



LTE Roaming

Market Strategies and Deployment Considerations



Agenda

- LTE market status and outlook
- Strategies to increase LTE roaming usage and take-up
- Future roaming opportunities
- Key services that are shaping the future of roaming and its opportunities
- Conclusions and recommendations
- Q&A

New whitepaper – LTE Roaming: Global Market Status and Drivers for Growth

informa
telecoms & media

LTE Roaming: Global Market Status and Drivers for Growth

Deployment plans, vendor choices and monetization strategies



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- First of a series of two whitepapers, it explores:
 - LTE evolution around the globe
 - LTE impact on current roaming business models
 - Strategies that will drive LTE roaming usage and take-up
 - New services that will drive LTE roaming usage

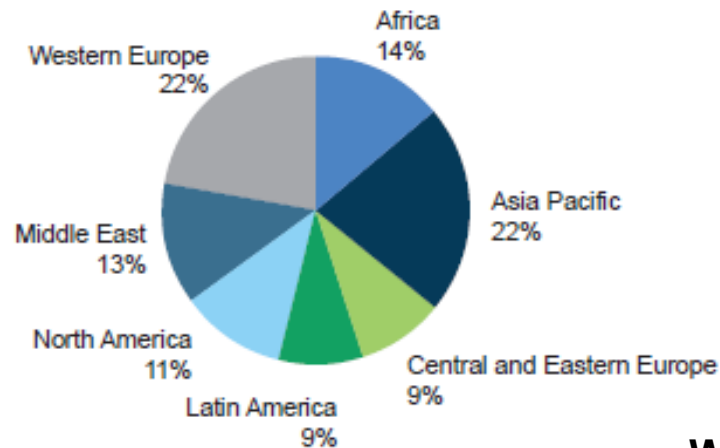
The second whitepaper, to be published late September, will provide Informa's perspectives on the future of roaming

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Before we start...

...let's talk about the survey demographics

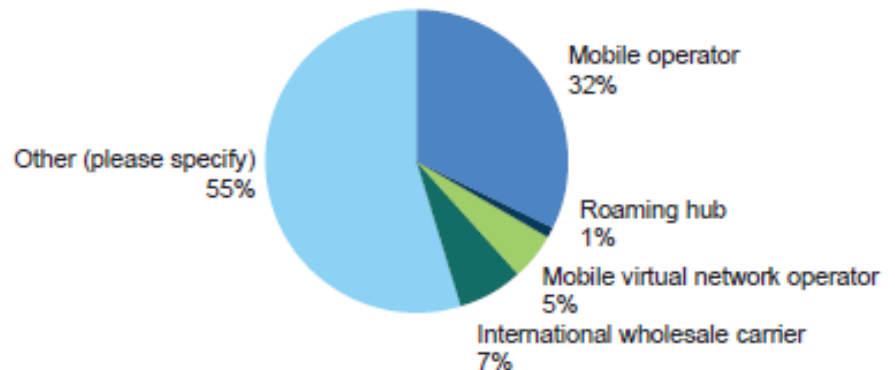
In which region are you based?



n= 423
Source: Informa Telecoms & Media

- Europe and Asia Pacific were especially strong regions, because of the early LTE rollouts there and the large amount of intra- and inter-regional roaming within them
- LTE rollouts are taking place in the other regions, but more sporadically there

What is your company primary area of business?



n= 423
Source: Informa Telecoms & Media

- Online survey conducted in May/June with approximately 423 respondents, including 188 operators

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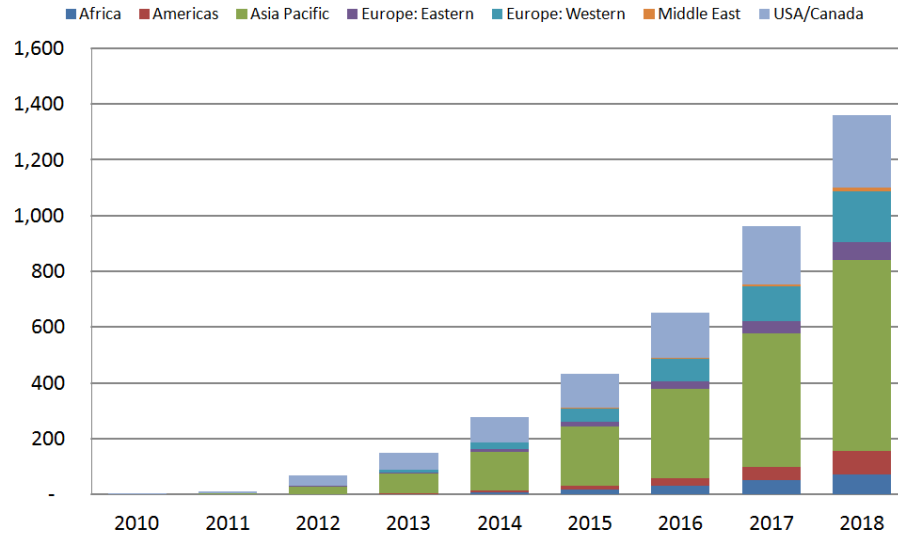
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LTE subscriptions will grow an average 64% annually over the next five years, pushing roaming data traffic growth

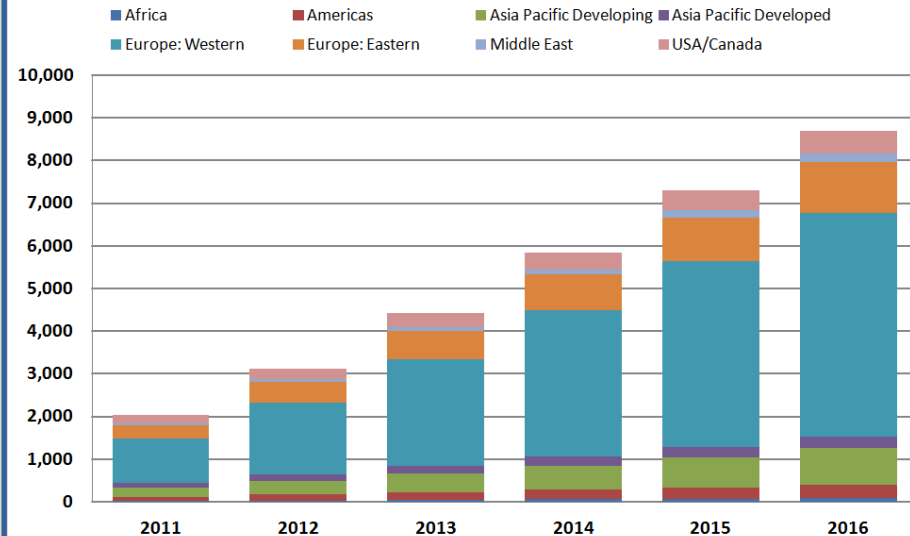


Global LTE subscriptions (in Millions)



Source: Informa Telecoms & Media

Total roaming data transactions (in million of MB)



Source: Informa Telecoms & Media

- There will be 653 million LTE subscriptions in 2016 and more than 1.3 billion by 2018:
 - Europe will represent 13% of total subscriptions in 2018
- Roaming data traffic will grow at exponential rates over the next four years, with Western Europe still being the biggest roaming market

Evolutionary trends: New technologies

LTE roaming challenges



Spectrum fragmentation

- National LTE roaming is already a problem
- Only a fraction of spectrum blocks overlap
- Internationally, roaming complexity is also feared

Consumption patterns

LTE will change data consumption patterns:

- Usage-based charging and by content or service consumed
- Real-time charging critical ; more complex rating and settlements.

Voice roaming

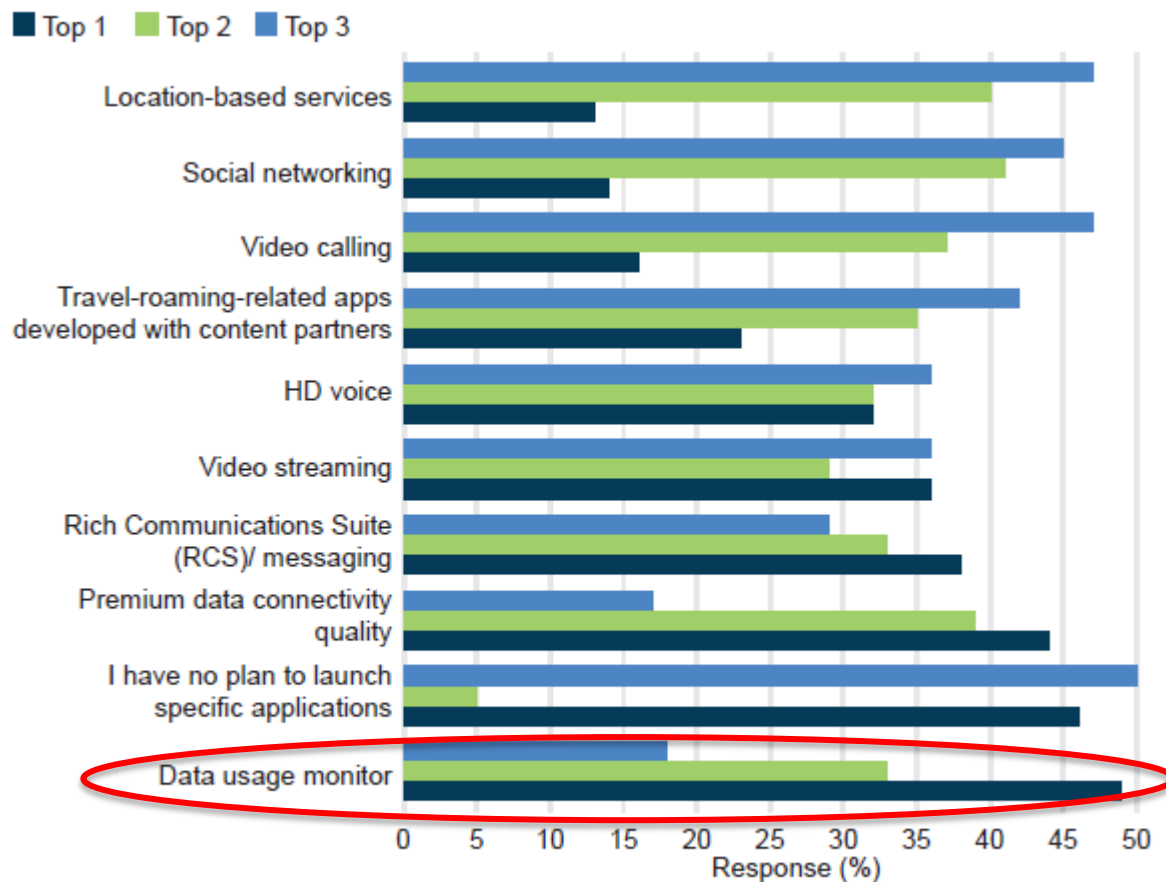
- VoLTE may affect rating models (by MB vs. by minute)
- It will enhance OTT players presence in the market
- New IP interconnect models will gain favor

Seamless experience

- Service experience must be the same at home and when roaming
- Same services must be available at home and roaming
- Costs must be transparent and visible

Increasing LTE roaming take up: Transparency

What specific applications/services do you plan to launch in order to drive LTE roaming usage?



Bill shock is still a critical barrier for roaming adoption. Operators need to offer the appropriated tools to provide education and transparency to customers.

n=117 (mobile operators and MVNOs)

Source: Informa Telecoms & Media

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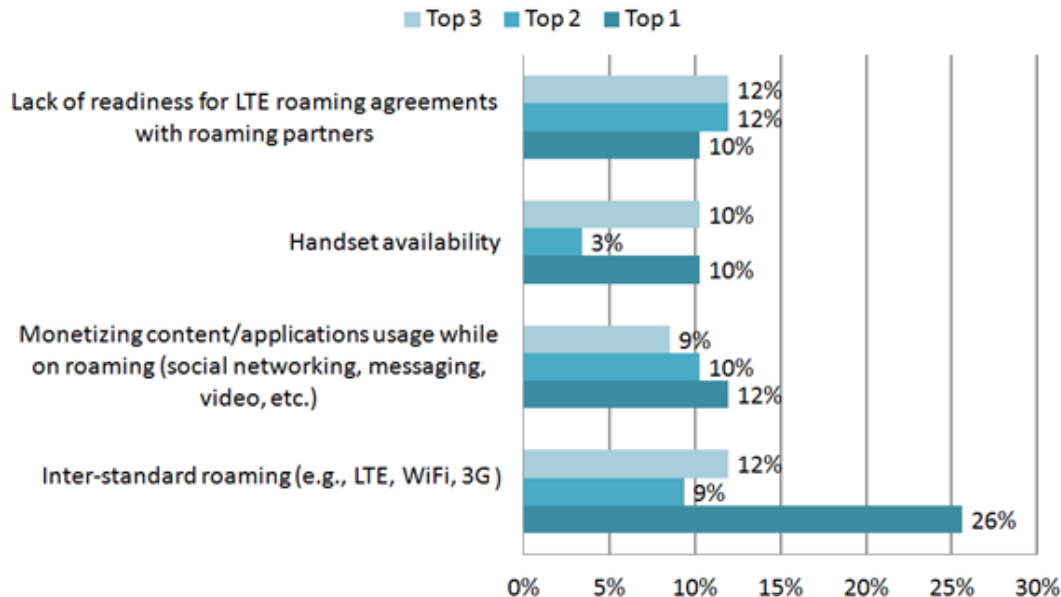
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Increasing LTE roaming take up: Service quality



What are the biggest challenges in roaming and interconnect you expect to face after LTE deployment?



N:117 (Mobile operators and MVNOs)
Source: Informa Telecoms & Media



Business users will generate more than 60% of data roaming traffic by 2016

Roaming QoS will be even more relevant to support key mobile business applications

- It will still take time for LTE to cover significant areas worldwide
- Until then, roamers will keep transiting over various technologies

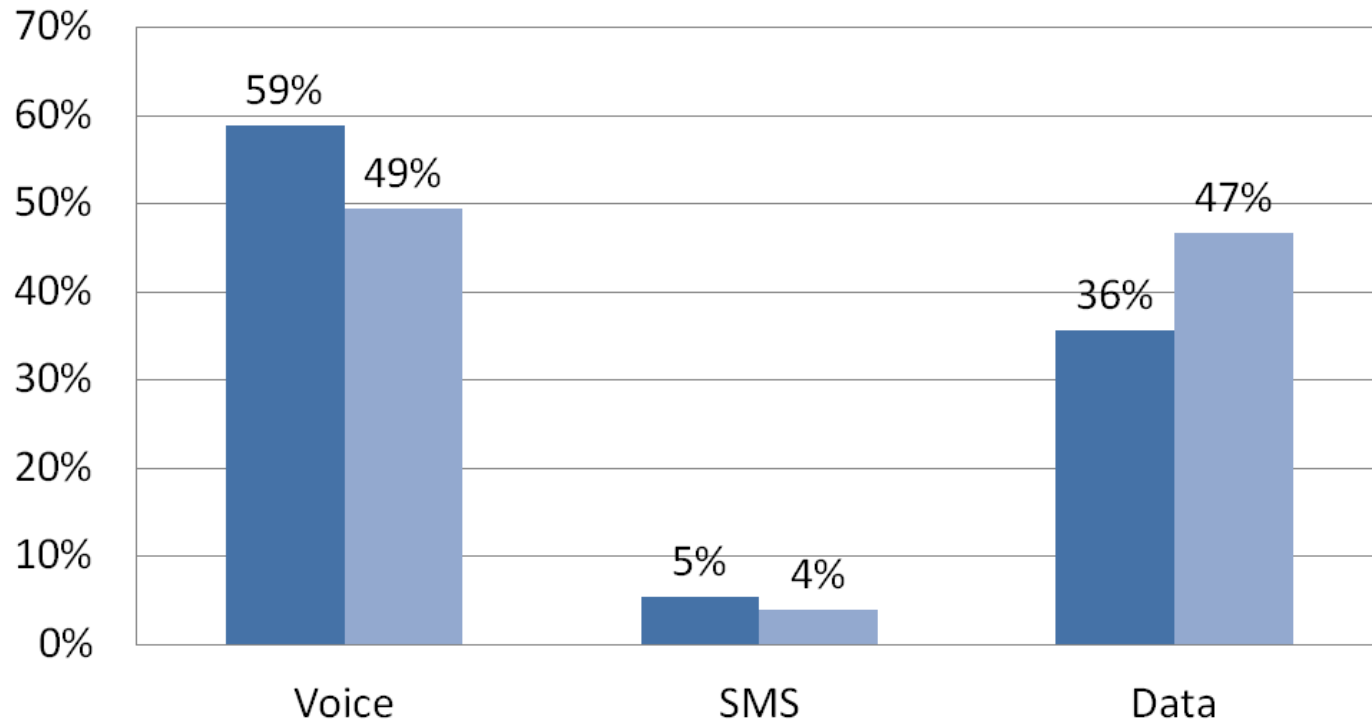
How will operators guarantee customers' LTE QoS while they are roaming?

Data is roaming's biggest opportunity, but voice still represents more than 50% of total roaming revenues



Total roaming revenues share

■ 2012 ■ 2016

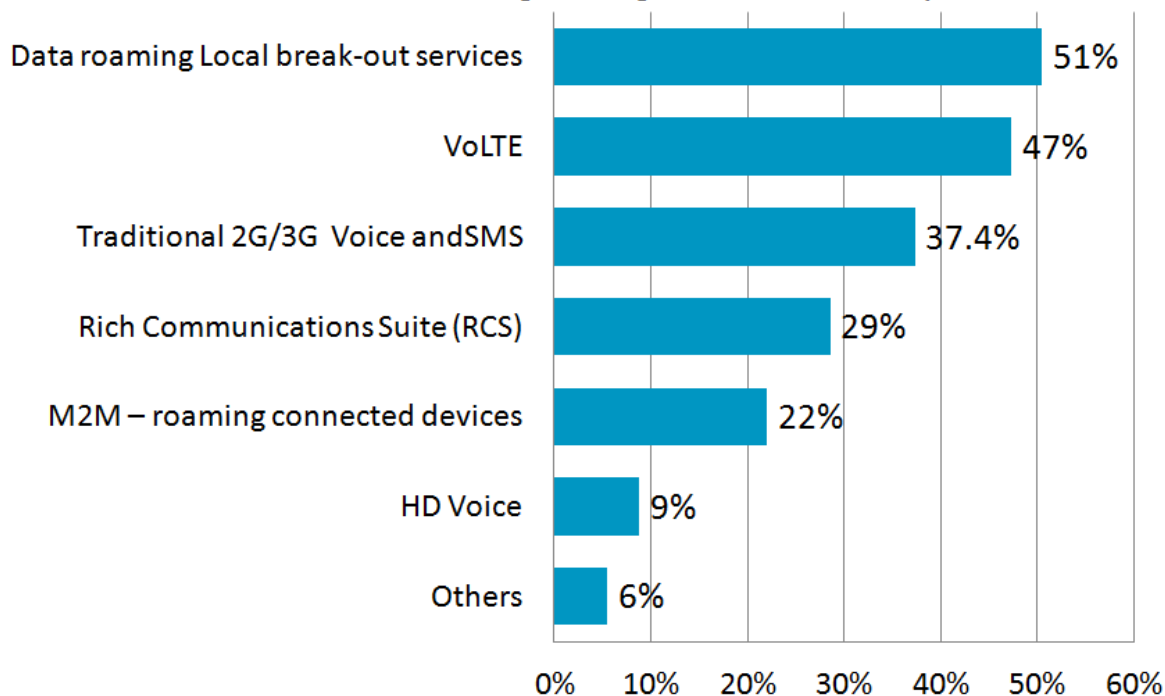


Source: Informa Telecoms & Media

Emerging opportunities are attracting the operators' interest, but voice-related services are still considered to be revenue-growth drivers



Which services will drive roaming revenue growth over the next five years?



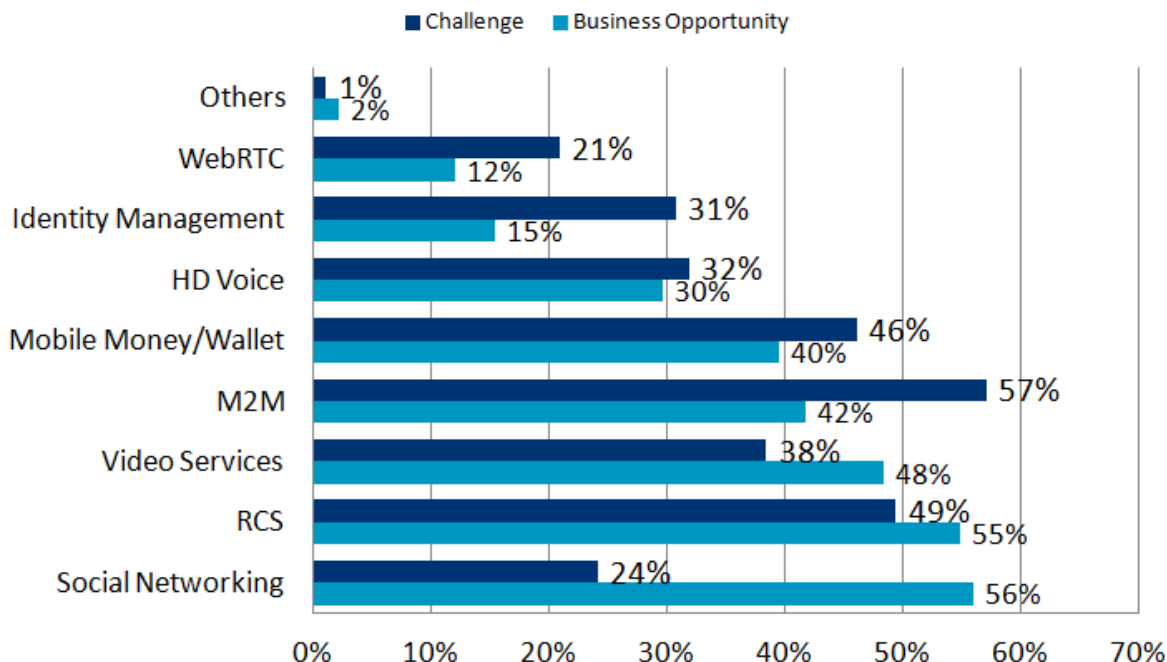
Source: Informa Telecoms & Media
N: 91 (Operators & MVNOs)

- LBO is an emerging topic attracting the market attention, but its challenges and opportunities are still uncertain
- Voice services will still represent the biggest revenue share. **However, they will need to evolve into a broader context (RCS, social networking, etc.)**

Social networking offers good opportunities, M2M also has a significant potential, but the challenges will be great



Which services will generate more opportunities and/or challenges in roaming context?



Source: Informa Telecoms & Media

N: 91 (Operators & MVNOs)

- Social networking has a strong appeal for users and it is less complex to deploy
- RCS still relies on standards creations in the local market – but it is just a matter of time before these hurdles are resolved
- M2M models are still too fragmented and need more help in setting up roaming standardization

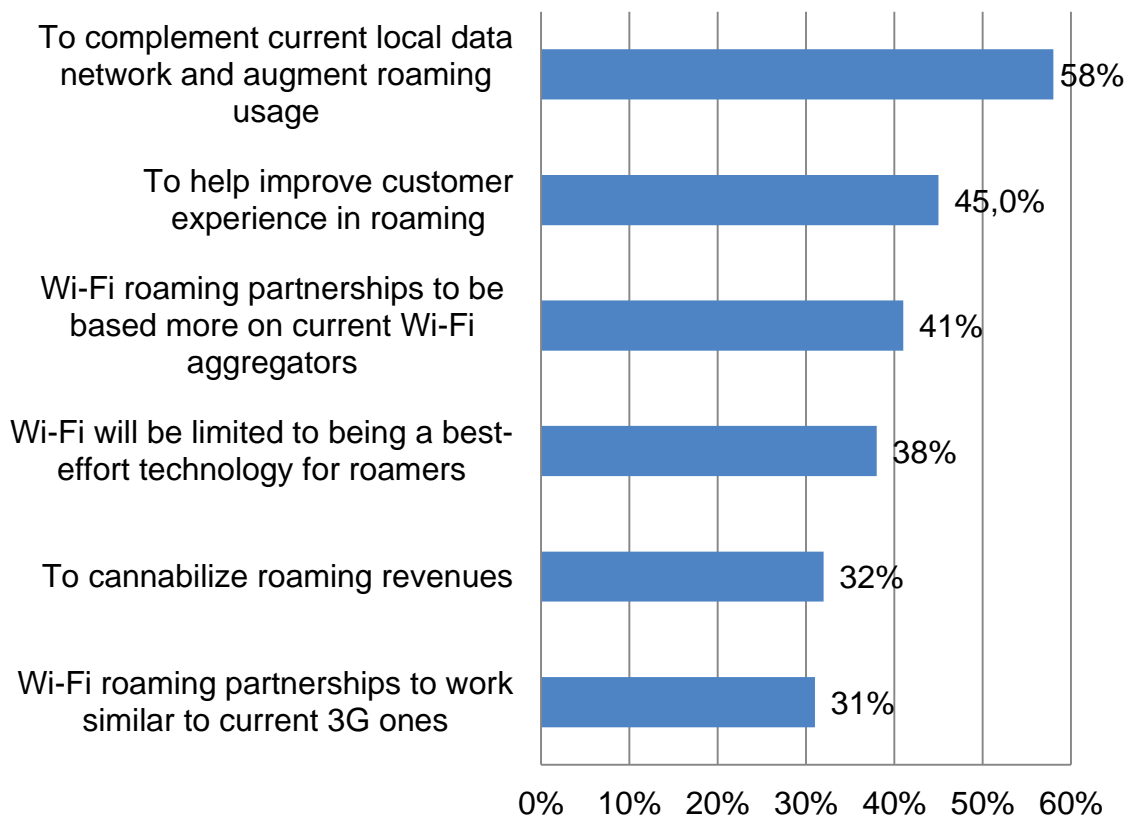
M2M example: Roaming challenges

- **M2M connectivity profiles are at odds with classic roaming**
 - M2M apps vary considerably, but can produce high-volume, short connectivity sessions consisting of small data transmissions
 - This can prove costly, depending on increments billed for data services domestically and internationally by a given carrier
- **Traditional SIM homing doesn't work for international M2M**
 - A SIM homed to a particular network is at the mercy of roaming agreements that its home network has established
- **M2M services are moving from national to multinational deployments**
 - Necessitates brokering of efficient bulk international M2M roaming agreements
- **Operators are allying to extend reach and manage costs**
 - For example, France Telecom and Deutsche Telekom with the recent addition of TeliaSonera
- **Global M2M SIMs establish a new ecosystem for roaming**
 - To enable multinational or roaming connectivity, global M2M SIMs use shared Mobile Country Codes (MCCs) to provision Mobile Network Codes (MNCs) and IMSI ranges
 - These SIMs that are not homed to carriers in a specific country, they are permanently roaming

Carrier-grade Wi-Fi – not a threat but an opportunity to improve customer experience



What is the level of agreement for Wi-Fi in the roaming context? (agree and strongly agree)



Wi-Fi will help operators improve their roaming propositions:

- Wi-Fi will augment data usage through improved coverage and seamless experience
- It will monetize the roaming opportunity for Wi-Fi-only devices which was closed-off earlier in cellular roaming

Source: Informa Telecoms & Media

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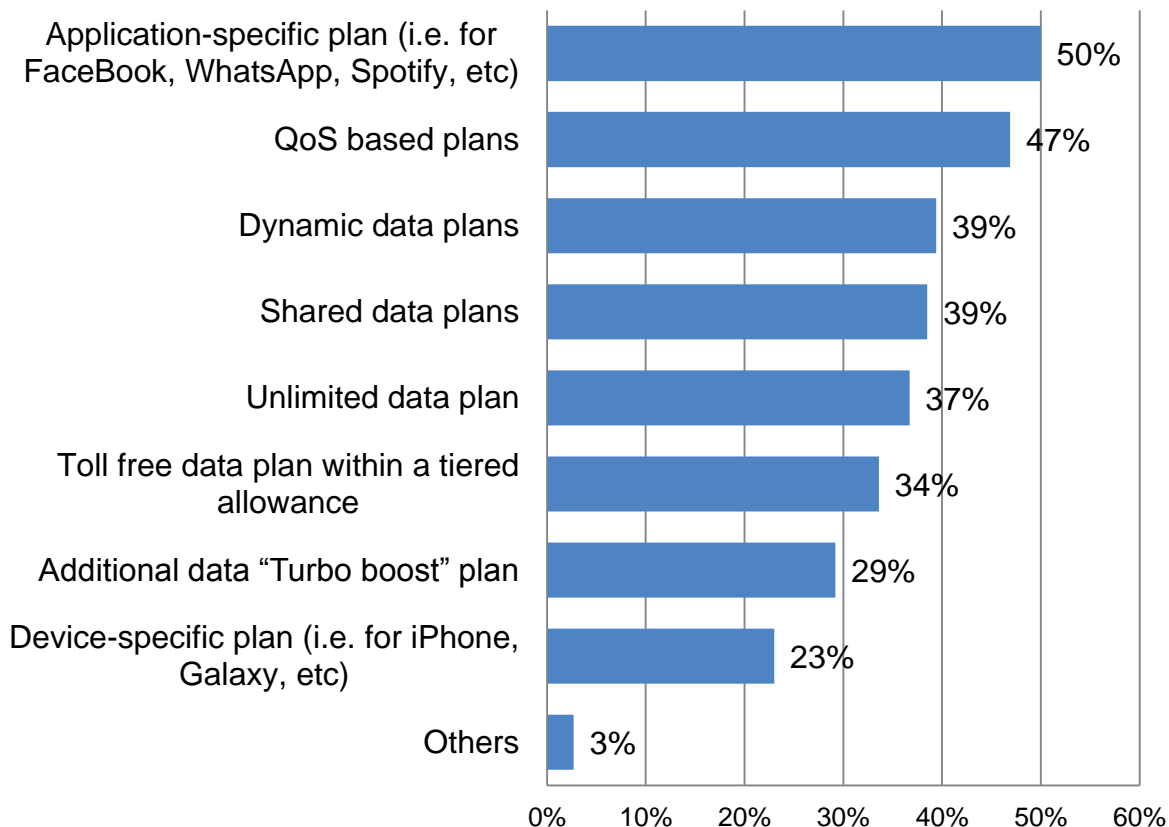
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Application-specific and QoS plans are the most popular to evolve the roaming offer



What type of plans will be extended to roaming customers similar to home markets?



Source: Informa Telecoms & Media

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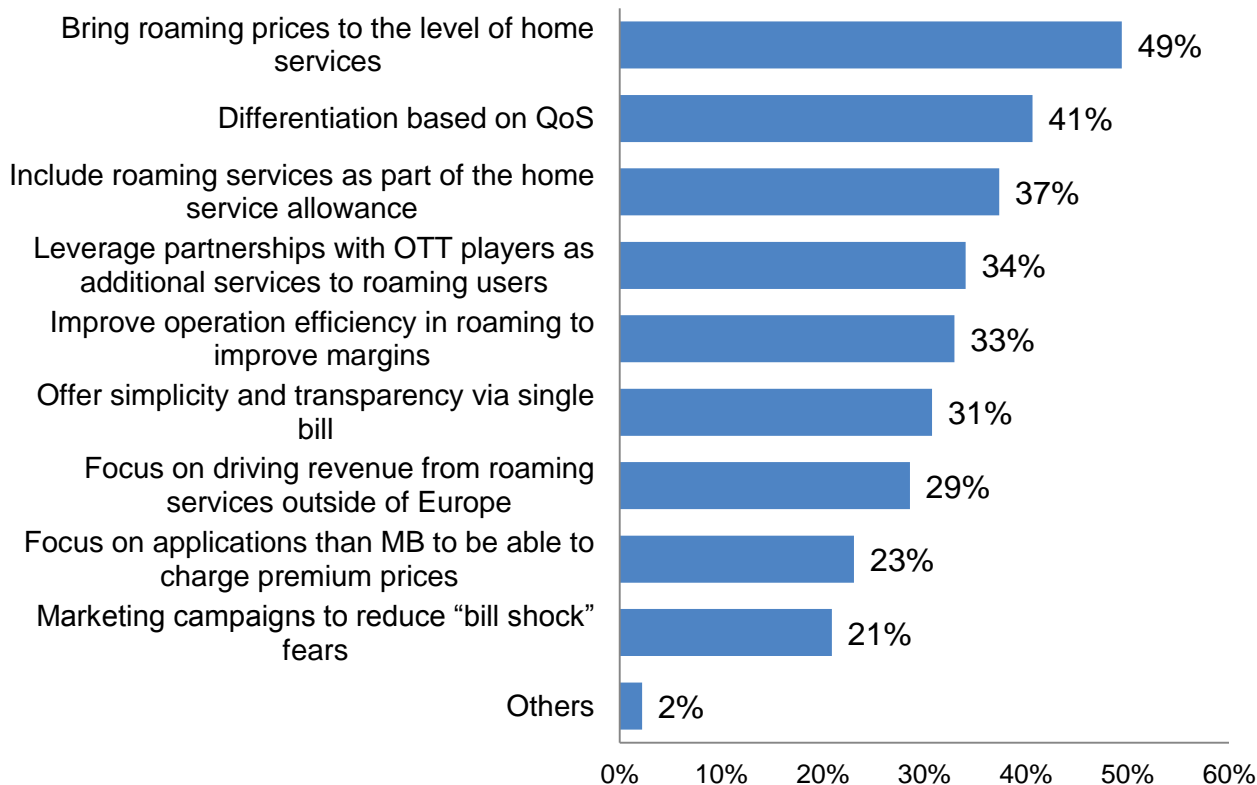
- The high levels of popularity of social networking and media applications will influence roaming tariffs as “leisure travellers” would like to **stay connected** when roaming
- Business travellers will also value application-specific plans, but **QoS** will be a significant requirement from this segment

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Price is one step, but operators will still need to provide service differentiation to sustain their roaming businesses



What key actions do operators need to take to sustain their roaming business in the long term?



Under EU2014, operators will need to not only revise their roaming access charges down but they also need to create new **service differentiation** to remain competitive in both home and foreign markets

QoS differentiation will be vital for acquiring business roamers while new **OTT service propositions** will become essential to attract new roaming segments

Source: Informa Telecoms & Media

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Conclusions



LTE will push customer expectations in terms of service quality in both home and roaming. Operators need to ensure they have the technical capability to maximize LTE roaming experience



Operators should approach LTE roaming with a view to monetize as much data traffic as possible.



Operators still consider voice services as the main roaming opportunity of the future. As voice migrates into IP, the services need to be part of a broader context including video, messaging and social networking.



Operators can't underestimate the importance of roaming on new digital services. QoS, interoperability and technology standards are still challenges for innovative services.

Source: Getty Images

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Recommendations



Roaming QoS should be the top priority for operators. With more digital services and applications and increasing customer expectation, “best-effort” access won’t be enough.

Roaming still represents a good opportunity. But operators need to move away from selling connectivity and start offering solutions, services and applications (e.g., social networking, SFDC, RCS, M2M, etc.)

Yes – in the future, roaming will still largely be about voice services. However, it won’t be the voice service we know today, it will be integrated with other services in a broader concept (e.g., RCS, unified communication, social networking, etc.)

Data services will demand more from operators to improve the quality of the roaming experience. Partnerships with local and global carriers cannot be about price, it will be experience, reach and IP capabilities that will be key success factors.



Gracias!

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