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**Elevate your subscriber roaming business:
Five considerations for operators**

Introduction

Today's subscribers are more open to the concept of roaming than ever before. High smartphone adoption, 24/7 internet use and increased travel have created unprecedented demand for international roaming.

Until recently operators were focused on boosting roaming use - some roamers opted for local SIM cards, others used WiFi services, and others just remained silent when abroad. Today, subscribers are more open to the idea of roaming. In this context, operators are needing to adapt their legacy roaming cost structures to the new market reality, while finding that they have very little control over the subscriber experience while roaming. This can result in compromised Quality of Experience (QoE) and consequently, subscriber churn.

The rise of a new roaming era

In June 2017, the landmark EU decision to abolish mobile roaming tariffs came into force. The Eurozone-wide change in regulation has further encouraged subscribers to keep their phones on while abroad. Although this has driven data roaming use to an all-time high, it also fundamentally altered a key revenue driver for operators.

Changes in roaming regulations are not limited to Europe. In 2021 Cameroon, Central African Republic (CAR), Chad, Congo, Equatorial Guinea and Gabon abolished intra-regional roaming charges.

Since 2007, when the EU's first roaming directives were issued, the unit costs of voice calls, SMS, and data for subscribers roaming outside their home network have declined significantly – and are today the same as domestic prices[1].

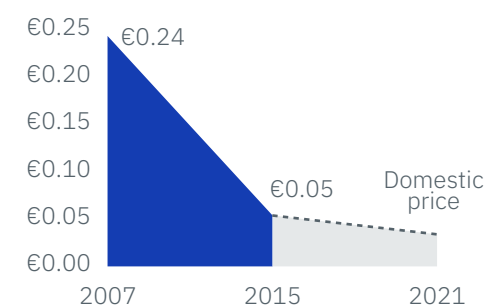**Roaming when travelling in the EU**
From 15 June 2017: no extra charges
Maximum roaming prices decreases since the EU took action in 2007
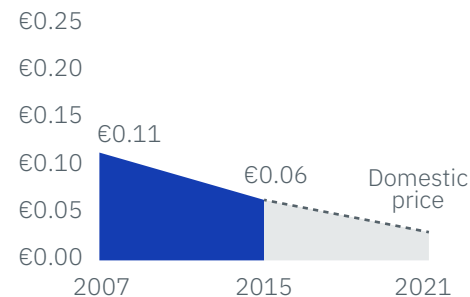(prices in euro cents, excl. VAT)

Voice calls made (per minute)
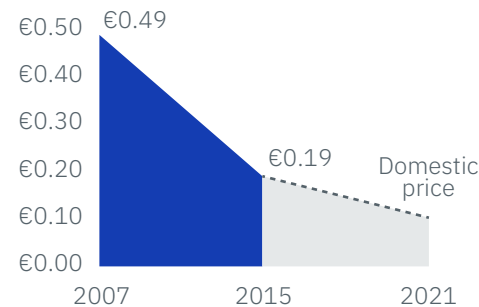
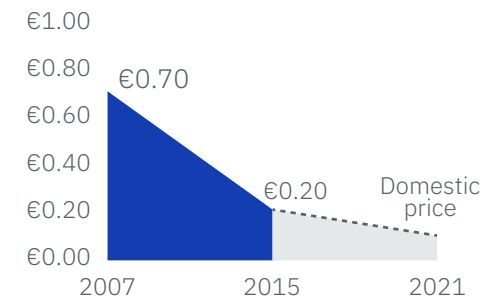**Voice calls received (per minute)**

SMS sent

Data (per MB)

[2]

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[1] https://ec.europa.eu/digital-single-market/en/roaming-tariffs
[2] https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/662599/EPRS_BRI(2021)662599_EN.pdf

The new roaming opportunity

Do operators have the means to make the most of the ever growing number of people travelling?

Do they have the insights needed to better serve subscribers?

Do they have the capabilities to introduce innovative roaming models and reduce costs while preventing fraud?

How can they gain further control over QoE?

What new mobile services can they develop for new segments?

Answers to these questions would enable them to drive up ARPUs once more.

Show me the money: what's next for the roaming business?

It's easy to see why operators place so much value on their roaming business. Traditionally, this roaming has provided them with additional revenues above domestic network access fees, with a market size of USD 70.76 billion in 2020, and expected to expand at a compound rate of 5.1% up to 2028[3]. This will only continue to grow with the increasing amount of business and leisure travel we see across the board.

Roaming has also been seen as essential for mobile operators trying to reverse the ongoing decline in ARPU, which has dropped in every region around the globe since 2008[4]. However, the roaming playing field has changed, and it's due to three key factors:

Changing regulations – as demonstrated by the abolition of roaming tariffs in the EU and Western Africa, and other changes taking place around the world.

Increased competition – whether from other operators offering new, tailored roaming packages, alternative service providers with specialized roaming SIMs or digital service providers offering over-the-top alternatives.

QoE challenges and missed opportunities – subscribers that are let down by a poor user experience while roaming, or those that remain silent and avoid using mobile services at all when away from the domestic network.

With such a vital part of their business at stake, the time to make a change is now.

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[3] Roaming Tariff Market Size, Share & Trends Analysis Report By Roaming Type (National, International), By Distribution Channel, By Service (Voice, SMS, Data), By Region, And Segment Forecasts, 2020 - 2027
[4] PWC telecom trends, July 2017

Three lucrative opportunities for operators willing to move into the next generation of roaming service.

Insight-led QoE and subscriber personalization – operators can use insights from big data analytics to stimulate the roaming business through availability, convenience, and a high quality experience. Equally, a deeper view into roaming performance will help ensure consistent QoE.

Enterprise and the IoT – a recent report from Juniper research predicts that the global number of IoT devices will reach 46 billion by the end of 2021, marking a 200% increase since 2016 and many of these devices will need global connectivity[5]. Delivering high quality roaming for IoT devices is a major opportunity for operators.

Activation of the data revenue stream – through real-time engagement, attractive bundles tailored to individual preferences and the offer of new services such as VoLTE roaming. Operators can trigger a step-change in the revenue curve through data roaming.

Global connectivity is a central enabler for the machine-to-machine opportunity and new subscriber roaming services.

These two opportunities are interlinked. Ensuring QoE for consumers as well as IoT devices, while boosting roaming use, will be a vital factor in helping operators move up the value chain.

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[5] https://www.juniperresearch.com/researchstore/devices-technology/internet-of-things-iot-data-research-report/subscription/consumer-industrial-public-services

Five considerations for defining a next generation roaming strategy

The decline in global roaming revenues has required operators to focus on innovation as the mechanism for driving new, revenue-generating usage. Almost every growth generation strategy has its foundations set in the use of network data and advanced analytics to succeed, and this is where operators are in a unique position.

They have vast data lakes of network and subscriber information that can drive next-generation opportunities. However, this also presents a challenge associated with managing additional traffic and roaming partner QoE, on top of existing subscriber demands.

Here are five key questions operators need to ask themselves about the future of roaming:
1. How can customer centricity be achieved?
2. How can the subscriber experience be optimized with steering strategies?
3. How can the IoT roaming opportunity be capitalized upon?
4. How can long tail opportunities be addressed?
5. How to capitalize on the inbound roaming opportunity?

1. How can customer centricity be achieved?

Operators can stimulate roaming by addressing the specific demands of the mobile-first, content-led lifestyle of today's subscribers. By understanding the preferences of each customer and which services they engage with the most, operators can offer tailored packages that enables them to continue accessing those services whilst abroad.

However, to deliver this, operators not only need to **understand customers' preferences and expectations** but **offer the right innovative products** and pricing to **deepen engagement**. They also need to consider how they can ensure customers who engage with these new products **avoid bill shock**.

Strategy
• Subscriber usage pattern analytics using data already in operator systems
• Timely warnings, usage caps and transparent, proactive communications to reassure subscribers
• Data analytics to achieve insights into subscriber preferences
• Real-time data usage tracking and proactive communications to prevent bill shock
• Migration to VoLTE roaming

The personalized roaming experience opportunity

For example, a subscriber that regularly uses an Internet TV service on the home network could be offered access to preferred programs while abroad at a reduced rate. In addition to generating up-front revenues for the operator, this bundle will move the subscriber away from Wi-Fi, and so also stimulates further data usage.

Crucially, to avoid damaging the relationship through bill shock, the operator can send proactive warnings or introduce an automated cap once the subscriber reaches a pre-set data limit.

2. How can the subscriber experience be optimized with steering strategies?

To ensure that international roaming customers receive optimal quality of experience, operators can connect subscribers via a preferred network using steering technology. Steering strategies can provide roamers with international connectivity services that are optimized for price, security, and quality.

But to make the best use of steering strategies in **optimizing customer tariffs**, operators must ensure that they are **relevant and well-timed**. If the operator's steering strategy connects roamers to the right networks at the right time, they will **achieve control over the customer's roaming experience**. So whether they are prioritizing quality of experience, or **protecting consumers from fraud**, roamers are connected to the right partner networks.

Strategy
• Proactively steer roaming customers to carefully selected partner networks to guarantee quality of experience
• Prevent fraud in order to capture all roaming revenue opportunities by offering roaming services to as many subscriber segments as possible
• Optimize interoperator tariffs by establishing a reliable network of preferred partners
• Migrate to VoLTE roaming for control over IMS service and cost structure

The roaming quality of experience opportunity

Frequent travelers and immigrant workers are two subsets of users that deliver high conversion rates for customized roaming bundles.
For example, a frequent business visitor to Singapore can be offered a 'premium traveler' bundle containing a per-day level of data use and priority high-quality access to certain applications, tailored to his or her individual requirements.

Prerequisites for success:
a. The foundation of this revenue generator is in big data analytics. Not only is real-time tracking of roaming usage required to identify the individual subscribers and their requirements in the first place, it also enables timely reminders to prevent bill shock and avoid disputes.
b. Ease of use is key. This starts with the initial marketing message that sparks the up-sell opportunity, but extends to the subsequent activation and updates around the subscriber's usage of the bundle thereafter.

3. How can the IoT roaming opportunity be capitalized upon?

For many IoT use cases such as logistics, transportation, and automotive manufacturing, roaming solutions are required to direct traffic from the device onto a preferred roaming partner in that country with a high QoS. By being flexible enough to address specific enterprise roaming needs, mobile operators will become vital partners to enterprises – transforming business operations by delivering connectivity without complexity.

This necessitates operators **achieve a global machine-to-machine network footprint** that helps enterprises **extend their connected business beyond domestic borders** and **delivers high quality of service for IoT deployments**.

Strategy
- Incorporate a global connectivity proposition into your IoT offering. *This is a highly lucrative revenue opportunity*
- Use a roaming hub as the gateway to these new sources of inbound roaming revenue for simplicity and efficiency
- Deliver reliable and high-quality connectivity: crucial for enterprises deploying IoT devices

The enterprise IoT opportunity

Tracking devices connected through cellular technology packages containing high-value goods often need to travel between multiple countries. A constant, reliable data stream from the device is required to ensure the package is on schedule and on course, in order to offer greater visibility to the end customer. The roaming solution must be comprehensive and flexible enough to ensure connectivity wherever the package goes.
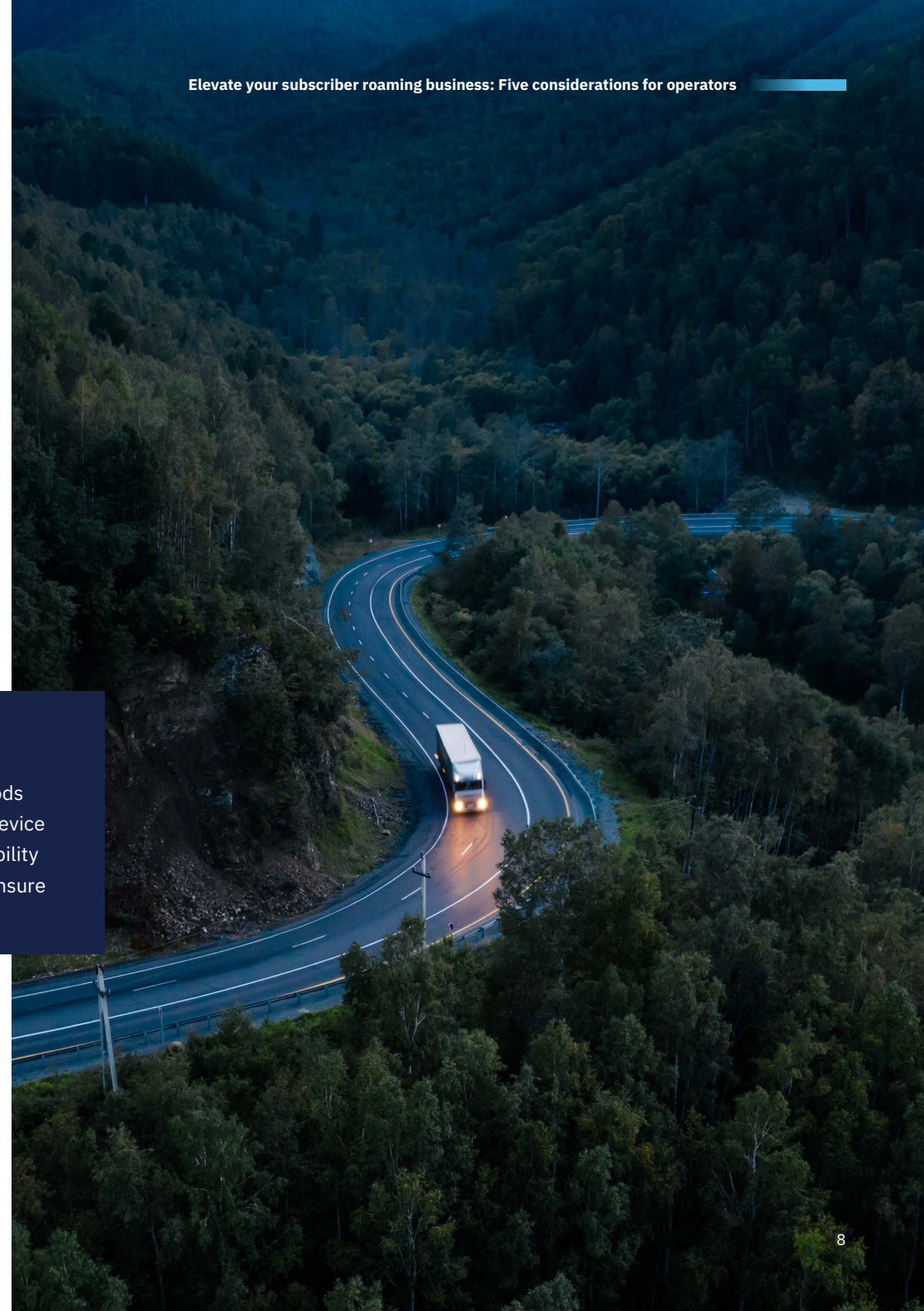
4. How can long tail opportunities be addressed?

To tap new customer segments and drive roaming revenues, operators must be able to **support any inbound roamer** through open connectivity with all MNOs and MVNOs, regardless of their size. But achieving **global roaming coverage (including less visited countries)** and rollout while **minimizing operational complexity**, is a major challenge for operators. It needs significant clout and resources to **manage the technical and commercial relationships with partner networks**, which can be particularly difficult for smaller operators.

Strategy
- Explore innovative models like hub-based or sponsored roaming to seamlessly achieve multilateral linkages through a single technical and commercial relationship with adequate security
- Use a comprehensive one-stop solution from a reliable partner to outsource the management of roaming infrastructure including connectivity, clearing, analytics, and voice/ messaging/ data services. Minimizing the cost of roaming management facilitates a profitable relationship with any MNO or MVNO

5. How to capitalize on the inbound roaming opportunity?

Global connectivity is a central business requirement for new MVNOs, global IoT enterprises, and digital service providers. To deliver on their value proposition, these players need **access to mobile networks** around the world. Consequently the market for inbound roaming is huge with billions of new connected devices coming to mobile networks.

Strategy:
- Open your network to as many as possible to these new players
- Use a roaming hub as the gateway to these new sources of inbound roaming revenue - it offers the simplicity and efficiency that the ecosystem needs for this new global connectivity requirement

The inbound roaming opportunity

A manufacturer based in Germany sells forklifts in every country in the world. The forklifts now embed connectivity for connected applications but do not have the capability to integrate with the IoT platforms of mobile operators in each country. It therefore uses a global SIM provided by a global MVNO and uses roaming as a connectivity enabler in each country.

This global MVNO uses a roaming hub for global connectivity, enabling any MNO on the hub to support traffic from the connected forklifts.

The three (big) data pillars: how network insights shape future roaming opportunities

Data is the lifeblood of the operator's network. The role of network, usage and subscriber data is set to become ever-more essential for operators to boost the roaming business and achieve margin growth – and will be essential for effective management of the mobile network in the age of IoT.

Each time a subscriber accesses the network, engages with an application, or makes a phone call, they are creating more insights into their preferences. The same applies for an IoT device. If this information is structured and analyzed in the right way, and subsequently combined with network data, it can be used to deliver highly personalized bundles that help drive the growth of roaming revenues in the future or identify when and where traffic needs to be prioritized.

When it comes to the use of data for informing the future of roaming opportunities, and particularly the IoT, data is the mechanism by which operators can add value beyond connectivity to drive new revenues:

Question	Consideration	Strategy
How can operators use big data to prevent roamers from switching to roaming alternatives?	• The roaming market is facing stiff competition from alternative roaming services • There are more opportunities for low-cost roaming available to subscribers than ever before, and some still become silent roamers when abroad	• Use big data analytics to identify each subscriber's preferred services, then differentiation through availability and convenience • Offer greater control and visibility of consumption while roaming, enticing subscribers to keep their phones switched on and connected to the mobile network
How can operators use insights from data for customizing the roaming experience?	• Revenues increase if operators differentiate via QoE • This depends on real-time insights into subscriber preferences, gleaned from analytics and usage data	• Develop personalized roaming bundles – matching usage profile, time spent in other countries, and other preferences • Combine bundles with prioritized access to OTT video and other services from the domestic network to attract usage • Use this data to hold roaming partners accountable and identify problems in real-time. Also, automate QoE management for affected subscribers, or take informed steps manually
How can operators use network data to help wake up silent roamers?	• Silent roamers are a major opportunity for operators to generate additional revenues from their own subscribers	• Empowered by subscriber data, operators can develop specific marketing campaigns aimed to stimulate roaming among this subset of users • Using real-time data access to give these subscribers flexibility is key; setting daily usage caps, tracking data consumption, and providing real-time alerts, will give subscribers new confidence in roaming services

Conclusion

Demand for roaming services will only continue to grow and has the potential to drive revenues. However, as the EU example has shown, it is important to adapt to a new paradigm where roaming has turned into a commodity for the mass market, have the strategies in place to take advantage of consumer reliance on roaming services, stimulate their use through personalized offers and optimizing the user experience while maintaining profitability.

Advanced data analytics will underpin the future of roaming revenues. BICS' solutions have been designed with this need in mind. Building on its heritage as a leading wholesale carrier, BICS has a widespread global footprint and a range of value-added services that make it easy for operators to implement controls on data usage and consumption per partner, application, or subscriber; and use network traffic and subscriber data to unlock the next generation of roaming opportunities, increase QoE, and enhance customer loyalty.

Finally, our mobile ecosystem is changing fast and global connectivity is an enabler to stimulate growth of our mobile industry. New players from the IoT ecosystem, digital service providers, and MVNOs need roaming connectivity to deliver their value proposition everywhere.

Operators today have the opportunity to step up and optimize the roaming business speed and agility, incorporating new opportunities and thus avoid becoming a victim of changing circumstances such as regulation and new competitors. To emerge as winners, they need to be prepared.

For more information, please visit:
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