

The Price is Right

Pricing Strategies for Mobile Broadband Services
Telecom & Media Insights



Innovative
pricing model



People matter, results count.

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1 Abstract

Since 2006, most developed countries have seen rapid growth in the adoption of mobile broadband. In addition, the proliferation of new mobile devices such as smartphones and tablets, along with the consumption of high-bandwidth services such as content streaming, VoIP and mobile cloud services has led to a drastic increase in data traffic. However, data revenues have not kept pace with this growth in traffic and the widening gap is putting pressure on the sustainability of a mobile operator's business model.

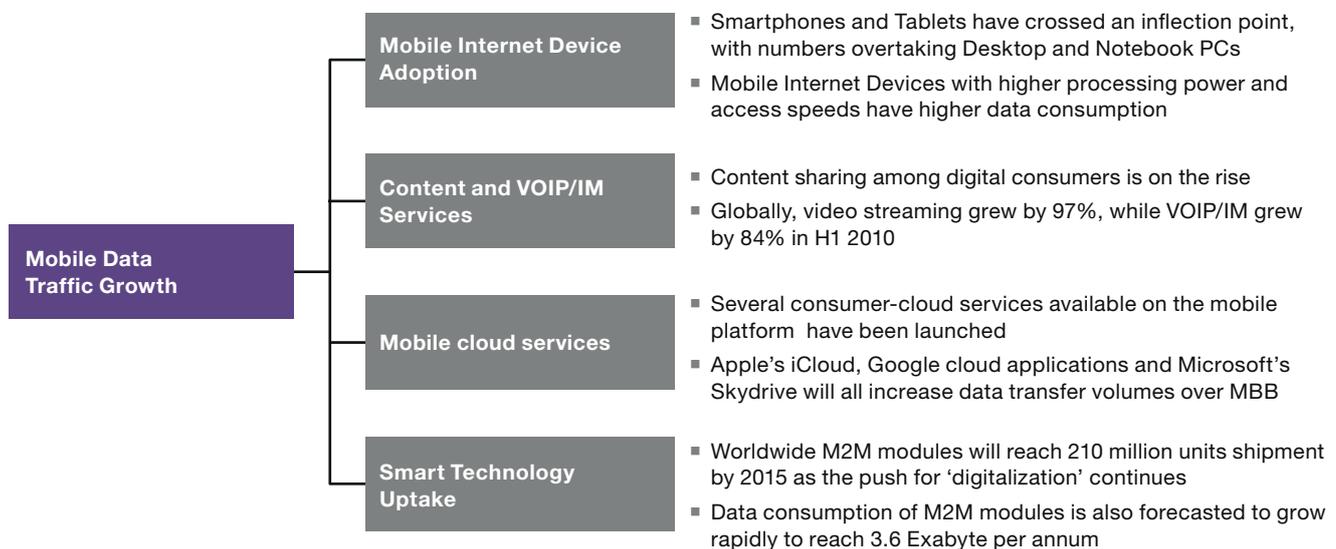
We believe that the pricing of mobile broadband is a critical lever for operators to effectively monetize this growing data consumption. Telcos should introduce innovative pricing models that are tailored for specific consumer segments and designed based on consumer-context information such as the device used, location, time-of-use and service being consumed rather than only the volume of consumption. Designing these innovative pricing models requires a clear understanding of the components of a mobile broadband pricing model and operational as well as market pre-requisites that allow the rapid roll-out of these new pricing models. Consequently, telcos should constitute a pricing process that includes identifying high-value customer segments, designing tailored pricing models, and then launching these new plans using traditional and digital channels.

2 Current Scenario and Need for New Pricing Strategies

The mobile broadband market has been growing rapidly since 2006 as more consumers adopt the ‘always connected’ lifestyle. In developed countries, Internet connections have reached high levels of penetration, with average household penetration at 65% in 2010; twice that of the global average of 29%.¹ Interestingly, mobile broadband has been instrumental in increasing the penetration levels due to the degree of mobility offered over fixed broadband. By the end of 2010, there were 51.1 mobile broadband connections as compared to 24.6 fixed broadband connections for every 100 inhabitants in developed countries.²

This demand for high-speed connectivity ‘on the move’ is expected to increase further with the growing adoption of mobile computing devices such as smartphones and tablets. In addition, consumers are being offered faster mobile broadband connections and innovative services that are fuelling demand for mobile broadband (see Figure 1). Thus, for telcos this growth in data services is an opportunity to make up for stagnant voice revenues. However, operators have yet to develop a successful model to effectively harness this mobile broadband growth engine.

Figure 1: Key Drivers for Mobile Broadband Traffic Growth



Source: Capgemini TME Strategy Lab analysis; Allot Communications, "Global Mobile Broadband Traffic Report", July 2010 ; ABI Research, "Cellular Machine-to-Machine (M2M) Markets ", September 2010; Cisco, "Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010–2015", Feb 2011

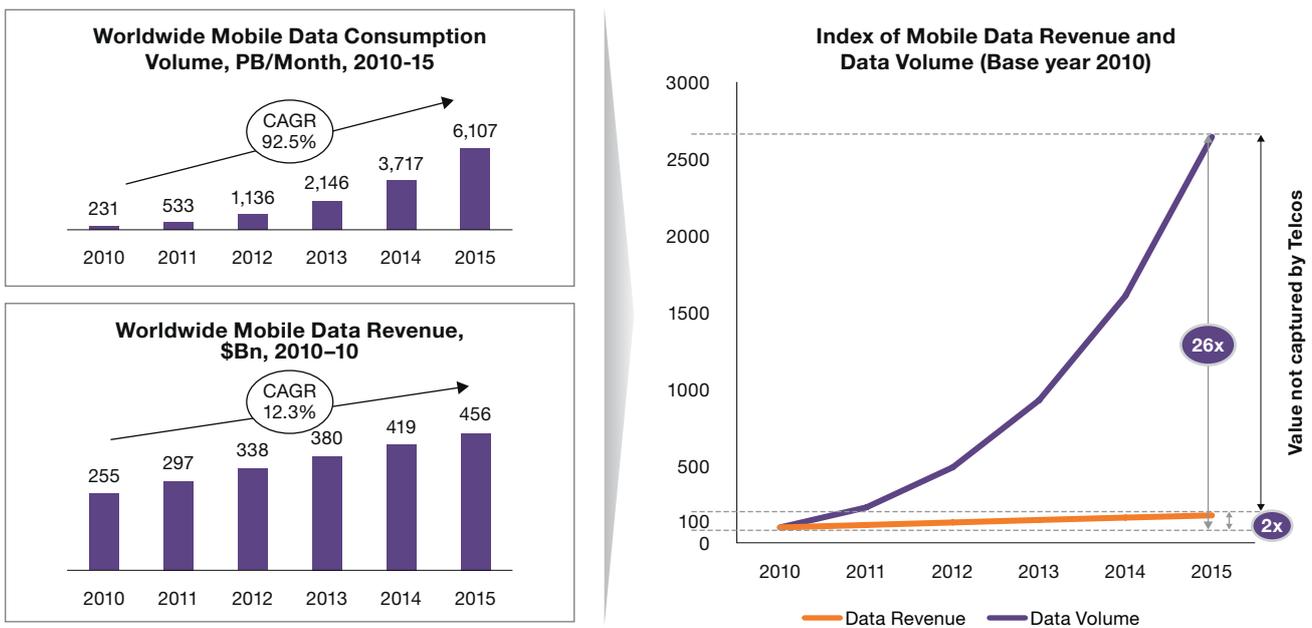
1 ITU Statistics Database 2010

2 Capgemini analysis and ITU Statistics Database 2010; The developed/developing country classifications are based on the UN M49, see: <http://www.itu.int/ITU-D/ict/definitions/regions/index.html>

Although the opportunity for telcos in mobile broadband looks promising, rapidly increasing mobile data traffic does raise some concern. The increase in mobile data traffic is being seen across geographies: Telecom Italia delivered 15 times more mobile data traffic in 2010 compared to 2007; AT&T reported traffic jumping by a factor of 30 from Q3 2009 to Q3 2010; while China Unicom's 3G services saw a 62% traffic increase in Q2 2010 alone.³ In the UK, the volume of mobile data transferred over the mobile networks has increased 40-fold over the last three years.⁴ Worldwide mobile data traffic is forecasted to grow at 108% per year to reach 3.6 Exabytes per month by 2015.⁵

However, increasing mobile data traffic has not resulted in an equal increase in revenues, as mobile operators in developed markets make only a third of their revenue from data traffic which is three-quarters of their total network traffic⁶ (see Figure 2). However, these forecasts are based on current business models and pricing assumptions which telcos can change to monetize the demand for mobile broadband.

Figure 2: The Volume and Revenue Gap



Source: Capgemini TME Strategy Lab analysis; WCIS Forecasts, 2011; Cisco, "Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010-2015", 2011

“ Analyst forecasts indicate that data volumes will increase 26 times, while revenue will only double over the next 5 years. ”

3 Ars Technica, "World mobile data traffic to explode by factor of 26 by 2015", April 2011

4 Ofcom, "The Communications Market 2011", August 2011

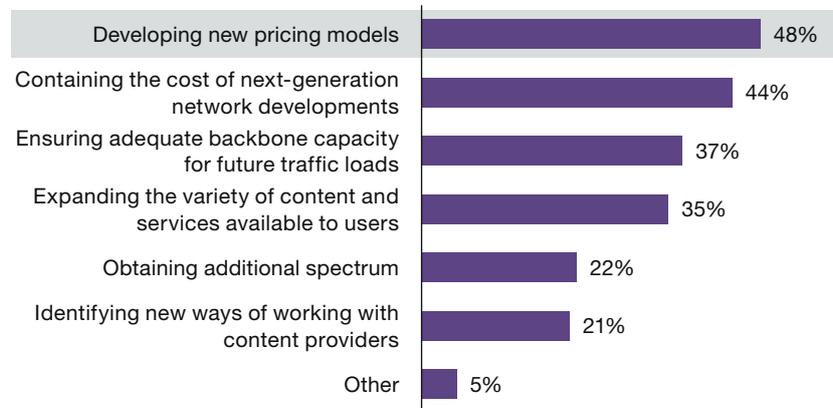
5 Cisco Visual Networking Index, "Global Mobile Data Traffic Forecast Update 2009-2014"

6 Based on North American market, Morgan Stanley, "Mobile Internet Report", December 2009

The disconnect is proving to be expensive for telcos who are facing shrinking profitability as network traffic increases and the investment need for latest technologies grows and revenues stagnate. With most opportunities for cost reduction exhausted, telcos must now focus on enhancing revenues by getting their pricing models right. A survey of top telco executives revealed that in the next three years developing innovative pricing models to ensure that revenues keep pace with growing mobile data consumption will be the top challenge (see Figure 3).

Figure 3: Pricing is the most critical challenge

In your (Telco) view, which of the following are the three most critical challenges facing mobile operators over the next three years?



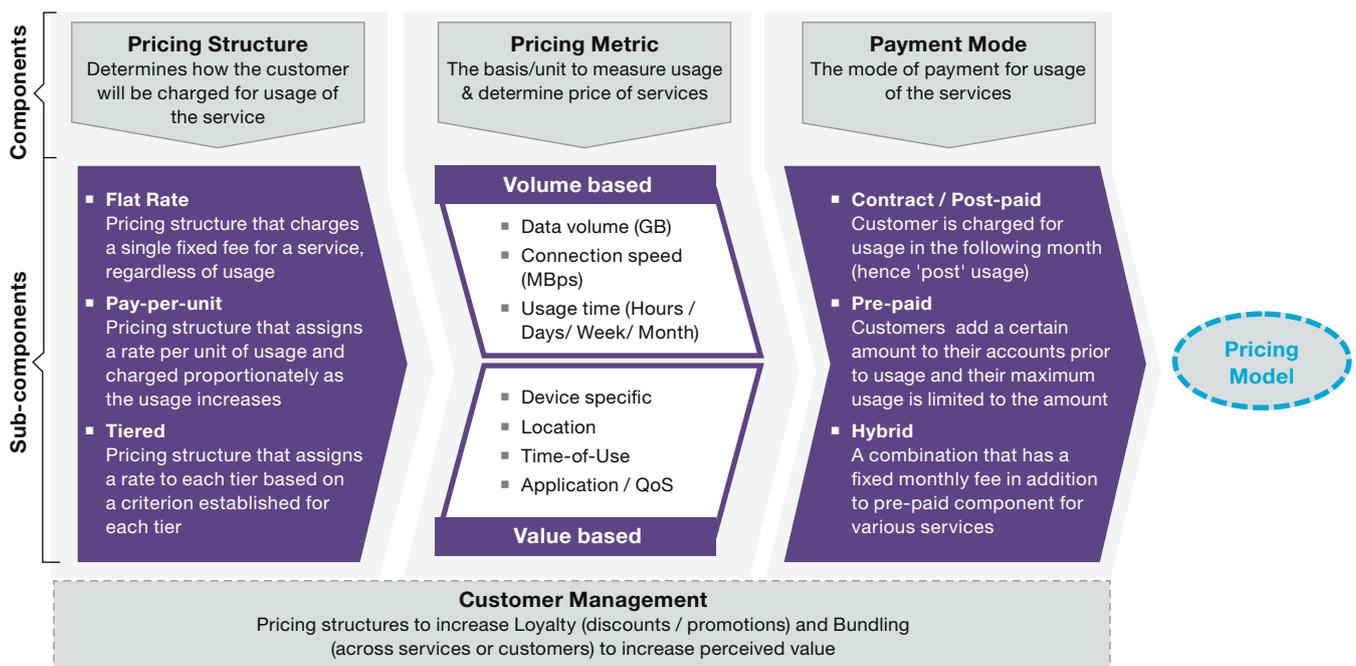
Source: Economist Intelligence Unit survey, June 2010

Although operators have been moving away from flat rate “All You Can Eat” plans to tiered pricing, the scope to improve monetization still exists. In this paper, we assess the components that go into designing a pricing model, the operational and market pre-requisites for introducing new pricing models, and recommend the optimal approach an operator should take to create innovative pricing models. Using this framework, operators could potentially create a number of innovative pricing plans to suit various high-value customer segments and monetize mobile broadband (MBB) demand. In the following section we start by elaborating the components of a MBB pricing model that can be used to design new pricing plans.

3 Components of Mobile Broadband Pricing

Operators today are looking to increase price discrimination of their mobile broadband offers by creating innovative pricing plans that are more personalized. Creating such plans requires a clear understanding of the basic components of a pricing model for mobile broadband. In this paper, we have defined three major components and their sub-components that operators can combine to design a mobile broadband pricing model (see Figure 4). Telcos could choose the right combination of sub-components to design innovative pricing plans that will maximize value. We take a closer look at these components in this section.

Figure 4: Basic Components of a MBB Pricing Model



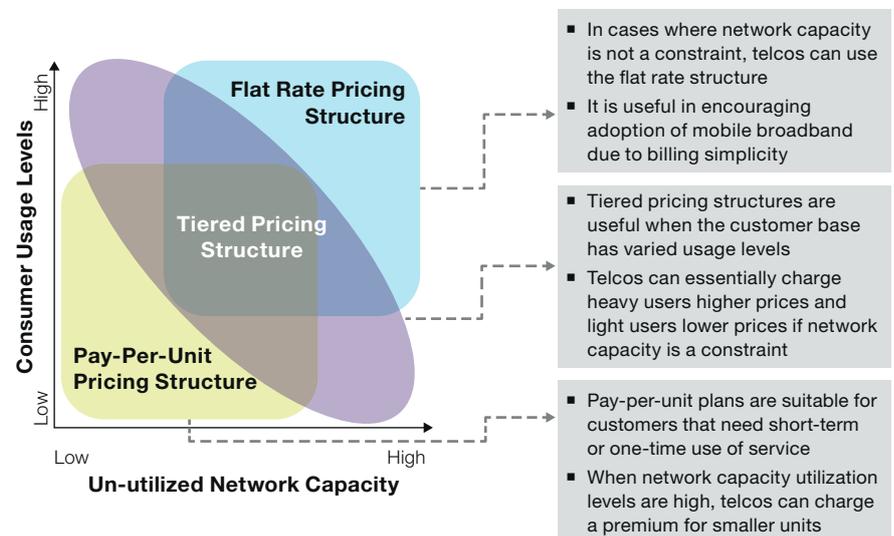
Source: Capgemini TME Strategy Lab analysis

“ Many players continue to offer unlimited plans as a potent method for increasing market share. ”

3.1 Pricing Structures

Traditionally operators have used flat rate or subscription plans for contract customers and pay-per-unit structure for pre-paid customers. However, telcos realized that flat rate plans are not sustainable as they discovered some heavy users were affecting quality of service for other customers and reducing monetization of bandwidth for operators. Operators have since introduced modified flat rate plans and tiered plans to tackle this issue. For instance, in Europe, 87% of the offers marketed as “unlimited” have fair usage policies that either apply bandwidth reduction beyond a defined cap or impose overage charges.⁷ However, this does not mean that unlimited plans are on their way out. Many players continue to offer them as a potent method for increasing market share.

Figure 5: Choosing the Right Pricing Structure



Source: Capgemini TME Strategy Lab analysis

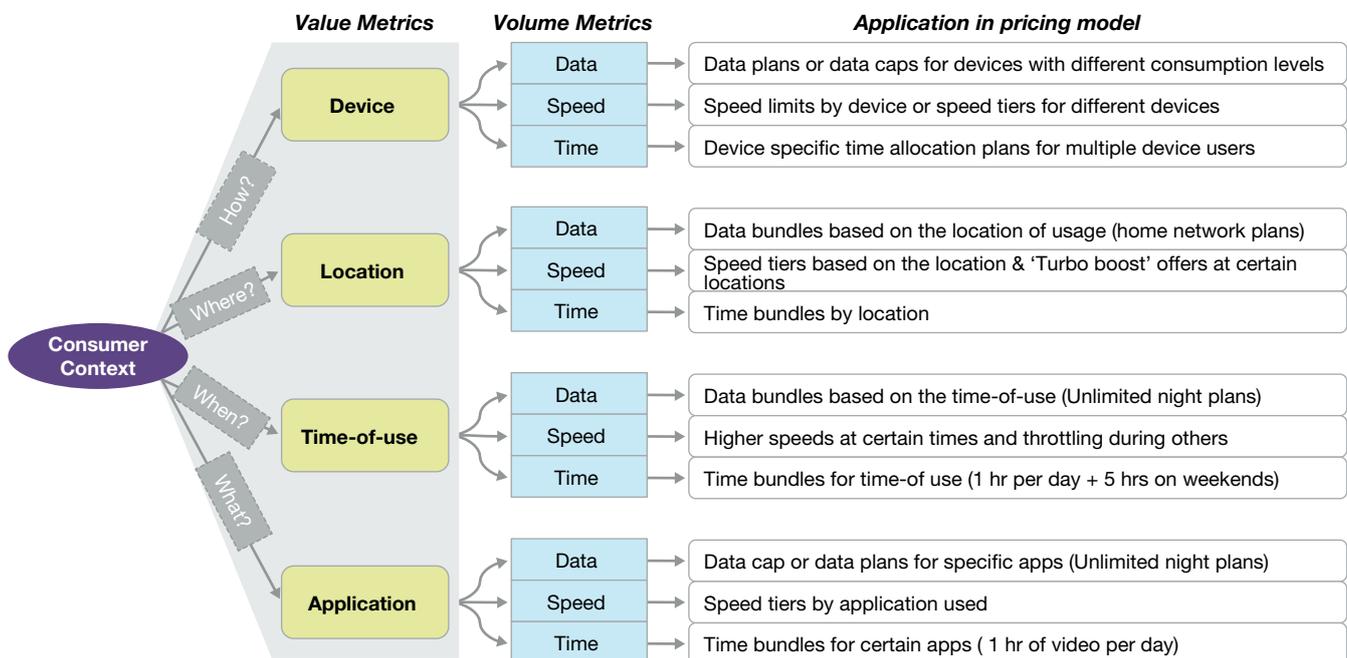
We believe that operators should target the kind of pricing structure based on the customer’s usage patterns and the level of unutilized network capacity (see Figure 5). Moreover, the price at which such flat rate plans are offered can make a significant difference to customers, as some of them are willing to pay a premium for unlimited broadband usage. Thus, operators can offer all three types of structures and differentiate their offer based on the pricing metrics rather than the structure alone.

⁷ Current Analysis, “Three mobile broadband myths busted”, February 2011

3.2 Pricing Metrics

The basis for charging customers is an important factor for operators, as it can be used to increase price discrimination. Volume-based metrics such as data, speed and time have been used as the primary pricing metrics for some time; however, we believe that value-based metrics which are based on consumer context data should be used. Although volume metrics will be the primary units used for billing, value-based metrics that require pricing based on type of device used, location, time-of-use and application or content being consumed should be used as a secondary means of price discrimination (see Figure 6).

Figure 6: Value-based Pricing Metrics using Consumer Context Information



Source: Capgemini TME Strategy Lab analysis

“ Value-based metrics can be used to extract pockets of customer value that the more generalized volume metrics cannot. ”

In order to increase monetization of mobile broadband, operators need to price MBB services on the basis of what is easier for the customer to understand rather than network related parameters. Consequently, customers need to be clearly informed of their consumption levels to reduce complexity. This is better achieved by using a combination of a value-based and volume-based metric. For example, if video content is charged by the minute or hour of viewing, it is easy for customers to understand their level of consumption. In this case the volume metric is time and the value metric is the content being consumed. The ability of value metrics to increase differentiation of MBB plans make it the most important component of the model and operators should use such value metrics. For instance, Smartone (Hong Kong) delivers tiered MBB services based on bandwidth usage and time, as well as applications on demand.

3.3 Payment Modes

Operator's choice of payment modes has traditionally been between contract plans and pre-paid plans. Across markets, the ratio of contract customers to pre-paid customers varies based on the maturity of the market and the preferences

of customers. In Europe, contract-based payment constitutes a sizeable portion of customers, which is also preferred by operators due to the higher ARPU levels. For instance, Vodafone has an average ARPU⁸ of €36.5 for contract customers across its European markets, compared to just €8.5 for pre-paid customers.⁹

However, over the last three years the number of pre-paid customers has been on the rise while the growth of contract customers has been stagnant. In addition, contract-free or '30-day plans' have become increasingly popular in Europe and the US with the launch of devices such as SIM-only tablets. For operators to maintain the advantage of higher 'stickiness' offered by contract plans and also provide customers the level of control offered by pre-paid, operators should offer hybrid payment mode for MBB services. T-Mobile UK, for instance, launched a hybrid plan called the "You Fix" plan. Customers get a fixed allowance of minutes, texts and other services for a fixed monthly amount, on a short 12-month plan and for any more minutes or texts needed, customers can simply top-up as they would on a pre-paid plan.¹⁰ Customers can also choose from a range of smartphones, including Android and BlackBerry, for a small upfront payment or for free. Thus, customers could get the advantage of subsidized devices and a low fixed monthly payment similar to post-paid plans along with the flexibility to use data services, choose pricing options and control on usage offered by pre-paid plans.

In the next section, we delve into the pre-requisites that are essential to ensure success of their new MBB plans.

8 Average Revenue Per User

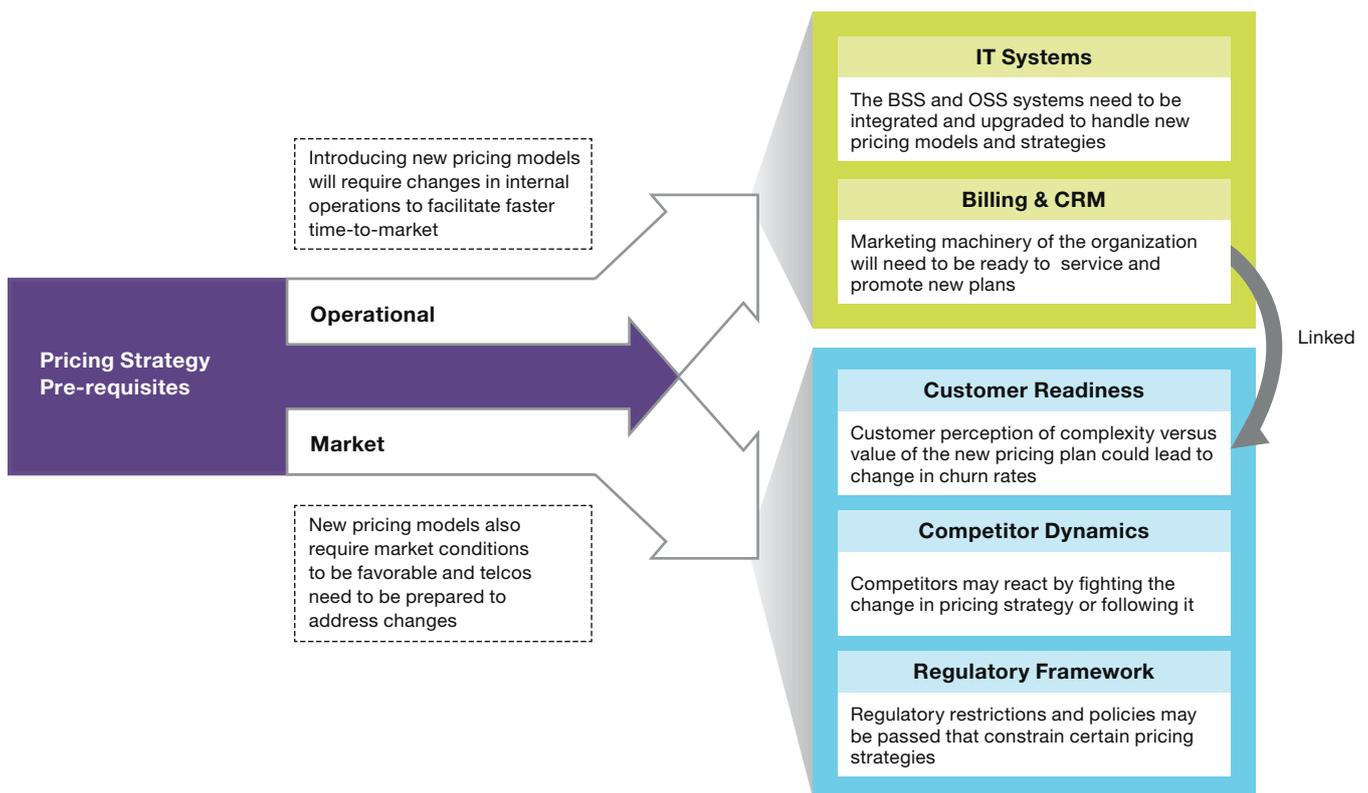
9 Capgemini Analysis and Vodafone Quarterly Reports

10 T-mobile (UK) ," T-Mobile launches unique You Fix plan", August 2011

4 Assessing the Pre-requisites for New Pricing Models

Prior to introducing new pricing plans, operators need to assess pre-requisites that are essential to ensure success of these new MBB plans. Internally, operators have to assess if their systems are geared to handle the increased reliance on IT, billing and customer relationship management (CRM), while externally customer readiness, competitor dynamics and regulations need to be favorable (see Figure 7). The analysis of these pre-requisites will form a vital input to the pricing strategy of the operator and ultimately affect the design of the pricing model. In this section, we elaborate on how operators will have to assess these pre-requisites and actions they need to take.

Figure 7: Pre-requisites to Introducing Innovative Pricing Models



Source: Capgemini TME Strategy Lab analysis

Telcos need to adopt broader architectural principles in changing IT systems to facilitate new pricing models.

“ Operators should anticipate price responses to new pricing plans and use game theory to predict outcomes. ”

4.1 Operational Pre-requisites

The introduction of new pricing plans requires operators to have their operations prepped for the additional demands of pricing flexibility, analysis of large amount of data and managing the digital customer experience. The highest impact of new pricing plans on the operators' operations will be on the IT, billing and CRM.

Telcos need to adopt broader architectural principles in changing IT systems to facilitate new pricing models. Currently, systems are monolithic and aligned to a specific service offered; leading to data fragmentation as customer, product, inventory, and identity information is located in multiple sources. These silos have to be broken to make IT systems more integrated, real-time and modular with all data consolidated.

In addition, operators' billing systems have traditionally been designed to handle Call Detail Record (CDR) -based metered pricing for voice and simple flat-rate pricing for data. Billing systems need to be equipped to offer dynamic data pricing plans based on volume, time-of-the-day, bandwidth and Quality of Service (SoS) or a combination of these factors. This will require more advanced policy control that is at the heart of the operator's Business Support Systems and Operations Support Systems (BSS and OSS). There are 'off-the-shelf' solutions available that offer advanced policy management for MBB, but transitioning from legacy systems can be costly, requiring a careful assessment of the operator's IT portfolio.

The increasing importance of digital channels requires the operator's CRM to be digitally focused. Operators have to ensure they have next-generation systems that support multi-channel integration, intelligent customer service such as chat bots¹¹, and utilize social media effectively. AT&T for instance provides a simple 'Data Calculator' to help customers decide the right plan based on the calculated usage. Besides, telcos could provide apps that interact with the BSS/OSS to help customers increase control and flexibility, especially in location, time-of-use and QoS-based plans.

4.2 Market Pre-requisites

In order for a new pricing plan to succeed, market conditions should be conducive, which is essentially determined from an assessment of the customer, competitors and the regulatory framework.

Operators can gauge customer readiness using data from their CRM systems, applying analytics and monitoring social media. Moreover, tried and tested methods such as 'voice of the customer' analysis (VoC), focus group discussions and test-marketing also provide indication of customer acceptance of new MBB plans.

At the same time, operators also need to assess the competitive dynamics at play and predict the reaction of competitors. Game theory is not new to telcos; in 2006 auction of radio-spectrum licenses by America's FCC, Time Warner and Comcast paid about a third less than their competitors for equivalent spectrum, saving almost \$1.2 billion by using game theorists to predict outcomes.¹² Similarly, price wars can be considered as a non-cooperative game where information on a firm's response to its competitors price change can be used to find an equilibrium that provides the most beneficial payoff. Largely competitive reaction would fall into two categories – Fight or Follow. For example, in 2009, except for Telenor all other Swedish mobile operators discontinued unlimited MBB plans. Telenor's market share grew, while all others suffered a drop in market share. Observing the drop in market share Tele2 and Hi3G re-introduced unlimited plans in 2010,

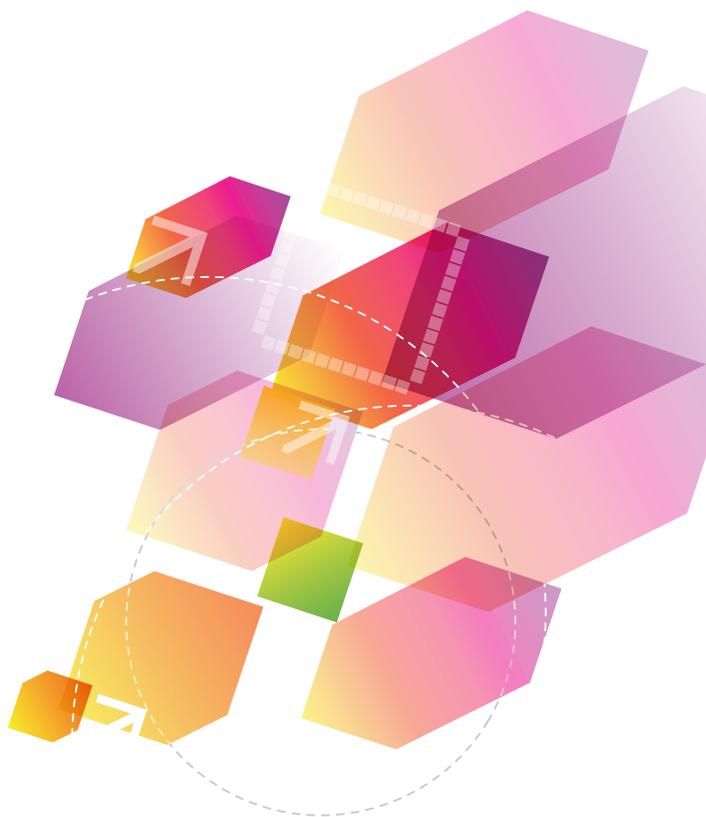
¹¹ A chat-bot is a computer program designed to simulate the responses of a real support agent.

¹² The Economist, "Game Theory in Practice - Software that models human behavior can make forecasts, outfox rivals and transform negotiations", September, 2011

although the incumbent Telia chose not to offer unlimited plans. Thus, operators need to anticipate and understand possible scenarios to manage risk of introducing new plans more proactively.

Another important factor is the regulatory framework, where issues such as price regulations and net neutrality could put a spoke in the wheel of an operator's plan to introduce new MBB pricing plans. The US FCC has already published net neutrality laws, while Norway's NPT and Sweden's PTS have published guidelines. France's ARCEP and UK's Ofcom have published discussion documents in 2010 and have made proposals on net neutrality laws.¹³ Largely the regulators intend to ensure that mobile broadband providers do not block or discriminate against lawful websites, or block applications that compete with their voice or video telephony services. Besides, the laws also require mobile broadband providers disclose their network management practices, performance characteristics, and commercial terms of their broadband services which may be a source of competitive advantage. In addition, innovative pricing plans that require telcos to implement deep packet inspection (DPI) may not comply with net neutrality laws in some countries such as the US. This will further push operators towards the 'Data Pipe' scenario and threaten their sustainability. Operators will have to be careful not to violate these laws and actively participate in the formation of these laws.

In the concluding section we recommend a process-outline that would enable the operator to reap the benefits of rising MBB demand and surging data volumes.

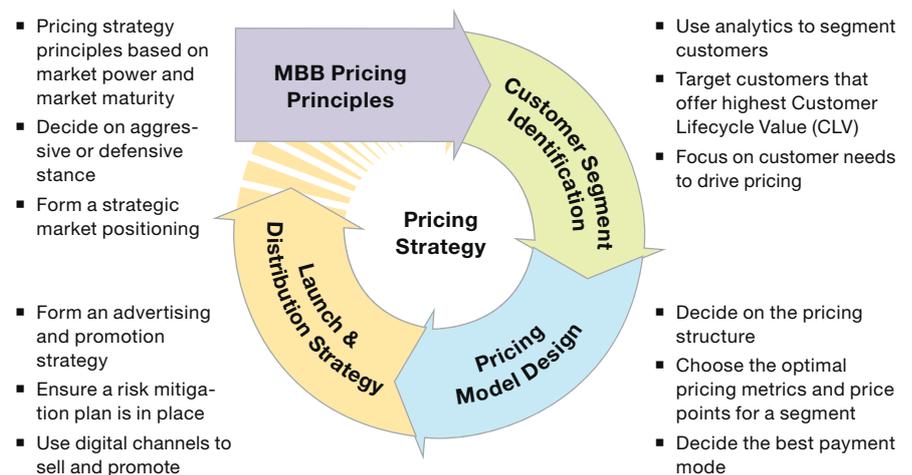


¹³ FCC (US) – Federal Communications Commission; NPT – Norwegian Post and Telecommunication Authority; PTS – Swedish Post and Telecommunication Authority; ARCEP (France) - Autorité de Régulation des Communications Électroniques et des Postes; Ofcom (UK) – Office of Communications.

5 Pricing Process to Maximize Value

Operators have the opportunity to ride the surge in demand for mobile broadband services and monetize the increasing data consumption levels. However, as we have already determined, they would have to first create innovative pricing plans. In order to have a continuous supply of innovative pricing plans and stay ahead of the curve, a holistic pricing process has to be constituted that starts with forming pricing principles, and goes on to identifying target segments, designing personalized pricing models and finally launching these plans via the right channels (see Figure 8).

Figure 8: Holistic Mobile Broadband Pricing Strategy



Source: Capgemini TME Strategy Lab

5.1 Choosing the right pricing strategy

Operators will have to form an overarching set of pricing principles that would form the basis of their pricing strategy. These principles should be decided based on the market power of the operator and the maturity of the market. The operator may be an incumbent, challenger or new entrant, while the market may be nascent, growing or mature and there are multiple strategic options that the operator may choose that vary based on their position. The operator may decide to price competitively or focus on niche segment for premium pricing. The operator might also decide to provide a loss leader for some time if it can eliminate competition. In the case of AT&T, the incumbent withdrew their flat rate plans for the iPhone in June 2010. Verizon, the challenger, followed the subsequent year to ensure that they retain their customers, while T-mobile and Sprint continue to offer flat rate plans to fight AT&T's move and win customers away from the incumbent.

5.2 Customer segmentation for personalized pricing

In order to launch more personalized pricing plans that have higher price discrimination, operators will have to identify high-value consumer segments. Identifying consumer segments requires advanced analytics to be conducted on usage

patterns and customer data that would give the operator a significant competitive advantage. Sophisticated segmentation requires the use of statistical tools such as cluster analysis and factor analysis. Data analytics not only helps in identifying high-value customer segments but also in predictive modeling that can indicate the success of a new pricing model.

5.3 Designing the pricing model

Designing the pricing model requires a clear understanding of the components and deciding the right combination of the sub-components for the target segment. Apart from combining the right sub-components, operators must also identify the optimal pricing point. This can be achieved by determining the price elasticity of an existing service or in the case of a new service, the Van Westerlandrop analysis¹⁴ can be used to determine optimal price. Operators need to strike the right balance between using multiple components to increase price discrimination and preserving the simplicity of the plan so that customer acceptance is high.

5.4 Launching new pricing plans

While creating the pricing plan, operators should also consider their launch strategy as a critical factor for success. The launch strategy will vary by target segment and choosing the right channel for launch is important. We believe that the digital channel will gain more importance over the next few years and operators have to be ready to serve a new breed of customers. Consequently, operators will also have to look at improving their online marketing capabilities by using social media, search engine optimization, using viral videos and banner ads. Some operators such as Orange have already launched 'Sosh', a Mobile Virtual Network Operator (MVNO) that caters to the 'ultra-connected'. The service plans will be sold exclusively online and the brand looks to create a community of users that will help co-create new offers.

5.5 Conclusion

The manifold growth in data traffic has not translated into a corresponding growth in data revenues, and has thus brought the mobile operator's business model under scrutiny. To address this issue and take advantage of the tremendous revenue generation potential of the fast-growing mobile broadband market, operators need to act quickly by formulating innovative pricing models. After a thorough assessment of the operational as well as marketing requisites, the operator can create a pricing process that would help personalize the pricing plans to suit unique customer segments, and launch these through the appropriate channels. Operators that offer flexible and innovative pricing plans would be able to successfully monetize the growth in data traffic, and thus sustain and grow in this highly competitive market.

“ We believe that the digital channel will gain more importance over the next few years and operators have to be ready to serve a new breed of customers. ”

¹⁴ Van Westerlandrop's Price Sensitivity Meter (PSM) is a market research technique for determining consumer price preferences by surveying customers on various price points to determine the limits of sensitivity and determine optimal price.

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Telecom & Media Insights is published by the TME Strategy Lab, a global network of strategy consultants dedicated to generating content-rich insights into the telecom and media industries. The Lab conducts in-depth strategic research and analysis to generate leading-edge Points of View on crucial industry topics that stimulate new ideas and help drive innovation for our clients.

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