

Exclusive Telco CEO & Private Equity Event

Presentation of the 12th annual joint Arthur D. Little / Exane BNP Paribas Study in Vienna



On May 27, 2013, Arthur D. Little hosted an exclusive event in its Vienna office with an unprecedented attendance of CEOs from the telecom industry, to launch Arthur D. Little – Exane BNP Paribas' 12th annual Telecom Operators Report.

This year's edition of the report focuses on the industry's hottest topic "4G: going faster, but where?" and addresses significant questions: How far from growth are the European Telcos today? How can 4G differentiate telecom operators? How do the structural implications of a new generation of mobile (4G) look like? Is the money well invested?

The importance of this topic for operators, broadcasters, as well as hardware and content providers was highlighted by over 60 top executives and shareholders of leading operators, internet players, software companies, media groups, equipment manufacturers, as well as regulators from 21 different countries.

The event commenced with a welcome by Karim Taga, Managing Partner and Global TIME Leader of Arthur D. Little Austria and co-author of the study. Subsequently, Ignacio GarciaAlves, CEO of Arthur D. Little, and Bertrand Grau, author of the study, held the executive presentation of the report, which was followed by a Q&A session during which the participants engaged in lively discussions about the implications of current findings and open questions for future developments.

Many guests stayed until after midnight and took advantage of the relaxed atmosphere to engage in high-profile networking and to share their experience with top executive leaders.

Key conclusions from the report:

- We expect the telecom sector revenue to keep decreasing at -1.8% CAGR over the 2012-2016 period
- Whilst voice revenues will decline, mobile data revenue will be the main contributor to growth in the coming years
- 4G roll-out is accelerating in Europe, driven by the need of operators to address the upcoming capacity wall
- 4G will support data usage surge, at a lower production cost - To bring telcos back to growth a 7€ LTE premium (in data ARPU) is required
- Challengers and fixed-mobile integrated operators are well placed because of respectively spectrum advantage and quad-play capabilities that they can offer to customers
- However 4G is unlikely to restore pricing power in European mobile; this trend can be mitigated through 5 levers

1. The tariff structure
2. Partnerships to develop additional services
3. Cost transformation
4. Small cells and WiFi offload
5. Network sharing, if consolidation is not an option

4G – going faster, but where? Are we coming close to the telecom inflection point?

We expect the telecom sector revenue to keep decreasing at -1.8% CAGR over the 2012-2016 period, including -2.6% in mobile, -2.9% in fixed-line and +4.4% in pay-TV. According to the survey with industry executives, 38 % were of the opinion that mobile data revenue will be the main contributor to growth in the coming years. The sector could return to growth if LTE smartphones generated data ARPU of EUR17/ month by 2016e i.e. EUR7 higher than today's data ARPU on 3G smartphones – this is a stretch.



Mobile data traffic growing steadily, monetization is the issue

Importantly, the slowdown in mobile data revenues throughout 2012 was driven by the growing difficulties of operators to monetise data traffic. The price of data fell rather than increased in 2012. Although there are no official statistics for Europe, the following statements are important:

- Ericsson points to strong and steady data traffic growth in cellular networks globally. It has been doubling year on year since Q4/10, and was still up 100% y/y in Q3/12
- In Europe, figures released by a number of operators point to slower growth (between +14% and +90% in the last quarters, depending on the operators), but a reaccelerating trend compared to the end of 2011/early 2012.

Still, from operators' point of view, moving to 4G LTE is a no-brainer...

In general, 4G roll-out is accelerating in Europe, driven by the need of operators to address the upcoming capacity wall. Firstly, with the latest spectrum auctions in 800MHz and 2.6GHz bands, operators' total spectrum assets will have increased by 55% and secondly 4G LTE is a better technology than 3G. The amount of traffic that can be carried on a given amount of spectrum is almost 70% higher on 4G than it is on HSPA+, the latest version of 3G.

European countries are in different stages of rolling out LTE but overall there is progress. Operators target coverage of between 50% and 99% of their country's population by 2014-2016. This requires slightly higher CAPEX budgets but the cost is very reasonable: our benchmark points to EUR16-17 per inhabitant covered (compared to EUR 1,000 per home for FTTH).

Furthermore, operators can count on a good line-up of devices, including high-end smartphones and tablets from the market leaders (Samsung, Apple) and from challenger handset vendors.

...and we expect customers to adopt 4G quickly

The US, Japanese and Korean markets, where 4G rapidly became successful, benefited from specific circumstances not shared by Europe. For Verizon Wireless customers, LTE represented a revolution compared to CDMA-EvDO. While European customers are surfing on HSPA+, LTE will only be an evolution. Still, we believe that 4G will be a commercial success in Europe.

Customers are growing increasingly frustrated with the 3G experience, a problem that will only get worse as usage increases. LTE will bring a better service, with download speeds 3-5 times faster (15-20Mbps versus 4-6Mbps) and a much reduced response time (upto 5 times shorter). The take-up of LTE should accelerate from H2 13 and in 2014. We expect 100% of smartphones and tablets to be LTE-enabled from 2015, leading to 54% penetration of 4G-enabled devices in the population by 2016e.

Data growth: Expecting traffic CAGR of +85% and revenue CAGR of 18%

In 2016e, we expect mobile broadband to generate 40% of the total mobile data traffic. This clearly shows that we expect tablets to be a key driver of mobile data traffic and revenues in the coming years.

4G will support and drive data usage surge, at a lower production cost

Certainly, costs will be lower under 4G than 3G, but the decline will take time to materialize and we expect all parties to benefit eventually. With 4G, network costs will become a smaller part of the total cost base over the long term; correspondingly, "other OPEX" will become an increasingly important factor to monitor — this is good for the leanest operators and not necessarily for the biggest.

LTE penetration > 50% by 2016e

Although LTE has not yet taken off in Europe, we still expect penetration to accelerate from 2013, and more so in 2014, to reach 17% of the installed base of mobile internet devices by 2014e, 37% in 2015e and 52% in 2016e. Until now, blocking factors have been the lack of devices as well as the lack of 4G coverage in many markets. With attractive 4G LTE devices now widely available, adequate spectrum now awarded in most countries and finally operators accelerating the pace of 4G network roll-outs, we believe that all the stars are aligned for a first commercial success of 4G LTE in Europe in H2/13.

Once it gets started, the penetration of 4G devices should increase quickly, as the pipeline of product launches will mainly be filled with 4G-enabled devices. We model that 4G-enabled smartphones will represent 10% of smartphones sold in 2013e, growing to 60% in 2014e and 100% from 2015e. Given the typical replacement cycle of smartphones in Europe (roughly every 2.5 years), this leads to a penetration of 54% of 4G enabled devices in the population by 2016e (including multi-device equipment).

Improving the situation with five main levers

4G is unlikely to restore pricing power in Europe but this trend can be moderated by implementing 5 levers. Firstly, a structured pricing plan can help to monetize data – one way to do that is follow the example of US operators who have introduced shared data plans. Secondly, partnerships are required to develop additional services - partnerships with OTT and content providers make sense. Thirdly, being the lowest-cost provider will become even more important in the future – and those most likely to benefit from a cost differentiation in the long term are not those which will be ahead of the pack in 4G, but rather those achieving better efficiencies on their “other OPEX. Last but not the least WiFi offload and small cells are going to be a key part of future architecture. Finally, we see a growing trend towards network sharing, which is likely to help out challengers by enabling them to access scale benefits that would otherwise have been reserved to leaders.

Ignacio GarciaAlves stated: “Partnerships with OTT and content providers are a major lever to monetize future usage on network. Open innovation is the key to success.”

Q&A Session

In the Q&A session following the presentation of the study results, it was clearly evident that the hottest topics this year were regulation (and consolidation), radical transformation in business models as well as the need to monetize data.

In general the industry is facing major issues in Europe and the key question about a single market is a matter of hot debate. A further step for successful results will be the rebalancing of a pricing strategy (from voice to data centric packages), which

includes the focus on the quality of service. Since usage is capped, some content owners like ESPN may want to pay revenues to telcos so that their customers on smartphones can watch unlimited TV. The flexibility of network sharing and the level playing field (e.g. with “big data” players like Facebook and Google) was hotly discussed as well.

Some participants accepted that it is time for a fundamental change of the business models and therefore operators should increase partnerships with OTT and content providers. The participants agreed that significant change in the business model is necessary to embrace innovation and to successfully engage with App developer community.

Commenting on the continuation of fixed and mobile convergence the audience agreed that there is enough capacity on LTE and additionally operators can easily partner with fixed operators in order to offload some of their traffic. However, the key value is in monetizing the mobile traffic and operators need to demonstrate this value to the end customers.

Karim Taga concluded: “The 12th edition of our report has illustrated again that the telecommunication and media industry is facing a challenge. However, operators need to radically change their business model. Operators need to rebalance and change customer’s mind-set to pay more for additional data usage. A data centric model will be key to survival”



About The Arthur D. Little – Exane BNP Paribas annual report

In 2013, we are honoured to release the 12th Arthur D. Little Exane study. Every year since 2002, Arthur D. Little and Exane BNP Paribas have conducted an in-depth examination of the telecom market, with a focus on European operators.

To conduct these studies, Arthur D. Little's international consultants meet with a variety of stakeholders within the sector (operators, hardware manufacturers, media and regulators). The 2013 report is thus the result of over 90 interviews with telecom operators, telecom & device vendors, regulators, utilities and local authorities across 15 countries in Europe.

About Arthur D. Little

As the world's first consultancy, Arthur D. Little has been at the forefront of innovation for more than 125 years. We are acknowledged as a thought leader in linking strategy, technology and innovation. Our consultants consistently develop enduring next generation solutions to master our clients' business complexity and to deliver sustainable results suited to the economic reality of each of our clients.

Arthur D. Little has offices in the most important business cities around the world. We are proud to serve many of the Fortune 500 companies globally, in addition to other leading firms and public sector organizations.

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