Sathya Atreyam
Research Manager

The Business Value of Subscriber Visibility for Mobile Network Operators

June 2016

Mobile network operators (MNOs) need to leverage their network assets and network traffic to deliver more of the right business intelligence more quickly and more cost effectively in order to differentiate themselves from the competition. Therefore, the ability to identify and focus on premium subscribers can help enhance an MNO's customer service and revenue growth. In addition to visibility into network behavior and application behavior, visibility into subscriber behavior holds the key to understanding the usage patterns of high-value customers, thereby providing MNOs with the opportunity to differentiate themselves based on better service while driving both top-line revenue and bottom-line profit margins.

The following questions were posed by Gigamon to Sathya Atreyam, a research manager at IDC, on behalf of Gigamon's customers.

Q. **How can MNOs leverage subscriber-aware intelligence to engage with an increasingly mature LTE consumer?**

A. MNOs have been rolling out LTE-based network architectures for some time now. Markets such as North America, Asia/Pacific, Europe, and China are maturing in terms of the network, meaning that the mobile network infrastructure is coming with good and sufficient capacity. Consumers are also maturing because now they have smartphone devices that leverage the speeds of LTE technology. So the challenge for the MNO becomes: How do you leverage these state-of-the-art networks and smartphone devices and create new business models that derive greater revenue?

At the same time, the networks are going through a transformation driven by network function virtualization (NFV) and software-defined networking (SDN), with an intended outcome of reducing cost, providing service agility to subscribers when and where they want services and in the format they choose. This empowers MNOs to think about the subscriber with a view to deepened levels of subscriber engagement, opening up opportunities to increase customer lifetime value — and even increasing day-to-day revenue.

Given all the investment in capex, there needs to be a focus on the return on investment and the return on assets — and subscriber awareness provides this. Subscribers are the main pool from which those returns can come — but only if there's a strategy to engage subscribers in a meaningful way.

Q. **What are the current challenges for MNOs to achieve efficiencies in capex and opex spend?**

A. The challenge in the capex/opex approach is: How do you increase the efficiencies around planning, design, and implementation, as well as operation and optimization? How do you increase the efficiency to realize some savings? That's the big challenge for the MNO strategy.

In the legacy world, MNOs would take a vendor solution and drop it into the network. After a five-year refresh cycle, they would then recommend replacing the infrastructure. That's no longer the case. MNOs want to extract as much value as possible from the investment they have made in the network.

MNOs also need to differentiate themselves competitively from other MNOs in their geography. How do you use this capex/opex approach to differentiate competitively? One way is service agility, or the speed at which you offer subscribers new services. Now the challenge becomes: How do I know the value of my subscribers? How do I know when the subscriber will need that service? And where will the subscriber avail himself/herself of that service?

Network visibility allows MNOs to understand their subscribers better so they can engage with them more effectively. The result of subscriber engagement is an increase in the day-to-day and lifetime value of those subscribers. This results in less churn as subscribers become increasingly loyal to MNOs that play a vital role in their lifestyle. MNOs can offer services and packages based on a subscriber's lifestyle and communications and data needs.

To summarize, the challenge becomes how to increase both service and operational efficiencies as well as maximize cost savings — and turn that into a competitive advantage to better engage subscribers — while having money left over at the end of the month to attract new subscribers. The answer is to increase agility in the network, or the ability to introduce services within the shortest period of time. It is also critical to have enough visibility into the network to see how subscribers are using the network and consuming data, and which subscribers cost the most to offer services to.

The key stakeholders for both service agility and network visibility in engaging subscribers are the MNO's CTO and IT organization and the CMO and the marketing and sales organization.

Q. **What are the key drivers for MNOs to differentiate, and how are they evolving?**

A. MNOs have measured their business success with a metric called average revenue per user/unit (ARPU), or the amount of money a subscriber spends on services with an MNO. However, revenue is not the only metric — or for that matter, the right metric — that carriers can use to differentiate themselves. Every MNO will hopefully generate revenue from subscribers. Preferably, the question should be: How much *profit* can be generated from each subscriber? MNOs need to start thinking about average profit per user (APPU) as a focus point for competitive differentiation. They also need to actively reduce the cost of offering services to subscribers on a subscriber-by-subscriber basis. How can MNOs change the way they do business with different types of subscribers? Can they provide the relevant service to the subscriber and not only make revenue but also turn a profit from that subscriber? Evolving from an ARPU model to an APPU model can be a key driver for the MNO to rise above its fellow in-region carriers.

There is also the challenge of finding new ways to differentiate services. You can have operational advantage in the network, where the network is ready to launch services with the fastest time to market. Now you need to turn that capability into a competitive advantage — to acquire subscribers from competitors. However, it's not necessarily about finding a new service or a new differentiating factor; rather, it's about reusing the operational cost savings

as a way to offer new services to subscribers for less money — and still make a profit. MNOs need to start thinking about APPU when they plan network strategy or subscriber acquisition. Thinking in this way will move them up the operator rankings.

Q. **How can MNOs expand to adjacent service industries such as finance, media entertainment, travel tourism, or sports?**

A. Mobile network infrastructure is a linchpin for all these industries. Everybody accesses services for these industries through their mobile phone, which gets that service through the infrastructure. MNOs are actively exploring whether they can play a meaningful role in these service industries.

In terms of subscriber behavior, it's important for MNOs to understand who the premium subscribers are and to provide them a fair level of service. If you step back and look at the range and diversity of subscribers, there's the subscriber who pays $300 per month versus the subscriber who pays $50 per month. The MNO allocates opex budget, and rightly so, to ensure the network is up and running so as to serve the entire range and diversity of subscribers. As a result, from a business priority perspective, offering high-touch services to premium subscribers often is relegated to the back burner.

Mobile operators need to take a hard look at their engagement strategy. Engagement with high-paying, high-value subscribers is critical because they will contribute more revenue to the network, unlike the $50 per month subscriber. Of course, MNOs would love to keep the $50 subscriber as well. But in all fairness, if a subscriber is willing to pay a premium to an MNO to achieve certain productivity needs, then such a subscriber deserves appropriate attention. And that can happen only when you have a fair understanding of the usage patterns of all subscribers. How are they using the network and consuming data? Where are they doing it? At what time of the day?

With subscriber-level visibility, MNOs can be fair to the entire subscriber spectrum. They now know exactly when premium subscribers will be using the network, in a certain period of time during the day or a day of the week, and in certain patterns. Thus, they can tune the network and make it respond to the needs of these subscribers. New competitive advantage is realized though greater operational efficiency. Customer support costs are matched to subscribers who can bear that cost. ARPU and APPU are maximized. The average cost of offering service to subscribers is decreased. Churn for premium users is decreased. Lower-profitability subscribers may choose to seek networks that do not have subscriber awareness.

With subscriber-level visibility, MNOs can go to service industries such as finance, media, entertainment, travel, tourism, or sports, and say, "We know how the subscribers behave on the network. We can partner with you to provide the best value for the money the subscriber is spending with us as an operator and with you as a media entertainment company." There is a nontrivial amount of business waiting to happen between the MNOs and the adjacent service industries by matching the cost of services to the subscribers who can bear it.

Operators can expand their business by offering subscriber-level visibility. This is a critical technology that can be leveraged by a mobile operator to work with these industries. Operators stand to gain only by investing in technologies that can deliver visibility about both the subscriber and the network — all while lowering their cost of offering the service.

Q. **What challenges do MNOs face in realizing business benefits of technologies such as NFV/SDN?**

A. Mobile operators are transforming their network. They're moving to use technologies such as NFV and SDN to reduce opex and capex costs.

NFV and SDN promote a network that is cheaper to run and more flexible. They also reduce the underlying differentiation of the operator because everyone is deploying the technology. Subscriber-level visibility enables the next operator battleground area — that of competing on operational efficiency. It does this by reducing the cost of offering a service on a subscriber-by-subscriber basis, focusing on the visibility into the behavior of subscribers and enabling the network to react or even preempt with resources required to serve such behaviors. NFV and SDN reduce the cost of maintaining a network and the cost of instantiating resources at capacity to the network. The cost to engage the subscriber drops, and consequently margins on spend from the subscriber increase, allowing the MNO to employ the resulting savings to attract new subscribers.

A B O U T   T H I S   A N A L Y S T

Sathya Atreyam is a research manager of IDC's Worldwide Wireless Network Infrastructure program. His primary research focuses on innovative initiatives by network equipment vendors, software vendors, and communication service providers in mobile backhaul, radio access, packet switch (PS), circuit switch (CS) core, and value-added services. He brings deep knowledge of key issues facing communication service providers (CSPs) in the areas of small cells, radio access network (RAN), evolved packet core (EPC), VoLTE, IP Multimedia Subsystem (IMS), rich communication services (RCS), carrier WiFi, and over-the-top (OTT) services. Atreyam's breadth of coverage allows him to take a holistic view of network infrastructure evolution and its key role in customer experience management.