

## LTE Business Suite 2014-2018

https://marketpublishers.com/r/L8E5CF7B0F1EN.html

Date: April 2014

Pages: 200

Price: US\$ 6,250.00 (Single User License)

ID: L8E5CF7B0F1EN

## **Abstracts**

Best Operator Practices for LTE Post-Deployment Executions, Monetisation, and Evolution towards LTE-Advanced

#### **Evaluate**

1. LTE Market Analysis & Forecasts 2014-2018

Analysis of global LTE deployment trend and subscriber uptake, key LTE market drivers, global and regional market forecasts for the next five years with country specific LTE market dynamics.

2. LTE Capex & Opex Strategies 2014-2018

A quick reference on key areas of LTE such as investment optimisation strategies, CAPEX and OPEX categorisation, various LTE deployment strategies, LTE technology trends – TDD/ FDD, developments in LTE-Advanced, and the propositions of various LTE enablers.

#### **Evolve**

1. Overcoming Post Deployment Challenges in LTE 2014-2018

In-depth analyses of all the major challenges in LTE monetisation, strategic guidelines for LTE traffic management and resource optimisation, spectrum refarming, data offloading, smart policy management, and network friendly mobile devices.

## **Monetise**



## 1. LTE Business Models & Charging Mechanisms 2014 – 2018

Analysis of various LTE/ LTE-Advanced business models, strategies for pricing and positioning of LTE services, and scope, viability and trends of wholesale LTE networks.

## 2. Worldwide LTE Operators' Case Studies

Thought provoking cases on LTE/ LTE-Advanced operators from different markets – Covering their LTE business models and pricing propositions, LTE devices portfolio, CAPEX and OPEX, network transitioning strategies, and operators' future plans for LTE-Advanced.

### **Executive Summary**

The global LTE subscriber base reached 200 million in 2013, exhibiting a year-on-year growth of 166%. With increasing number of LTE networks as well as availability of LTE devices in the market, LTE subscriber base will continue to grow strongly during the forecast period (at a CAGR of 46% during 2013-2018) and the global LTE subscriber base will reach over 1 billion in 2017.

The Report offers extensive coverage on LTE market outlook over the next five years both globally and regionally (Subscriber, Revenue, and ARPU). We have quantified the LTE market opportunity till 2018 that will greatly help MNOs, network infrastructure vendors, device manufacturers, and telecom investors in their strategic planning.

The Report also explains LTE status of more than 40 countries back to back. In country specific LTE analyses, we have included key developments in LTE segment by operators, regulators, and vendors along with subscriber uptake, investments, spectrum scenarios, and planned LTE launches. These analyses offer a quick reference to understand the LTE market dynamics in these countries.

As the roll out of an LTE network involves huge investments, it is posing really complex challenges for network operators. One of the major challenges for them is to prioritise the investments areas and decide the amount of capital allocation into various parts and phases of their LTE networks. It is equally important for LTE enablers such as network infrastructure vendors and device manufacturers to properly recognise the current and future LTE market structure and offer appropriate solutions which can justify the operator costs and revenues.



To help mobile operators with LTE capex & opex we have provided valuable insights on key areas of LTE such as investment optimisation strategies, CAPEX and OPEX categorisation, various LTE deployment strategies, LTE technology trends – TDD/ FDD, developments in LTE-Advanced, and the propositions of various LTE enablers. Key forecasts on LTE CAPEX, growth of LTE Base Stations, Small Cells Backhaul CAPEX, Backhaul OPEX, and the uptake of LTE/ LTE-Advanced have been provided as an add-on. These crucial forecasts will greatly help the various stakeholders of LTE in opportunity spotting, strategic planning and roadmapping for the next five years.

However, as the technology is still evolving, operators are also facing many post deployment challenges such as policy control and traffic management, pricing and service bundling, traffic migration, interoperability, and Voice over LTE.

We have provided in-depth analyses of all the major challenges in LTE monetisation. Our study indicates that Rol is currently the major challenge for LTE operators while technical, regulatory, and ecosystem related challenges are also limiting their growth. Moreover, the current options for offering voice over LTE are somewhat temporary solutions.

Key aspects of LTE traffic management & resource optimisation have been covered. LTE operators are anticipating spectrum crisis as a major challenge in the coming years and are worried about controlling the cost of acquiring more spectrum to match the demand for high bandwidth services. However, they can optimise their network performance and can ensure the QoE by making appropriate strategies for spectrum refarming, data offloading, smart policy management and network friendly mobile devices.

We have also offered strategic guidelines on key LTE issues such as migration & interoperability (Backward Compatibility), LTE Pricing, LTE Branding, financing strategies for LTE devices, and customer support and billing.

Most of the LTE launches have failed to seize the real potential of the technology and are now burdened with huge Opex as they need to carry the legacy networks as well. We have analysed the launch, business models, monetisation strategies and uptake of several LTE networks to provide guidelines on how other MNOs can have a better LTE program.

Further, the Report provides suitable strategies as to how LTE services should be positioned in different market settings such as urban, rural, underserved, unserved, and



developed markets. Besides, LTE pricing strategies of mobile operators across different markets has been covered inside the Report.

To further enhance our study, the Report is loaded with 25 thought provoking cases on LTE operators from different markets. The cases are built around them to create a true picture of events of their LTE journey so far: How they went about it, the hurdles they faced, how best they dealt with the challenges, what pricing strategies they implemented, how they have fared so far in terms of subscribers and revenues, and, what are their future plans. Moreover, in our selection of the 25 mobile operators we have covered both tier-1 and tier-2 operators. This was to ensure that we analyse LTE from every possible angle – from the operators that already command a substantial subscriber base and have strong balance sheet to the operators who are at the beginner's stage with very limited resources.

# The cases covered will greatly help LTE stakeholders from the following perspectives:

In helping mobile operators to devise appropriate transitioning strategies;

To avoid the mistakes that other LTE players made;

Planning their CAPEX and OPEX;

To develop the most suitable business/ pricing models for LTE;

In assessing new revenue opportunities via LTE;

In identifying opportunities for expansions, mergers and acquisitions related to LTE:

Helping mobile operators in evolving mutually profitable partnerships with mobile device makers, mobile app developers and mobile network equipment vendors;

To help mobile operators in planning their LTE device portfolio in a well-informed manner;

To assist mobile device makers in developing the right type, and the right numbers of LTE-enabled mobile devices:



To provide competition analysis for LTE operators in terms of deployments, subscribers, revenues, ARPU, EBITDA, uptake of high-end mobile data services, etc.;

In assessing whether they are actually ready to deploy LTE networks (the right timing);

To help mobile infrastructure vendors to gauge potential business opportunities.

## **Key Questions Answered:**

What is the current market size (Subscribers, Revenue) of LTE market?

How the LTE market will progress across different regions in the coming years?

Which regions will exhibit maximum growth in LTE subscribers and revenue?

What are the key investment areas to maximise the Rol on an LTE network?

What should be your ideal deployment path for LTE?

What are the effective techniques of mobile data offloading?

What should be your ideal approach to face spectrum shortage?

How can mobile operators manage their LTE backhaul costs?

How to develop an effective PCRF to monetise LTE services?

What are the various LTE pricing models being adopted by operators worldwide?

What are the major challenges and opportunities in Wholesale LTE business model?

What should be the ideal approach for late entrants into the LTE market?

What were the major factors responsible for initial success or failure of individual



operator in LTE market?

How LTE operators have improved their LTE business models and pricing strategies during the past 3-4 years?

How can you formulate an ideal business model for LTE?

## **Key Findings:**

The global LTE service revenue is projected to cross US\$500 billion in 2018 from US\$78 billion in 2013, exhibiting a CAGR of 46% during this period.

North America, Western Europe and Asia Pacific will account for 83% of the global LTE service revenue by 2018.

USA, South Korea and Japan have established themselves as the early leaders in LTE. However, the developing and underdeveloped markets in Asia and Africa hold huge business potential for LTE.

Operators across the globe are projected to spend US\$180 billion in LTE CAPEX by 2018.

4G small cells will surpass 3G small cells in next four years. The overall small cell backhaul expenditure will be worth US\$28.7 billion by 2018.

The total LTE-Advanced subscriber base will account for more than 42% of the global LTE subscriber base by 2018.

The global subscriber base on LTE-Advanced networks is projected to reach 461 million by 2018, growing at a CAGR of 158% during 2013 and 2018.

Earlier LTE operators were focusing primarily on USB dongle based data services due to lack of (affordable) LTE smartphones and tablets. However, the increasing penetration of LTE devices is likely to create new business opportunities such as LTE broadcast and online gaming.

Many operators were offering unlimited data plans to attract customers from 2G and 3G networks to LTE. However, they very soon realised that their current available spectrum



would not be able to meet such demand in the long run. Consequently, most of the LTE operators across the globe started putting data caps and finished unlimited data plans.

Being an ALL-IP network, LTE brings considerable security challenges for operators, end users, device manufacturers and application providers. The growing use of smaller cell sites (picocells and femtocells) will further increase security concerns as these small cell sites tend to be located in less physically secure locations and there will be more network elements to manage.

## Who can benefit from this Report?

Mobile Network Operators

For a better understanding of the current LTE market dynamics, subscriber uptake, and future revenue potential globally and regionally.

Mobile Device Makers

For better informed LTE product development and to imbue a competitive edge into the product/ services in sync with the technological developments, end user lifestyles, and operators' challenges in meeting the market demand efficiently.

Content Providers and Application Developers

To gain an insight into the market expectations and opportunities that LTE market will generate across various geographies in the coming years. To prepare for the likely changes that Content Providers and Application Developers must go through to remain relevant and profitable in the market.

Telecom Investors

With an obvious interest in the current happenings within the LTE market globally, the report provides an in-depth market analysis for telecom investors. The report will help you in identifying the right choices for your investments.

Research Methodology

We took into our ambit the past few years and for this particular study we regionally explored some of the prominent mobile operators, device makers, infrastructure



providers and interviewed several telecoms experts, C-level and mid-level executives.

Information Sources: Major sources include both face to face and telephonic interviews with telecom industry experts and consumers. It also includes various surveys that were conducted in different regions of the world. Other sources comprise of organisations' websites and financial reports, books, trade journals, magazines, white papers, industry portals and numerous government sources.

Forecasting Methodology: We used extensive database of macroeconomic and sector specific data to generate industry forecasts. We used Judgment based methods like the Delphi method and Extrapolation; Time series methods like Exponential smoothing, Cyclical and seasonal trends and Statistical modeling, as well as the Survey method. The initial baseline projection is computed with the most recent market data. After an initial baseline forecast, all probable future macroeconomic and industry specific occurrences and assumptions are taken into consideration to generate the final forecast.



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