “Uncarrier” T-Mobile USA have already made significant inroads, converting “radical” pricing strategies into solid subscriber growth. The Uncarrier’s postpaid subscriber growth has significantly outpaced that of peers in the saturated US wireless space.

In addition, we have recently witnessed a dramatic shift back to unlimited data pricing, with all the top four US carriers now offering some form of unlimited data plans¹.

One challenge for operators in mature markets is abundantly clear: to gain new subscribers they will need to entice other operators’ customers to make the move. To allure subscribers and hold on to them, operators must differentiate their offering in the eye of the subscriber. In addition, the erosion of traditional consumer revenues will compel operators to look elsewhere for growth, the SMB IT services market is an alluring option. The challenge of keeping hold of your subscribers, however, is not so clear. In many mature markets the line between the bankable postpaid subscriber and the less lucrative prepaid subs is being seriously blurred. The “contract lock-in” has been phased out and with advents like the soft-SIM, switching between operators has never been easier for the subscriber.

The focus for operators in mature markets is caring for their own installed base, while enticing rival operators’ subscribers to make the switch. With basic network services a commodity, and barriers to switching at an all-time low, the only possible answer to “how to retain customers” is through innovation. Innovation in terms of experience, engagement and services.

The battle for market share and the commoditization of traditional mobile revenues means that operators must look elsewhere for new sources of income to offset this decline. The good news is, there are plenty of operators taking up the challenge.

Trends and Opportunities in Mature Markets

Regulation, Zero-rating and Net Neutrality

The status and the very definition of Net Neutrality may be about to change, at least in the United States. Just recently, President Trump appointed commissioner Ajit Pai to the post of FCC chairman. One of chairman Pai’s first actions was to formally rescind a report issued under former Chairman Wheeler, criticizing AT&T and Verizon

¹ USA Today Feb 27 2017 AT&T expands its unlimited wireless plan options

for zero rating their own video services². Chairman Pai's approach to telecoms regulation is what can be best be described as "if it isn't broken, don't fix it" and he has publicly stated the "need to remove outdated and unnecessary regulations".³

The regulatory shift opens the floodgates of opportunity for operators to seriously rethink how they can package internet and their value-added services. The days of the "one-size fits all" may shortly be coming to an end.

The top four operators have all embraced zero-rating to the benefit of their customers. T-Mobile's Binge On was first, but it has been followed by Verizon's Go90 and NFL⁴ streaming app. Sprint zero-rated every match in the Copa America⁵ and AT&T zero-rated its DirecTV content Now⁶ content. With the zero-rating debate now history, operators in the US have been freed to turn innovation into customer offerings without the fear of falling foul of the regulator at every step.

As we have seen in the past, any change in the US Net Neutrality position will invariably have a serious ripple effect, as many countries take their lead from US regulations.

The impact of Unlimited Data, UHD Video, Virtual Reality and IoT

The one undeniable constant in our industry is that traffic is continually on the rise. When it comes to content, subscribers want more of everything, and in high definition. OTT traffic isn't slowing down any time soon. As the Internet of Things (IoT) continues to expand, the impact of these connected "things" will very quickly impact operator networks. IoT not only puts added pressure on bandwidth but it also brings unprecedented security concerns from hacking of connected cars to using IoT devices as new attack vector for launching massive botnet attacks.

Video, which accounts for much of the traffic growth, has finally been monetized, albeit not in the way many vendors and operators imagined. The success of T-Mobile's Binge On initiative can be simply measured in financial terms by looking at the subscriber growth for the period following the introduction of the service.

Traffic will experience further exponential growth as advancements in video such as 4K, 8K, UHD and 360 video and Virtual Reality with Immersive Experience become mainstream.

² <http://fortune.com/2017/02/03/trump-fcc-zero-rating-att-verizon/>

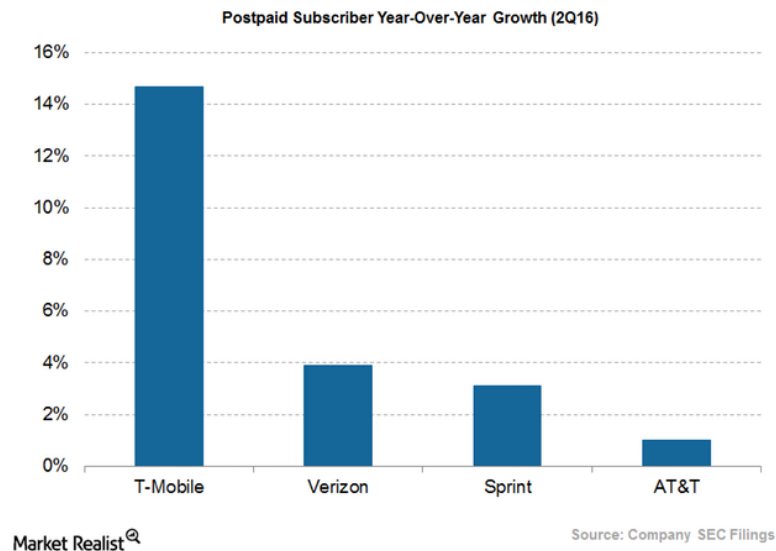
³ <https://arstechnica.com/information-technology/2016/12/fccs-ajit-pai-says-net-neutralities-days-are-numbered-under-trump/>

⁴ <http://www.fiercewireless.com/wireless/shammo-verizon-s-zero-rated-video-to-launch-go90-week>

⁵ <http://www.fiercewireless.com/wireless/sprint-joins-zero-rated-data-bandwagon-copa-america-streaming-video-campaign>

⁶ <http://www.fiercewireless.com/wireless/sprint-joins-zero-rated-data-bandwagon-copa-america-streaming-video-campaign>

The swing back to unlimited now provides operators with a new set of challenges regarding how to differentiate their service. As data becomes a commodity, a personal, tailored experience will become the key differentiator for operators. Personalizing the digital experience, offering value-based charging alternatives and new innovative services will be key areas for operator growth, both in terms of market share and ARPU.



Securing the subscriber’s experience and Competitive Differentiator

Securing subscribers’ digital experience is a perfect example of a new service area where operators are rising to the challenge. In mature markets, subscribers have become reliant on the mobile internet to accomplish day to day tasks, from shopping and banking to healthcare and entertainment. If anything, the internet has become a much less secure environment over the years, with malware, ransomware and fraud incidents continuously on the rise. In addition, in the post-Snowden era, issues such as privacy and encryption have been thrust to the fore. Many subscribers are (rightfully) concerned about who might be looking at their communications and data. These well-founded concerns have given operators the perfect opportunity to both offer new security services and to further differentiate their position in the market.

Small-Medium Business (SMB) IT in the Cloud

Another less-tapped opportunity for operators is found in providing IT services to SMBs. In today’s cloud era, it is possible to do away with traditional IT, with hardware and applications on premises, and reduce costs by outsourcing everything to the cloud. Several operators in mature markets have clearly marked this opportunity for growth potential. Innovative telecom operators from Deutsche Telekom⁷ in Germany to Rogers Communications⁸ in Canada have launched SMB app market places to specifically serve the IT needs all small businesses.

⁷ <https://cloud.telekom.de/>

⁸ <http://www.rogers.com/small-business/products-and-solutions/business-app-market>

Contemporary Use Case in Mature Markets

The following section documents four use cases implemented by network operators in mature markets to generate tangible business value to both themselves and their customers.

Use Case #1 Value-based Charging & Optimization

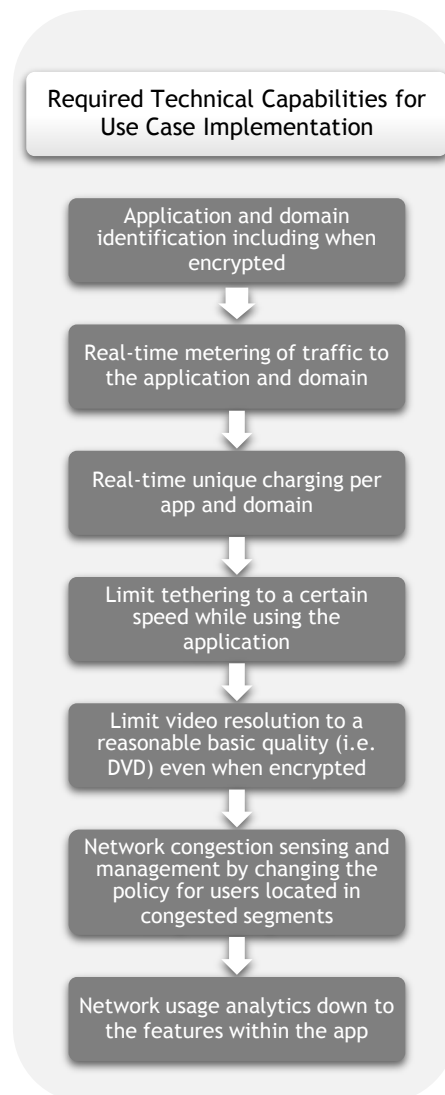
Business Impact



Mature Market Opportunity

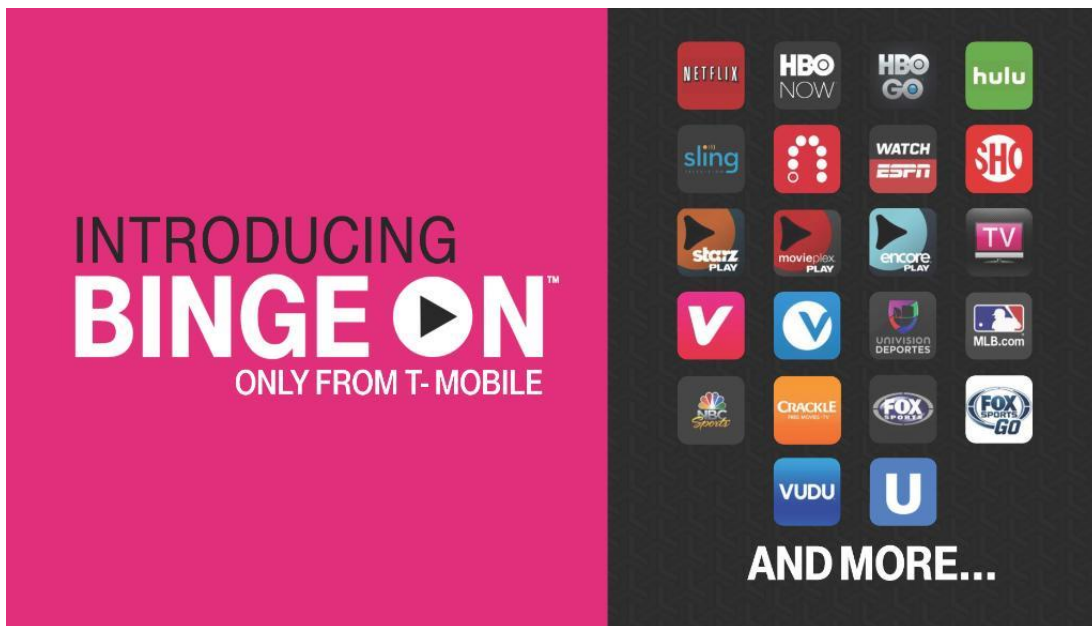
Traffic will continue to grow due to several factors that include the trend towards unlimited data plans, IoT expansion and richer content such as 4K, UHD and 360 video and,) Immersive VR and 360 video. As the traffic grows, the focus shifts from traditional issues like network coverage, to how well your chosen content can be consumed on a carrier's network. How well does Netflix or WhatsApp or a messenger video call operator work over your network? Operators need to truly understand the motivation, and what's important to each individual customer.

Operators will need to work exceedingly hard at optimizing the traffic on their networks, but they can no longer rely on limiting "heavy" traffic or users such as in the case of T-Mobile's initial Binge on offering. While T-Mobile's Binge provided zero-rated video, it did so by limiting the resolution to 480p.⁹ Operators cannot negatively impact the content that is most important to their subscribers, just because their networks are becoming more congested. More sophisticated optimization techniques will be



⁹ <http://www.fiercewireless.com/wireless/verizon-at-t-flatly-deny-legere-s-claims-they-provide-lower-resolution-netflix-video-than>

required along with additional in-depth analytics to understand which content is most important to each individual subscriber. Gone are the days of heavy-handed traffic management, finesse and a fine brush are now what is required.



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Unlimited plans are not for everyone. Many MNVO or smaller operators have great niche offering to their target market. In 2016, FreedomPop, a US-based MVNO launched a new offer that gives free access to WhatsApp in over 30 countries, including the US. This offer is applicable even when the user is roaming, allowing them to use WhatsApp abroad for free. While limited, these types of offers may be just the thing a segment or demographic is after.



FreedomPop
100% Free WhatsApp Data Every Month!

Special Launch Deal

**100% FREE
Talk, Text, Data +
WhatsApp**

See if your location qualifies

Zip Code

Email Address

CHECK AVAILABILITY NOW

By continuing, you agree to our [terms of use](#) and [privacy policy](#).

Get 100% Free w/ FreedomPop:
Free Unlimited WhatsApp Data
Free Basic Plan: 100 minutes, 100 texts, 200MB each month
Use your phone around the world in 30+ countries
Earn additional free data every month by adding friends
Earn unlimited free data by completing partner offers

Operator Strategy

Operators that go for upmarket (\$50 to \$90 a month that slow down around 22 to 28 GB) will need to aggressively but intelligently optimize subscriber traffic. They will use in-depth analytics tools that can build subscriber profiles based on usage, based on content consumption and engagement models.

Other operators will target specific segments (i.e. Youth or cord cutters) with specific zero-rated content such as music, video or VoIP and video calls to friends. While VoIP calls may be seen by some operators as a cannibalization of their traditional revenues, high-definition video call can be a significant differentiator. The examples require tools that can accurately identify application traffic in order to exempt it from charging.

Operators can differentiate themselves on how well they cater to content and experience needs of a particular segment or demographic.

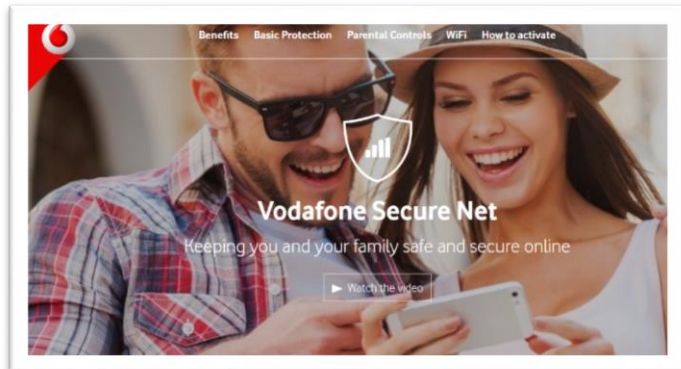
Use Case #2 Security as a Service

Business Impact



Mature Market Opportunity

As connectivity has become commoditized, operators are looking to offer value-added services for generating revenue and differentiation. Mobile Internet Security is just such an opportunity. Protection of consumer mobile devices against threats like viruses and malware, parental control of a minor's device and blocking of unwanted ads are features offered by leading operators as part of a Security as a Service offering. Operators have a golden opportunity to not only increase ARPU by offering security as a service, but to give customers' peace of mind.



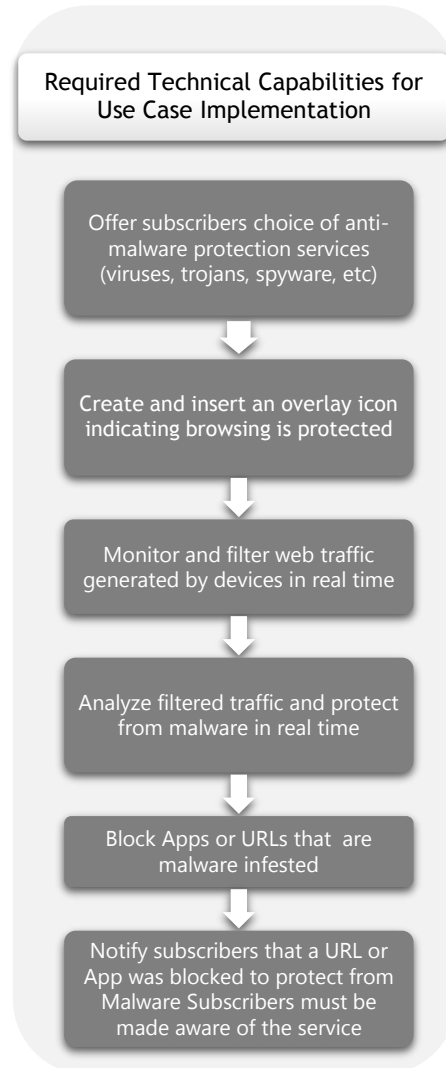


Operator Strategy

Security as a Service enables an operator to deliver a valuable network-based security offering to every individual customer. This type of solution negates the need for service-based software and endless updates. Anti-malware and anti-virus services are important to all mobile customers. With a Security as a Service offering, operators can generate new recurring revenue, strengthen customer loyalty and provide clear differentiation.

Telefonica Chairman and CEO, José María Álvarez-Pallete López, stated in his MWC 2017 Keynote that "We need to make sure that they (the subscribers) feel secure, that they have full access to the information that lies on the network and we want to make sure they can feel the empowerment that the network can provide to them."

Telefonica is using security and privacy to differentiate its offering to subscribers.¹⁰



¹⁰ https://mwc2017.s3.eu-central-1.amazonaws.com/1ADCC327-BDC8-4FD7-BC5A-92DF316A31E8/Keynote+1_Jose+Maria+Alvarez-Pallete_Telefonica.pdf

Use Case #3 IoT services

Business Impact

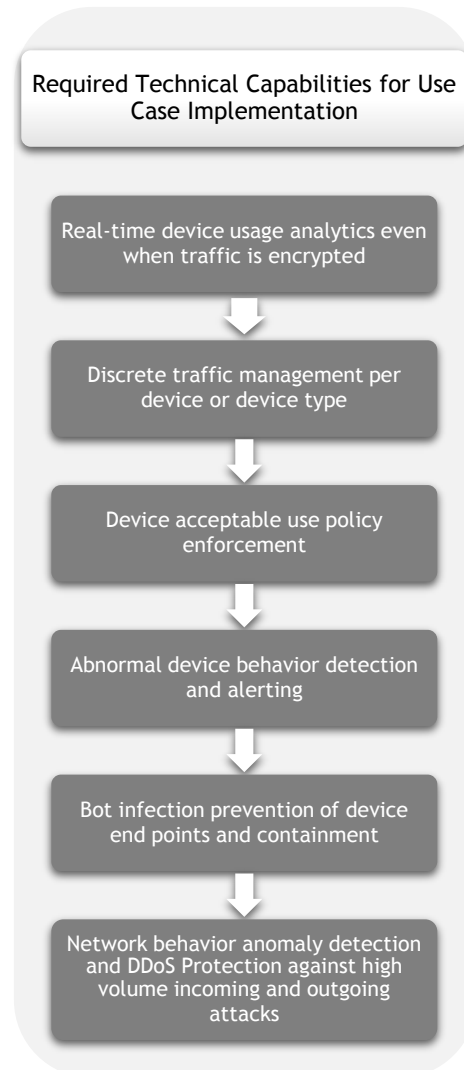


Mature Market Opportunity

The entire IoT notion is dependent on network connectivity, but we have already seen that simple connectivity is not enough. As operators shift away from the notion of using separate networks (2G/3G) for IoT, the need to manage the bandwidth and security requirements of both things and people has become paramount.

The new “hyper-connected” reality will potentially impact every facet of life, changing the way we live and conduct business. From self-driving cars to nuclear power stations, connected refrigerators to fleets of drones. The connected future is already here.

Apart from the obvious security and fraud concerns, IoT devices do not all have the same requirements from an operator's network. Some require high bandwidth and low-latency such as high-definition video security services, while others require intermittent connectivity, such as a smart meter. The opportunity for operators in mature markets is to move beyond basic connectivity and develop more secure and sophisticated offerings for the world of IoT.



Operator Strategy

Operators can put in place solutions that will analyze and base-line the behaviors of IoT devices. This will enable them to look for anomalies in that behavior and take effective counter measures. They will need to protect both things and people from the mega-IoT botnet attacks we have seen recently¹¹. An IoT “Defense in Depth” strategy can be implemented that includes analytics for visibility into IoT

¹¹ <http://cybersec.buzz/massive-ddos-attacks-new-black/>

deployments for endpoint identification, communications patterns and trend analysis to support capacity planning and troubleshooting.

These same techniques and others are meant to verify that a particular IoT device is what it claims to be and not an unauthorized device or nasty actor bent on malicious intent. They can enforce an “acceptable use policy” for IoT devices in order to identify and isolate misbehaving devices.

By offering “Class of Service” levels for the different requirements of IoT devices, operators can match service class variables (priority, latency and bandwidth) with the IoT device requirements.

These services can be upsold in order to significantly enhance and secure IoT offerings.

Use Case #4 SMB IT as a Service

Business Impact



Mature Market Opportunity

Operators in mature markets provide mission-critical connectivity to many small and medium sized businesses. According to 2012 Census Bureau data, there were 5.73 million employer firms in the U.S. Firms with fewer than 500 workers accounted for 99.7 percent of those businesses, and businesses with less than 20 workers made up 89.6 percent. These SMB’s are increasingly turning towards cloud providers and operators to outsource their IT requirements. Beyond simple connectivity, operators are in a prime position to offer business customers additional services such as securing mobile traffic against malware and viruses, content filtering, traffic and application monitoring, tiered services and traffic prioritization. What’s more, these services can be delivered on-demand to comply with SMB budgetary concerns. Optus (SingTel) Australia recently launched¹² a Cloud Applications and Services for Small Businesses¹³ that provides services such as Security, Cloud Support and Productivity applications to SMBs.

Examples of Business Services offered by leading operators

Acceptable Use Policy – Since most devices used today are connected to the internet, enterprises are defining the acceptable use policy with connected devices during

¹² <http://www.zdnet.com/article/optus-smart-shop-launches-for-smb-cloud-apps-and-support/>

¹³ <https://smartshop.optus.com.au/en/marketplace/?SID=smb:hme:ict:ict:bnr:smbapp:nn>

working hours. The policy may include anything from social network blocking to blocking of gaming and betting domains. After the policy is set and agreed, it can be enforced in the network.

Business Application Prioritization – Solutions are in place to identify business applications such as Oracle, Salesforce, Skype, ERP and VPN traffic, and provide access to these apps based on a set performance indicators even at the expense of reducing the quality of non-business applications. Enterprises are willing to pay extra to ensure Business Application Prioritization that guarantees their apps are getting the promised quality of service and operators do not need to further build out the network to deliver this.

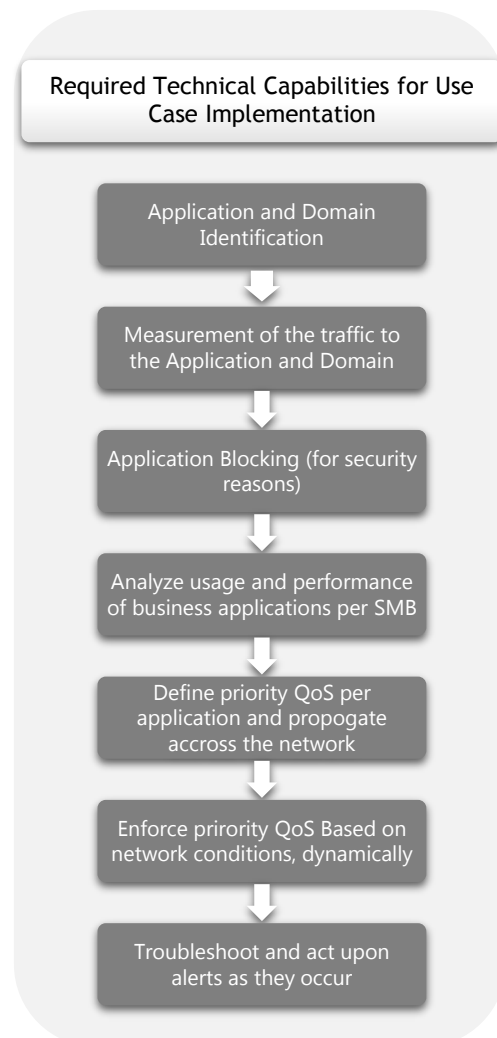
Self-care portal for enterprises - This service provides protection and productivity to enterprise customers. Protection is achieved by blocking certain apps. Productivity is achieved both by blocking non-business apps that may waste time for employees and by prioritizing business-critical apps to achieve rapid response times.

Operator Strategy

Operators are creating new revenue opportunities by expanding the range of services they are offering to enterprise customers. To remain efficient and competitive, companies must ensure application availability and create a secure environment for their business customers.

Operators are enabling higher productivity for enterprise employees and a simple method for execution of the acceptable use policy for data use on smartphones.

Multitenancy is a fundamental component of any SMB service solution. A multi-tenant solution will enable an operator to deliver a unified set of services to thousands or millions of customers (tenants), while keeping each customer's data separate and private. SMB administrators can log into their own customized portal to view their traffic usage, get detailed analytics and even set priorities on their business-critical applications.



Conclusion

While there is a constant tug-of-war over the "traditional" mobile subscriber in mature markets, there are also numerous opportunities to provide innovative services and increase revenues. With recent shifts in the regulatory environment opening new exciting opportunities, now is the time for operators to embark on a new age of innovation.

The use cases detailed in this paper highlight opportunities that operators are currently pursuing in order to increase revenue, improve customer satisfaction and security, and drive loyalty. The functionality required to implement these use cases, such as policy control, charging functions and granular network, application and subscriber analytics may very well be installed in many operator networks.

In addition to traditional consumer services, other lucrative opportunities await innovative operators both in IoT and SMB markets.

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