

# THE FUTURE OF MOBILE ROAMING

HELPING MOBILE  
OPERATORS  
REMAIN

**Colin Brooks, Etienne Piciocchi, Aditya Kandath, Isabelle Paradis and Steve Heap**

COMPETITIVE  
IN THE EVOLVING  
LANDSCAPE



**The Future of Mobile Roaming**  
**Helping mobile operators**  
**remain competitive**  
**in the evolving landscape**

Published by  
Value Partners Management Consulting Ltd  
Kings Buildings, 7th Floor,  
16 Smith Square, London SW1P 3HQ, UK

In partnership with  
Hot Telecom

June 2014

Written and edited by:  
Colin Brooks, Etienne Piciocchi, Aditya Kandath,  
Isabelle Paradis and Steve Heap

If you would like an electronic copy  
or more information on the issues  
raised in the report please contact:  
[colinj.brooks@valuepartners.com](mailto:colinj.brooks@valuepartners.com)  
[etienne.piciocchi@valuepartners.com](mailto:etienne.piciocchi@valuepartners.com)

If you would like to subscribe  
or to be removed from our mailing list  
please write to:  
[subscription@valuepartners.com](mailto:subscription@valuepartners.com)

[valuepartners.com](http://valuepartners.com)

Copyright  
© Value Partners Management Consulting Limited  
All rights reserved

## CONTENTS

INTRODUCTION	5
WHAT IS ROAMING ?	6
CURRENT STATE OF THE ROAMING MARKET	7
DISRUPTIONS TO THE ROAMING MARKET	9
OPPORTUNITIES FOR OPERATORS	13
CONCLUSION	15
HOW VALUE PARTNERS AND HOT TELECOM CAN HELP	16
ABOUT VALUE PARTNERS	18
ABOUT HOT TELECOM	19
AUTHORS	20

Roaming has been a high margin business for mobile operators. However, the high rates have led many travellers to become silent roamers, leaving a large untapped market.

## INTRODUCTION

<sup>1</sup> European commission estimates  
- This estimation is based on the assumption of the following domestic prices: mobile calls 0.103 €/min; SMS, 0.02 €/SMS; data 0.01 €/MB.

<sup>2</sup> HOT TELECOM estimates.

<sup>3</sup> HOT TELECOM estimates.

On the 3rd of April 2014, the members of the European Parliament voted in overwhelming majority to remove roaming fees completely in the European Union (EU) by December 2015.

The vote was a result of 5 years of regulatory price caps and changing attitudes towards the high cost of roaming.

With the removal of the roaming rates altogether the mobile operators in Europe are predicted to lose 2% of their annual revenue, representing about €1.65bn (\$2.29bn).<sup>1</sup>

This news acts as a reminder that both regulatory developments and massive technology changes are creating a major impact on the roaming activity of consumers and roaming revenue of operators, and that real opportunities are available to increase revenue in this space.

Roaming fees have been a steady source of income for mobile operators. However, as a result of high roaming charge rates, many travellers are silent roamers (i.e. do not use their phone at all when abroad) and many others are very careful in how they use their service while travelling. As a result, operators have left a latent market untapped.

In 2013, it was estimated that 70% to 80% of all roamers (depending on the region) were silent mobile data roamers. This latent demand equates to a loss of 10,500 TB/year in mobile roaming data traffic in 2013, and represents a missed revenue opportunity of over \$3.0 billion<sup>2</sup> in inter-operator payments alone.

In addition, mobile subscribers who do use mobile data roaming, significantly curb their data usage when abroad, again due to the high price of data roaming packages. If all current roamers had a similar data usage pattern as they do when at home (with the introduction of all-you-can-eat data roaming plans for example), the current data roaming usage would increase 500 fold.

On the voice side, a similar situation is occurring. It is estimated that around 50% of roamers do not use mobile voice services while roaming, which equates to a loss of 16 billion potential international minutes and US\$0.6 billion<sup>3</sup> in termination rates revenue.

Consistently high roaming fees combined with the growth of smartphones and tablets, the rising dependence on social media and the ease of access to the internet is prompting mobile users to seek alternative services when roaming such as WiFi, local sim cards, as well as alternate roaming service providers.

These combined pressures on mobile operators' international business and the advent of LTE, with the potential of exponential traffic growth that it could bring, are making it more urgent for mobile operators to change their business model and introduce new services and packages to take advantage of the upcoming explosion in data roaming traffic and services.

## WHAT IS ROAMING ?

<sup>4</sup> International Roaming Agreement OECD, 2013

International roaming is a service that allows customers of a mobile operator in one country to obtain services from an operator in another country using the same handset, systems and approaches that they use at home, facilitated by a common technology and a wholesale inter-operator tariff, the IOT, which is a bilateral agreement between operators that defines the pricing under which they provide services for their respective roaming customers.<sup>4</sup> Roaming was originally established for voice calls, but expanded to messaging and data roaming in the 2000s.

### **Authentication and approval**

The starting point for roaming is an authentication and approval step whereby the visited network recognises the phone, signals back to the home network, and receives approval to allow different categories of roaming – from emergency calls only through voice, messaging and full data access. The visited network assigns a temporary roaming number to the customer.

### **Voice roaming**

When a roaming customer makes a voice call, the visited network is responsible for establishing the call using its own network and wholesale supplier relationships. Details of the call are passed back to the home network for billing and inter-carrier settlement. Calls made to that roaming customer are first routed to the home network, which confirms that the customer is, in fact, roaming, and originates a second call to the temporary number that has been assigned to them in the visited network. Finally, the home network bills the customer at the contracted roaming rate for any calls made (or received) while roaming. These can also include calls routed to voicemail.

### **Messaging roaming**

Unlike the voice case, a message sent by a customer while roaming is sent back through international signalling networks to the home network for delivery using their supplier arrangements. This occurs even if the message is being sent to someone in the visited country. This outgoing text is billed to the customer at the retail roaming rate. Incoming text messages to a roaming customer are generally not billed to that customer.

### **Data roaming**

In a similar way to text messaging, data roaming – providing internet access - is currently returned, via a GRX (GPRS Roaming exchange) or IPX (Internet Protocol Exchange), back to the home network for processing and routing to the required server or website. In a data roaming environment, three parties are therefore normally involved from both a technical and commercial perspective: the visited network providing radio access and initial data transport, the GRX/IPX operator and the home network handling the data and its routing into the public internet. While not significantly impacting the cost of the service, this does result in the 'tromboning' of the IP packets often back to servers in the visited network to provide local web-based information. The retail cost to the end customer has traditionally been high, and charged per MB of data transferred to the handset. Wholesale settlement between the operators is based on the inter-operator contract (IOT) and then the GRX/IPX generally charges both networks based on port usage.

## CURRENT STATE OF THE ROAMING MARKET

Historically roaming charges and fees have been a very high margin business for mobile operators. However high roaming prices have dis-incentivised customers, tarnished the reputations of mobile operators, and resulted in a latent market left untapped by operators.

### **Consumer's usage is dis-incentivised**

The high prices that mobile operators have traditionally charged have been deterring users from even turning on the phone when roaming. Data roaming costs represented the highest cost to consumers when using their device abroad and the lack of transparency on how much data typical activities consume has made most people very wary of any usage. Around the world, most roamers are silent and use WiFi or other bypass methods (local SIMs that provide access to the visited network at local rates) when abroad.

A study done by the European Commission on roaming in the EU found that:

- 47% of customers never use mobile internet in another EU country
- Only 1 in 10 customers use emails in the same way abroad as they do at home
- Around 70% of mobile users switch off their data connection when roaming

### **The industry's reputation is being tarnished**

The prices are reflecting badly on the industry and mistrust toward mobile operators is spreading. Regulatory intervention has further weakened the industry's position, restricting them to imposed structures. In addition, the marketing of some smaller mobile operators (e.g. T-Mobile in the USA) have ridiculed the high roaming charges of their competitors as a way to gain market share.

### **Mobile operators may be missing out on a latent market**

Industry analysts and regulators estimate that due to prevalent silent roaming, telecoms companies are missing out on a significant latent market. The European Commission estimated that in the EU 94% of travellers limit their use of mobile phones in some way or other because of current pricing strategies.

This latent market is already partially addressed by substitutes such as WiFi offloading. However, with the establishment of commercial LTE roaming agreements and appropriate pricing structure, customers would be able to obtain the same high capacity service even while roaming and continue their normal usage behaviour wherever they are located.

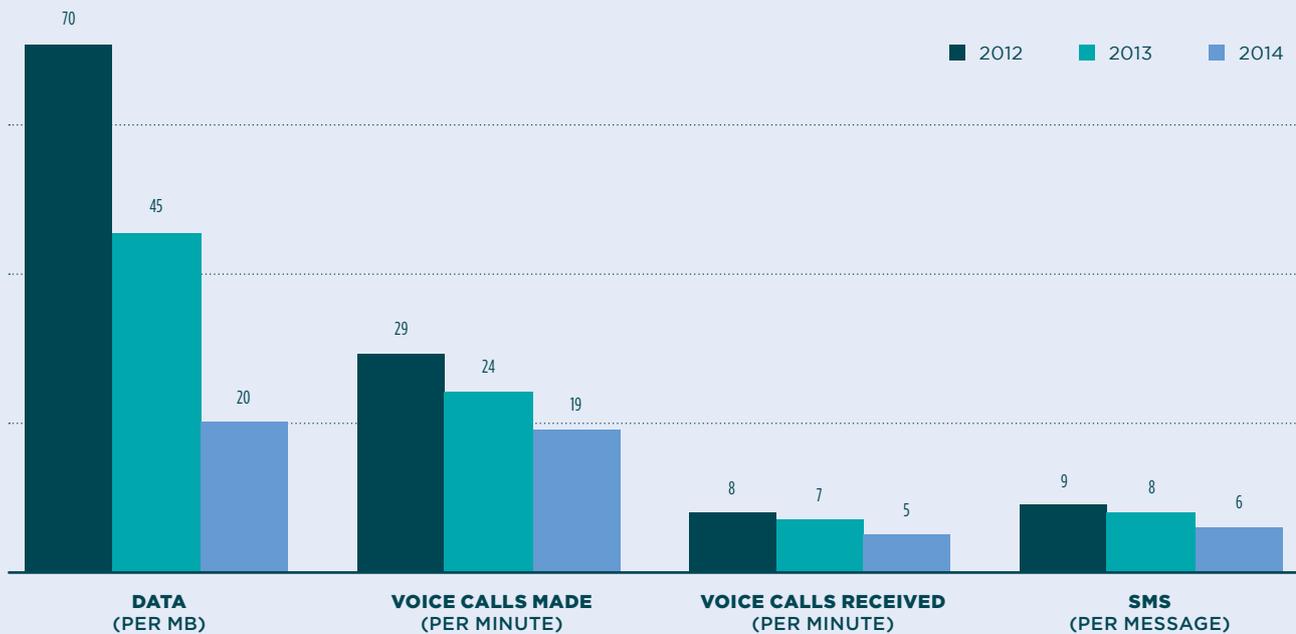
## EXHIBIT 1

European Commission regulated wholesale rates evolution (euro per unit)

WHOLESALE PRICE CAPS	JULY 2011	JULY 2013	JULY 2013	JULY 2014
DATA (PER MB)	50 CENTS	30 CENTS	20 CENTS	10 CENTS
VOICE (PER MINUTE)	18 CENTS	14 CENTS	10 CENTS	6 CENTS
SMS (PER SMS)	4 CENTS	3 CENTS	3 CENTS	2 CENTS

## EXHIBIT 2

Cap on retail roaming charges in the European Union 2012 –2014 in Euro Cents



Source: European Commission, Value Partners analysis

## DISRUPTIONS TO THE ROAMING MARKET

<sup>5</sup> International Roaming Agreement OECD, 2013

<sup>6</sup> Wiki consult workshop on Regulatory and Economic Aspects of Roaming, 2013

The situation in the roaming market is changing due to regulatory changes, technology developments and the arrival of substitutes. These evolutions threaten the profitable roaming business of mobile operators.

### Regulatory environment

The worldwide mobile telecommunications industry is a key enabler to global economic growth and hence regulators in many countries have acted to lower pricing when it is judged to be excessive and in order to stimulate increased competition.

### European Union

The European Commission has been at the forefront, introducing regulations that set maximum prices for both retail and wholesale roaming services and also increase competitive pressures by permitting users to choose alternative roaming providers and to directly access the services of the operator in a visited network via a direct relationship, without changing the SIM card or smartphone. The European Commission has regulated the wholesale (as per [Exhibit 1](#)) and retail price caps.

Furthermore, the European Commission, voted to completely remove roaming charges within the EU starting in December 2015, stating that mobile users will pay the same rate as they would if using their phone in their home network.

The roaming charges in the European Union have been constantly reducing from the introduction of roaming caps for the last few years ([Exhibit 2](#)). Despite this, the European Commission has still been concerned about the loss of business across the community as a result of high roaming rates and hence recently voted in the European Parliament to remove roaming charges.

### Worldwide

Other countries are taking similar actions, while a group of more protective countries are looking to charge or restrict access to applications that could allow the bypass of the services of the mobile operators – e.g. Skype, WhatsApp etc.

Similarly, given the increasing importance of data services, the Gulf Cooperation Council is now looking at roaming charges with a view to developing an appropriate price cap<sup>5</sup>. Roaming is also a concern in Australia, New Zealand, Asia Pacific and Latin America with all three regions making moves towards increasing price transparency.<sup>6</sup>

Recent regulatory and technology changes in the market are also forcing mobile operators to re-evaluate their business model.

## **Technology developments and challenges**

### **Penetration of smartphones and tablets**

The world of mobility has seen two upheavals in the space of a just a few years. The first was the launch of the iPhone and then the iPad, followed closely by the wide range of Android based smartphones and tablets. These powerful devices with high resolution screens and cameras have given consumers access to content, applications, videos and entertainment wherever they are, and in most developed countries, have rapidly taken the lion's share of the market.

### **Deployment of LTE networks**

In parallel, the mobile industry has been finalising and launching LTE in the radio network, paving the way for much higher speed downloads and the potential for quality segregation of services all the way from the source to the handset. The rapid rollout of the new networks, coupled with the smartphone's ability to seamlessly choose a local WiFi network when available, has resulted in an increase in data usage - without consumers being aware of the scale of that usage. Some networks launched LTE with "all you can eat" data plans, further reducing consumer interest in monitoring their LTE usage or even caring whether they are on LTE as distinct from a local WiFi network.

Roaming on LTE is not yet deployed at scale, and the current perception (and reality in many cases) of high data roaming charges means that roaming consumers have significantly altered their home behaviour when travelling, seeking out WiFi hotspots and restricting any 3G activity to a minimum. The combination of growth in data usage domestically but lack of appetite to data roam whilst traveling abroad indicates a growing latent demand and potential loss of consumer utility.

### **Other developments**

New applications that provide video conferencing to the smartphone, bridging different standards together, are being deployed, consumption of video entertainment via the smartphone and cutting the "cord" to traditional TV are all occurring and the expectation that this behaviour will continue when travelling will be hard to stop.

As we have seen, regulators are applying pressure at both retail and wholesale price levels, but competitive pressure between operators is also creating change - for example with the offer from T-Mobile US to drop roaming charges altogether for data and messaging in a range of countries.

Finally, service integration of automatic WiFi authentication and connection to distant networks when in a roaming country will also enable this same seamless environment that consumers see at home, but without some of the network costs currently incurred. All of these pricing and technology changes will result in a significant expansion of usage in a roaming environment.

<sup>7</sup> Syniverse Transient roamer potential was based on expert insights into average roaming volumes, end-user roaming habits, and third-party travel and roaming reports (2012 end-user spending estimates \$8.7bn spent on hotel WiFi, \$3.9bn on paid WiFi hotspots, \$225m on in-flight WiFi, and \$4.8bn on local SIMs).

<sup>8</sup> GSR 2012 Discussion Paper

<sup>9</sup> International Mobile Roaming Services ITU report

### Roaming alternatives

The transient roaming market, consisting of substitute services which allow travellers to avoid roaming fees, is estimated to be worth US\$17bn<sup>7</sup>. There are several substitutes for consumers, ranging from simply connecting to the local WiFi network to CrowdRoaming, an application which allows subscribers to use other members' unlimited or unused data in their mobile package when travelling outside their own network. These alternatives have the potential to place a downward pressure on international roaming revenue and, more significantly, develop an international roaming market no longer dominated by domestic operators.

The impact of substitutes on international roaming is evolving continuously with developing technologies. The ability of these substitutes to replace demand for international roaming is dependent on how 'perfect' these substitutes are<sup>8</sup> and currently many solutions are only for the technically savvy. As accessibility and coverage dominate consumer decisions, the desire for continued access when travelling can only increase, growing this already large and relatively untapped market

International roaming alternatives can be broadly divided into two main categories; SIM-based technologies and Network-based technologies.

### SIM-based technologies

- **Local SIM cards:** an attractive option for placing local calls abroad. A user obtains a different number and the phone must be unlocked.
- **Dual SIM cards:** Most relevant if the user is a frequent visitor to one country. Users must subscribe to a second service and the phone must support dual SIM cards.
- **Global SIM cards:** Multi-IMSI technology offering worldwide connectivity at local rates. This will also cover 'Global MVNOs'<sup>9</sup>: Companies that have obtained access to the local mobile and fixed networks in several countries at local wholesale prices and can connect to local mobile network operators. They usually provide local numbers to clients in each of the visited countries.

Examples of companies operating in this arena include Gentay (UK based), HolidayPhone (Europe focus), FlexiRoam (USA, Canada, Australia and South-East Asia offering) and Roamline (global). Among these Interfone (global) offers a chip-based solution. The chip must be installed on top of the existing SIM card. Every time an international number is dialled, the call handling is directed through Interfone's server so a local charge is incurred.

Another example is TravelSIM (Australia), which supplies customers a prepaid SIM with a single number valid for 190 countries. The user receives free calls in 115 countries. Users can divert calls to their home mobile number to the TravelSIM service so they also receive these calls, for a charge.

BackChat Mobile (Australia) offers a similar service. Regionally, alternatives are particularly active at targeting users in Europe, Australia and the US, where outgoing travel is high and international roaming well-publicised as expensive. The inherent global nature of the telcoms industry means no one operator is unaffected by these substitutes, although it is the domestic provider of international roaming in Europe or Australia that stands to lose the most. In response to this loss, operators are offering more competitive roaming packages. For example Vodafone Eurotraveller allows users to use their UK contract allowance in Europe for £3 per day. Operators also offer the option to buy data allowances for a daily rate (e.g. £6.67 for 100MB). EE offers customers voice, SMS or data packages e.g. £35 for 200MB for 30 days roaming data in Europe (voice and SMS are monthly contract packages). No frills mobile operator Frogmobile (Europe) offers users prepaid 24 hour or 7 day roaming data passes, a service activated for all prepaid subscribers. Users send an SMS to activate the pass (unlimited data costs €15 for 1 week).

#### **Network-based technologies**

- **Local WiFi:** by definition not a truly mobile substitute. Usage of WiFi combined with IP telephony boosts the usefulness of this substitution.
- **Alternative data roaming providers and local break-out:** From July 2014 EU regulations will give users the option to sign up to an alternative roaming provider separate from their domestic provider. This will allow a company in the visited country to offer data roaming services, separate from any arrangement with the home operator.

- **Sharing applications:** CrowdRoaming (Europe) is an application that allows users with unlimited data access at home to automatically access locals' WiFi hotspots when travelling abroad. In return, when these travellers get back home, they themselves open their mobile WiFi hotspot to visiting users. Cell Buddy (targeting medium-sized corporations) enables users to purchase a SIM card in the marketplace (carriers, MVNOs and resellers put their SIMs up for sale). The SIM is then downloaded to their phone without the need to switch SIMs. When abroad this SIM will act as a local SIM and no roaming charges are incurred.

The breadth of alternatives to international roaming is wide and continues to expand. There may be some developments that restrict the choices for consumers such as sponsored data, which provides free access to the services of just one company or content provider as they pay for wireless broadband to give a user access to their services. Overall, the industry is in a nascent stage; however, this does not reduce the significance of activity in this new alternatives market and the potential to capture consumer demand, thereby shifting a growth market away from traditional operators.

## OPPORTUNITIES FOR OPERATORS

Faced with declining roaming revenues, some mobile operators have started reacting by increasing their domestic pricing plans or increasing the cost of roaming outside the area of regulation (particularly in the EU once roaming charges in the EU are removed).

This might not be the best strategy. Instead operators should adopt new pricing roaming structures, and develop alternative sources of revenues by capitalising on this significant latent demand for services.

Faced with declining roaming revenues, rather than simply increasing the prices of their other services, mobile operators should adopt new pricing roaming structures, and develop alternative sources of revenues by capitalising on this significant latent demand for services.

### Change/adopt new roaming pricing structures

Mobile operators should restructure their roaming pricing plans in order to address the latent demand. Some mobile operators have already started doing so:

- A number of operators waive roaming charges as an add on incentive for its subscribers like 3 and Orange Spain and T-Mobile US
- Other operators like Orange in France offer waiving of roaming charges for its subscribers if they spend over a certain limit
- In Germany, E-Plus, owned by Dutch group KPN NV, lets customers purchase a no-roaming-fee plan for a flat rate of €3 a month. Vodafone PLC has a similar deal
- In many cases, budget operators such as Sweden's Comviq, VikingCo NV's Mobile Vikings and Iliad SA's Free of France are leading the no-fee push, forcing larger rivals like Orange to follow suit in a market already caught up in price wars
- Comviq, the low-cost brand of Sweden's Tele2 AB, offers Swedish subscribers unlimited calls, messaging, and one gigabyte of data traffic in all EU countries, for €55 a month. Comviq thinks it can make up revenue on additional usage, once customers stop worrying about roaming fees.

### Develop alternative sources of revenue

- Some mobile operators might be interested in setting up roaming hubs or networks (IPX) to provide high quality access to their networks for a fee. The operators that are part of a commercial group are perhaps in the best position to do this. IPX hubbing makes the process of supporting roaming for multiple IP-based services much simpler and cheaper.
- Technical evolutions such as LTE and Voice over LTE (VoLTE) can support local access to services rather than the tromboning approach described earlier. This reduction in costs by using local breakouts can enable higher usage packages at lower cost.
- Enabling global access to WiFi networks using authentication controlled by the home mobile network can ease access to high speed connections when travelling and maintain control and revenue for the mobile operator.
- LTE roaming usage growth is expected to drive a range of different services like data usage monitor, premium data connectivity quality, Rich Communications Suite (RCS)/messaging, video streaming, HD voice, video calling, social networking and location-based services. This will increase value of low ARPU customers, combat high value customer loss, raise commitment level of customers and capitalise on apps.
- Real Time Intelligence/Big Data is another avenue where Wholesalers can offer tools which allow MNOs to access retail oriented and actionable information, using the wholesale raw data coming from Signalling and Roaming (GTP, info from Data clearing House DCH). These tools can help to stimulate retail usage by helping customer sub-segmentation
- Some large service providers (e.g. Facebook) have suggested that some elements of internet access should be provided to all their customers and may be willing to sponsor that access in some way. Similarly, large providers of online content, e.g. Netflix, may be willing to pay for guaranteed high quality access to mobile smartphones to permit video viewing both at home and when traveling. Such deals could provide an interesting and valuable additional revenue stream to mobile operators and IPXs interconnecting them.

## CONCLUSION

Mobile operators face many challenges in the next few years with accelerating technology changes, regulatory activities and changing user behaviour all impacting the way their services are used and their financial health. At worst, a do-nothing scenario in addressing these changes will inevitably move them down the value chain towards wireless transport providers.

The mobile industry has one massive advantage compared to many other application providers – the ability to use a globally recognised addressing scheme – the telephone number – and to seamlessly use those services wherever the customer happens to be. Traditional roaming pricing has discouraged the advantage in the minds of many consumers and they have sought alternatives to meet their needs.

Refocusing efforts on creating easily used and simply priced services that persuade the customer that their mobile service is the default service wherever they are could pay dividends in generating incremental revenue and customer satisfaction, while removing the need for regulatory action on pricing in the future. In addition, mobile operators could also seek to develop alternate revenue generating services and adapt to the changing landscape.

## HOW VALUE PARTNERS AND HOT TELECOM CAN HELP

With our extensive experience in this sector, Value Partners and HOT TELECOM believe we can help mobile operators develop the right strategy in order to position themselves successfully in the future roaming market.

Our expertise is also greatly supplemented by the fact that we have access to roaming statistics and data worldwide that will be essential to conduct meaningful analyses and develop effective strategies for mobile operators.

### **Potential voice and data roaming revenue and traffic forecasts**

- Our team of experts can help mobile operators, carriers and regulators define potential roaming revenue and traffic, taking into consideration the latent demand and the growth of the demand over the next 5 years
- The model derives its input from interviews with mobile operators in different regions, discussions with industry experts, regulators and mobile data hubs as well as market data developed during past projects
- Forecasts are developed by region and technology (2G/3G and LTE).

### **Roaming elasticity analysis**

- Our team of experts can help you understand the performance of past roaming propositions by mobile operators around the world
- Our assessment of the pricing elasticity is presented using cases studies as well as an elasticity models
- Typical case studies include profiles of mobile operators (company overview, services offered, number of subscribers, technology used), pricing package offered (structure, timeline), and impact of pricing package/structure on traffic evolution. The elasticity model includes, for example, variation of demand generated by the variation in price, and the review of the optimal pricing to maximise revenue
- This data is provided by region
- A qualitative evaluation of the difference in demand elasticity for 2G/3G and LTE can also be analysed.

#### **Competitor analysis and identification of disruptive offerings**

- Our team of experts can generate a detailed analysis of the competitive landscape highlighting examples of innovative organisations in the data roaming market, showcasing their business models and performance
- The analysis is framed around several areas of innovation and opportunity in the roaming market, drawing examples from each (including local SIM cards, global SIM cards and Apps).

#### **LTE roaming strategy**

- Our team of experts can support you in developing your LTE roaming strategy, whether in terms of roaming hubs, partners and pricing to ensure optimal quality and return on investment
- Our knowledge of the International carrier segment enables us to provide an up-to-date view of who is offering what, when it comes to roaming support, and what solution and provider would best meet your objectives
- This type of project can also include workshops on IPX and how it can help you offer the best customer experience to your LTE subscribers when roaming while optimising your revenue.

With extensive experience in this sector, Value Partners and Hot Telecom can help mobile operators develop the right strategy in order to position themselves successfully in the future roaming market.

## AUTHORS



**COLIN BROOKS**

Managing Partner, London Office

[colinj.brooks@valuepartners.com](mailto:colinj.brooks@valuepartners.com)



**ISABELLE PARADIS**

President, Hot Telecom

[paradis@hottelecoms.com](mailto:paradis@hottelecoms.com)



**ETIENNE PICIOCCHI**

Engagement Manager, London Office

[etienne.picocchi@valuepartners.com](mailto:etienne.picocchi@valuepartners.com)



**STEVE HEAP**

CTO, Hot Telecom

[steveheap@hottelecoms.com](mailto:steveheap@hottelecoms.com)



**ADITYA KANDATH**

Business Analyst, London Office

[aditya.kandath@valuepartners.com](mailto:aditya.kandath@valuepartners.com)

## ABOUT HOT TELECOM

Hot Telecom is a leading telecommunication research company providing premier quality telecom research and services to the International telecom community. Hot Telecom's team is composed of International telecom experts based in America, Europe and Asia, giving it a unique insight into the global telecom market.

In over 11 years, Hot Telecom has served 200+ of the industry's leading operators, consulting firms and governments globally, providing them with telecom analysis and reports, training and consulting services across a wide range of subject areas.

We have extensive and unrivalled international experience working on data roaming from both a technical and commercial perspective.

Our projects include:

- Development of a comprehensive model of international voice, messaging and data traffic and revenue - This has been extended with a detailed regional analysis of roaming of those services coupled with assessments of the impact of changing technology, particularly LTE, on the roaming volumes and revenue
- Detailed financial analysis to support an actionable plan for a major voice wholesale company - Our client was looking to expand into the support of mobile international interconnect and roaming services
- Detailed report on carrier and mobile operator IP migration, advanced service launch and IPX deployment plans - we developed the report from comprehensive interviews with key players and a global survey of the industry

For more information on the issues raised in this note please contact the authors.

Find all the contact details on [hottelcom.com](http://hottelcom.com)

## ABOUT VALUE PARTNERS

Value Partners is a leading international strategy consultancy focused on the converging industries of telecommunication, media and information technology.

Founded in Milan in 1993, Value Partners' rapid growth testifies the value it has created for clients over time. Today it draws on 25 partners and 250 professionals from 23 nations, working out of offices in Milan, London, Istanbul, Dubai, São Paulo, Buenos Aires, Beijing, Shanghai, Hong Kong and Singapore. Value Partners has built a portfolio of more than 350 international clients - from the original 10 in 1993 - with a worldwide revenue mix.

Our clients include the world's leading operators, vendors, financiers, policy makers and regulators. We work across corporate and commercial strategy, economic and financial advisory support, licensing, regulation, rights management, organisational change and operational improvement.

In particular, we have deep expertise in carrying out projects related to data roaming and regulation. Some of our projects include the business model evaluation in the roaming market, evaluation and development of a new business model for the Multinational Companies (MNCs) segment, and the assessment of roaming market - we supported a mobile roaming start-up client in gaining investment for a multiple-number based roaming solution.

For more information on the issues raised in this note please contact the authors.

Find all the contact details on [valuepartners.com](http://valuepartners.com)

Milan  
London  
Istanbul  
Dubai  
São Paulo  
Buenos Aires  
Beijing  
Shanghai  
Hong Kong  
Singapore