Pyramid Perspective 2012 Excerpt*

Top Trends in the Global Communications Industry

*This is an excerpt of the Pyramid Perspective 2012.
The full version is available to Pyramid's Membership & Consulting clients.
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What to Expect in 2012

After expanding at 7% in 2011, we expect the global telecommunications services market to grow at a more modest 4% in 2012 as a result of the rising volatility and uncertainty facing the global economy. We expect total service revenue to reach US\$1.7trn, 2.4% of global GDP, in 2012. Mobile broadband, enabled by the proliferation of high-speed mobile computing devices including smartphones and tablets, will be one of the largest growth areas in 2012, particularly as the price of these computing devices comes down, enabling further penetration in emerging markets.

We expect to see emerging market players continue to move up in the global rankings, with developed market players losing ground. America Móvil, currently No. 3 on the list of top global service providers, will continue to close the gap with No. 2 player Vodafone. Further, we expect operators such as Airtel and MTN to make additional gains, while operators such as Deutsche Telekom risk falling off the list in the wake of further entrenchment. In a demand-challenged environment, operators' exposure to high-growth markets continues to be a key strategic advantage.

- ❖ Mobile subscriptions will pass the 6bn mark in February, with the 3bn marker being passed in Asia-Pacific in January.
- India will surpass China to become the world's largest mobile market in terms of subscriptions.
- WiMAX will see the beginning of its end in Asia. Operators will favor LTE instead.
- Broadband penetration of population will pass the 10% mark globally. This milestone creates opportunities to provide consumers with information, entertainment and value-added services.
- ❖ The M2M opportunity will take higher priority on operator agendas. Investment and innovation will follow.
- ❖ A cloud computing strategy, the high-growth of the IT service market and a clear value proposition for the enterprise market will become central to operators' growth profile.
- ❖ IPTV penetration of population will pass the 1% mark globally.
- The installed base of PCs will pass the 2bn mark.
- ❖ The mobile handset market will surpass the \$200bn mark.

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Top Trends by Sector

Mobile Content & Applications

The M2M opportunity finally takes shape

M2M and wider discussions about the Internet of Things are set to take on heightened significance over the next 12 months. We expect to see operators modifying their previously passive approach to the M2M market, given its complexities and small size, to a more focused and active positioning in the value chain. By becoming more active in the value chain, operators can both take a larger share of revenue, as well as facilitate its growth. We expect 2012 to herald new operator-owned platforms (see Vodafone's global enterprise strategy and the recent announcement by Everything Everywhere of the introduction of its own proprietary management platform). Furthermore, we expect that those operators with the best coverage, excellent international roaming agreements and an established position in the business market will be best placed to gain from the M2M opportunity.

Related content

The Machine-to-Machine Market: A high-growth opportunity for MNOs

Thematic Report published October 2011

In this report, Pyramid Research analyzes the current state of the M2M segment, providing forecasts by application type and by region.

Location-Based Services: Market Forecast, 2011-2015

Thematic Report published May 2011

The report provides a detailed overview of the current status and size of the location-based services market. It takes a specific look at the positioning of the mobile operators within the value chain and how they can leverage their assets to take a stake in this growing opportunity.

Related resources

Digital Content & Applications Report Series

This series offer comprehensive insights into emerging trends, business models, best practices and services.

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Broadband & Media

Given economic uncertainties, we expect to see a slowdown in FTTH deployments worldwide in favor of continued VDSL buildout

Pyramid Research is seeing a slowdown in the deployment of some of the largest planned fiber rollouts (Verizon in the US is an example) in response to the economic uncertainty in the global financial markets. Given the expense associated with rolling out FTTH and longer ROI periods, operators are looking to the much less expensive VDSL option as a way to extend higher capacities to customers. This is certainly the case in Western European markets, where operators are focused on VDSL expansion. The largest markets for fiber rollout will continue to be Russia and China, which are favoring a less-expensive FTTB versus FTTH configuration. Middle Eastern operators will continue their push for last-mile fiber access, particularly in the UAE and Turkey.

Related content

Industry Insight Service on Mobile Broadband Devices: Global Landscape & Trends

The Mobile Broadband Devices Insight Service offers analysis of current and future trends in mobile broadband devices unit sell-through globally, device vendor competitive landscape, analysis of the most important distribution channels, as well as devices' revenue and average selling price evolution trends.

Industry Insight Service on Fiber in the Last Mile: Network Business Models, Adoption Trends and Best Practices

Built around detailed operator case studies, The Fiber in the Last Mile Insight Service uncovers the implications of different FTTH/B network models for the expansion of services, current and planned services, how the role of network service providers is evolving and the development of new business opportunities and business models for network service providers to recoup their investment.

Despite a Challenging Climate, Fixed Operators Can Profit from Business Broadband and FTTx

Africa & Middle East Telecom Insider published September 2011

In this Insider, we examine the fixed sector trends in AME that are expected during the next five years, including the effects that activity on the mobile side will have on the sector. This examination includes highlights from key markets in the region. Next we outline the areas of strength on the fixed side, including how FTTx will make a significant impact in terms of revenue. Then we identify the operators best positioned to take advantage of the opportunities that exist in fixed services during the forecast



period. Finally we present three case studies from the UAE, Jordan and South Africa that provide examples of fixed incumbents that have devised ways to remain relevant in the shifting fixed communications landscape in AME.

Related resources

Media Forecast

The Media Forecast is designed to provide competitive intelligence on the pay-TV and mobile TV dynamics for more 50+ countries, as well as regionally and globally. It tracks demand patterns for free and pay-TV services over terrestrial, satellite and mobile platforms worldwide, providing market share information at both the technology and operator levels, as well as five-year adoption and revenue projections.

Fixed Communications Forecast

The Fixed Communications Forecast quantifies fixed voice, Internet and IPTV adoption and service revenue trends, at the residential, corporate and total market level. It tracks demand and projects future growth for 60+ markets worldwide and is available at the country, regional and global levels.

Mobile Data Forecast

The Mobile Data Forecast tracks current and future demand for mobile data services, within the context of overall mobile demand. This forecast includes all the same tracking as the standard Mobile Demand Forecast but breaks down mobile data ARPS, revenue and subscriptions at the service level. It is available for 75+ markets worldwide at the country, regional and global levels.

Broadband & Media Report Series

This series offers comprehensive insights into emerging trends, business models, best practices and services.

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Regulation & Policy

Regulators and policy makers will invest in the digital world

Regulators and policy makers around the world are developing programs to push broadband adoption and establish incentive mechanisms to increase investment in broadband infrastructure. From the FCC in the US to the Uganda Communications Commission, increased broadband access and adoption are key goals for the sector and the development of the countries in general. Governments are making unprecedented financial commitments to the sector and mobilizing private capital along the way.

Related content

Industry Insight Service on Universal Access to Broadband: Regulation and Policy Best Practices in Emerging Markets

This Insight Service offers analysis of current trends and best practices in achieving universal access in emerging markets. By combining key access indicators and forecasts with unique insights on current universal access policies and selected case studies, it provides analysis of penetration levels, technologies deployed, usages and programs and strategies to expand access to and use of ICT.

For more on Pyramid Research's perspective on 2012 trends and our Consulting Expertise and Capabilities in Regulation & Policy, visit www.pyr.com or contact us at info@pyr.com.



Mobile Payments

Point of sale apps will proliferate before standards force consolidation after 2012

The meteoric rise in smartphone ownership will increase the amount of innovative companies pushing their own point-of-sale service applications using different approaches from barcode scanning, QR codes, NFC, premium SMS and picture scanning, among others. We expect that moves from market leaders such as PayPal, Google and Apple will craft the path toward standardization, but standardization will only happen after 12-18 months of application and service experimentation.

Related content

Industry Insight Service on Mobile Commerce Landscape: Value Chains, Business Models and Innovations

The Mobile Commerce Landscape Insight Service offers analysis of current trends and best practices in mobile payments in emerging and developed markets. By combining key market players with unique insights on current market trends in payments, it provides analysis of different initiatives that are coming from several players.

Operators Take Mobile Banking to the Masses, with 65% Annual Growth Expected until 2015

Latin America Telecom Insider published May 2011

With mobile penetration in Latin America close to 100% and voice services barely showing organic growth, mobile operators are now open to investing resources in developing platforms that can create new markets or seek revenue lines that sustain growth. One of those areas is mobile financial services, including payments. Pyramid Research believes that Latin America has achieved the right conditions to smoothly increase the uptake of mobile financial services, including banking and payments. We expect that leading mobile operators, including Claro and Movistar, will develop commercial offerings over the next few months in order to participate in an emerging market where mobile operators have substantial upside.



Up to 2.3 Billion Mobile Finance Users in APAC by 2015

Asia-Pacific Telecom Insider published April 2011

This report outlines the existing mFinance services in Asia-Pacific, with a focus on insights in emerging markets rather than in developed markets. We then examine the market dynamics in the region to understand the potential mFinance has to meet the demand of the considerably underserved population. The report concludes with two case studies from the advanced and emerging markets in the region where mFinance has gained traction, as well as a discussion of the initiatives operators have taken to promote mFinance services.

For more on Pyramid Research's perspective on 2012 trends and our Consulting Expertise and Capabilities in Mobile Payments, visit www.pyr.com or contact us at info@pyr.com.



Connected Devices

Approximately 70% of total handset sales and nearly half of smartphone sales in 2012 will come from emerging markets

The role of emerging markets such as China and India in the handset and smartphone arena will continue to grow, driven by the availability of less expensive device models.

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Industry Insight Services on Mobile Broadband Devices: Global Landscape & Trends

The Mobile Broadband Devices Insight Service offers analysis on current and future trends in mobile broadband devices unit sell-through globally, device vendor competitive landscape, analysis of the most important distribution channels as well as devices' revenue and average selling price evolution trends.

Smartphone Operating Systems: Ecosystem analysis and trends shaping the future of the global smartphone market

Thematic Report published June 2011

In this report, Pyramid Research analyzes the current state of the smartphone market segment, focusing specifically on the developments taking place in the OS arena.

NFC-Enabled Smartphones to Account for 28% of Global Market by 2015

Global Telecom Insider published April 2011

Despite the positive early trends in the nascent NFC market, many are still skeptical about the future of NFC-based services. Some point out the lack of industry standards, others the lack of profitable and attractive business models. Finally, some claim that there is a genuine lack of interest in NFC-based services from end users. Our opinion is that the overwhelming supply of NFC-enabled handsets will result in strong sales of these devices in the short run (2011-2012). In the medium to long term, as NFC-based services become ubiquitous, consistent and secure, the sales of NFC-enabled devices, including handsets, will continue to grow, at that point driven by the growing demand for NFC services on behalf of end users and retailers. Over 250m mobile handsets sold to end users in 2015 will be NFC-enabled.



Related resources

Smartphone Forecast

The Smartphone Forecast tracks annual handset sell-through of total mobile handsets and smartphones for a ten-year period including five historical years and five forecast years. Smartphone sell-through is segmented by vendor and by operating system. Granular data is provided for each of more than 50 countries, making Pyramid Research's smartphone forecast the most detailed on the market today.

Devices Report Series

Comprehensive insights into emerging trends, business models, best practices and services.

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Top Trends by Region

Africa & Middle East

Completion of several submarine projects in the region will triple capacity and allow for substantial price drops, all of which will contribute to rising Internet and broadband adoption

Large submarine cable projects around Africa and terrestrial cable projects across the Middle East are reaching completion. West African countries will see their international capacity more than triple from 4TB/sec to 14TB/sec in 2012. If we are to replicate the impact of cable landings on East African countries, then we expect to see substantial price reductions for both voice and Internet services, driving adoption of broadband services. African countries will also push hard to capture a share of the outsourcing pie that benefited mostly North African countries. Cameroon, Cote d'Ivoire and Senegal will see major investment in outsourcing and call center activities catering to Francophone countries, while Kenya and Tanzania will try to cater to English-speaking countries.

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Despite a Challenging Climate, Fixed Operators Can Profit from Business Broadband and FTTx

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Beyond Price Wars: A Road Map for Better Mobile Services in East Africa

Africa & Middle East Telecom Insider published September 2011

In this Telecom Insider, we first describe the market conditions in which the East African telecom price wars surfaced. Then we discuss three possible remedies for price wars on voice services and discuss why these responses are sensible within the context of East Africa. Finally, we focus on the implications of price wars in three



countries, namely Kenya, Uganda and Tanzania. In our closer look into these markets, we evaluate their present challenges and the adequacy of our recommended responses.

Three Steps to Accelerate Mobile Innovation in Africa and the Middle East

Africa & Middle East Telecom Insider published August 2011

In this report, we explain the basic components of mInnovation and discuss why African & the Middle East (AME) is fertile ground for mInnovation to take root. Next we identify the three enabling conditions in the mobile innovation arena, along with the roles these conditions play in the mInnovation ecosystem. Then we highlight the benefits of mobile innovation to interested stakeholders. We conclude with four case studies from the Africa & Middle East region that present mobile innovators, the new ideas they have created involving the use of the mobile phone and the funding sources that supported the development of the mInnovation.

Related resources

Africa & Middle East Mobile Demand Forecasts

Pyramid Research's renowned market forecasts follow a structured methodological approach to forecasting. Our forecasts provide intelligence at both the country, regional and operator level for 25 markets in Africa & Middle East.

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For more on Pyramid Research's perspective on 2012 trends in AME, visit www.pyr.com or contact us at info@pyr.com.



Asia-Pacific

We will witness the beginning of the end of WiMAX in Asia

Asia has long been considered an important test bed for WiMAX technology, with local governments like the Taiwanese government putting political muscle behind the technology and licenses being awarded throughout the region. 2012, however, might be the year that marks the beginning of the end for WiMAX. Operators in Taiwan and Malaysia are opting to use LTE instead of WiMAX (or asking permission of regulators to make the switch), and the majority of BWA licensees in India, considered by WiMAX proponents as an ideal market for WiMAX, are opting for LTE. Waning operator support will also translate into declining vendor support and higher prices for the technology and, most importantly, the price of end-user devices, which ultimately determine a technology's success.

Related content

Asia-Pacific to Be Global Leader in LTE

Asia-Pacific Telecom Insider published July 2011

LTE will be deployed in developed markets first where more customers are willing to pay for better service, with wide-scale deployments in emerging markets expected after costs for equipment, devices and handsets begin to decrease. Although the market share potential for LTE in emerging markets in the next five years is limited, due to its huge population we expect emerging markets to capture more than half of the LTE market share in Asia-Pacific by year-end 2016.

Up to 2.3 Billion Mobile Finance Users in APAC by 2015

Asia-Pacific Telecom Insider published April 2011

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Central & Eastern Europe

Smartphone proliferation will be the critical factor in the CEE market's growth trajectory

While much of the smartphone buzz has been generated by the developed markets of Western Europe to date, we see a growing number of operators launching a range of own-branded smart devices across CEE as a way of meeting the pent-up demand as well as to engender greater loyalty and reduce churn within their customer bases. Operator examples of this trend include Vodafone across its footprint, the introduction of Orange-branded tablets in Poland and MTS' own branded device portfolio in Russia. We expect smart device proliferation to explode through 2012 and beyond in the region, and as a result we forecast greater data and application uptake to ensue and for this segment to command a greater percentage of total mobile revenues as a result. To quantify this, we forecast that approximately 90% of the growth in total mobile revenues of \$59.6bn in the region in 2012 will come from increased expenditure on data services.

Related content

The Multiscreen Opportunity Makes for Great Viewing for Traditional Telcos in Europe

Europe Telecom Insider published September 2011

In this report we discuss how the growing proliferation of connected devices and multiple screens in households presents an opportunity for traditional telcos, which continue to invest in delivering TV content to their audiences. This is because there is more clarity on multiplatform video delivery standards, with many telcos already owning the delivery platforms: mobile, broadband (PC) and TV (addition of IPTV by many telcos). Telcos also have an established billing relationship with clients as well as the ability and experience in providing service bundles.

Coopetition Replaces Competition as Telcos Aim to Cut Costs and Grow Revenue Streams

Europe Telecom Insider published June 2011

This report analyzes the development of the cooperation agreements among a number of European telecom players, their successes and also learning points for those considering future tie-ups. We first discuss those initiatives employed by operators to maintain their market position and leverage their existing customer relationships. Then we contemplate those initiatives that address balance sheet woes and existing revenue streams, and finally we take a look at partnerships that are



focused on new revenue streams and the development of standardization across new technologies.

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Latin America

Opportunity knocks in the IT services market

In some markets, such as Mexico, the IT outsourced services market (including SaaS, laaS and PaaS) will experience high growth rates as a result of fixed operators' strategies to offer cloud-based solutions specifically for SMEs. Alestra's offering of SAP ERP in the cloud is just one example of how fixed operators are willing to climb in the value chain.

Related content

Operators Embrace Video on Demand to Overcome Regulations Stifling IPTV Market

Latin America Telecom Insider published November 2011

This report examines the main regulatory restrictions that operators in Latin America face when launching IPTV services in the region. We look at some of the strategies that have been adopted by some telcos to overcome these restrictions. Our analysis focuses on three countries – Argentina, Brazil and Mexico – where different regulatory hurdles have been penalizing incumbent operators and delaying the development of the IPTV segment.

Operators and Vendors Aim Smartphones at the Mass Market

Latin America Telecom Insider published November 2011

The iPhone revolutionized the industry, making smartphones a product for regular consumers and not just businesspeople. Google then launched its Android operating system, offering a way for vendors such as Motorola, Samsung, LG, Huawei and others to indirectly join forces to compete in the market. As the market continues to evolve, all market players – vendors, operators and developers – are trying to grab a piece of the smartphone revenue pie.

Mobile Social Networks Set to Experience Rapid Growth as Mobile Penetration Rates Rise

Latin America Telecom Insider published October 2011

Supported by the extremely high penetration of mobile devices, Pyramid Research believes that LA will be a major region in terms of mobile social network usage. The increasing investments in network quality, the availability of more data plans tailored to mobile social network users and the availability of more devices able to access data networks are the main reasons why Pyramid Research believes mobile social networking in LA will soon compare with more developed regions.



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Latin America Telecom Insiders

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North America

Mobile payments will become mainstream

In North America, we expect Google/Sprint/MasterCard to extend their partnership and include Google Payments in a wider base of Android devices. We expect Verizon and AT&T to push their venture Isis to launch services before mid-2012 with features similar to Google Payments: localized coupons, mobile transactions with the use of the device and CRM features for merchants.

Related content

United States: Operators Turn to Mobile Broadband for Growth Opportunities

Country Intelligence Report published September 2011

The United States Intelligence Report is the industry's best available analysis on market trends, regulatory environments, and competitive dynamics, providing detailed competitive analysis on fixed and mobile sectors, tracking market adoption of new technologies and services such as WiMAX, IPTV and VoIP.

Canada: Low Mobile Penetration Presents Big Opportunity for Operators

Country Intelligence Report published March 2011

Moving forward, we expect growth to stabilize at a 2.8% CAGR for 2010-2015, reaching \$48.5bn in revenue in 2015. Mobile data will be the fastest-growing segment with a CAGR of 16.9% over this time period, reaching \$8.6bn in revenue in 2015. Growth in smartphones as well as a wide variety of other devices that require mobile network access, such as eReaders and tablets, will be the drivers behind this growth. Another contributing factor will be mobile services rate declines in real terms, which will encourage more consumers to subscribe to mobile data plans. Canada currently has some of the highest mobile rates in the world, which has led to underpenetration of the market.

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Western Europe

Operator realignment across Europe will continue

Telefónica's creation of a new business unit in September 2011, consisting of around 2,500 employees, shows the importance of new products and services to this telco giant. Telefónica Digital will group products and services such as e-health, financial services, VoIP and M2M under a single structure to better position the company for future growth. We expect a 2012 launch for its voice-and-text-over-Wi-Fi product, O2 Connect, which is just one of the areas the unit is now exploring. In a similar vein, Telenor also announced in the same month that it too would create a business unit to focus on digital services – such as Comoyo, the one-stop shop for consumers on all devices, which it believes will signal the future of how we interact with and consume services. We expect further announcements of this kind into 2012, particularly from publicly listed operators that need to reassure their shareholders that they are well positioned to participate and shape the growth of a number of new products and services across the CMT industry.

Coopetition will become a key operator strategy

Our analysis of operator strategies across Europe points to the importance of coopetition as a way of maintaining revenue and positioning in core markets, as well as rendering the core activities of voice and data provision more profitable by reducing operating and capital expenditure through partnerships with other service providers and vendors. We expect partnerships between companies such as Deutsche Telekom and France Telecom to deepen and become more common practice, although the bargaining power that they are now able to exert across their supplier base may begin to attract more scrutiny in 2012.

Related content

Spain: Network Rollouts Will Drive Opportunities in Broadband and Mobile Data Country Intelligence Report published October 2011

The Spanish telecom market is expected to generate \$38.6bn in service revenue in 2011 and to grow at a CAGR of 2.1% in the forecast period. Two major growth segments will be broadband Internet and mobile data, which we project to grow at CAGRs of 4.9% and 15.8%, respectively. Accompanying broadband adoption, VoIP



will grow at a double-digit CAGR of 24.1%, which translates into a cumulative revenue opportunity of \$1.5bn.

Netherlands: New Mobile Players and Spectrum Auctions Enliven a Mature Market

Country Intelligence Report published June 2011

The Dutch communications market is one of the higher growth markets in Western Europe. Competition in the fixed broadband market is driving investment in higher speed networks. New LTE licensees will foster innovation in the mobile market. Radio spectrum in several different bands will be re-auctioned, and 800MHz spectrum will also become available, with some bands likely to be reserved for new entrants.

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Western Europe Mobile Demand Forecasts

Pyramid Research's renowned market forecasts follow a structured methodological approach to forecasting. Our forecasts provide intelligence at both the country, regional and operator level for 16 markets in Western Europe.

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Western Europe Telecom Insiders

Telecom Insiders deliver concise, data-driven analysis on service trends affecting the European region. Each Insider report is packed with trend analysis, industry best practices, market sizing and forecasting, competitor analysis and case studies – all the essential information to make more informed business decisions.

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Offering a blend of qualitative and quantitative analysis, Industry Insight Services combine sector-related reports, forecasts and live analyst interaction. Each Industry Insight Service provides business model analysis, operator revenue opportunities, adoption trends and best practices across Pyramid Research's most prominent areas of expertise: Mobile Devices, Broadband & Media, Mobile Payments/Mobile Banking, and Regulation & Policy.

Learn more here:

www.pyramidresearch.com/Industry-Insight-Packs.htm

Enterprise Services 2010-2016: Mexico

Pyramid Research applies its time-tested analytical framework to Mexico's enterprise segment through forecasts, a market analysis report and a webinar presentation. The 20-slide market analysis report offers a demographic and macroeconomic context of the Mexican market, a review of market sizing forecasts by service and operator, as well as by new services and application areas. It also provides a competitive SWOT analysis of the top four service providers in the country. Clients are also able to participate in a webinar presentation.

Learn more here:

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Pyramid Research has conducted custom research and consulting in more than 120 markets worldwide for nearly 25 years and has assisted many companies as they examine the business case for investment in certain market sectors. Our methodology is based on a unique matrix that addresses key strategic business issues and then applied to Pyramid Research's most prominent sectors of expertise: Mobile Devices, Broadband & Media, Mobile Payments/Mobile Banking, and Regulation & Policy.

Learn more here:

www.pyramidresearch.com/cs overview.htm

Consumer Insight Series: Brazil 2011

Combines insight from demand-side primary research conducted with 1,400+ consumer end users, along with ongoing interviews with leading players in Brazil's mobile market ecosystem, to provide detailed quantitative and qualitative analysis of the mobile data and devices market in Brazil. This combination of demand and supply side analysis is truly unique in the marketplace today.

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Pyramid Research Worldwide Offices

Headquarters	Europ

Pyramid Research 10 Canal Park Cambridge, MA 02141 USA

Tel: + 1 617 871-1900 Fax: + 1 617 871-1933 Europe, Middle East, Africa Office Boris Hure, Manager

Ludgate House 245 Blackfriars Road London, SE1 9UY

Tel: + 44 (0) 20 7560 4471

Fax: + 44 (0) 20 7560 4485

Latin America Office

Fernando Pafumi, Director 1925 Brickell Ave., D-204 Miami, FL 33129 USA

Tel: + 1 305 856 7166 Fax: + 1 305 479 2933 **Asia-Pacific Office**

Room 1606 China Resources Building 26 Harbour Road Wanchai, Hong Kong Tel: + 852 3971 4992

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