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White Paper

## | The Growth Phase of 3G in India



**EVALUESERVE**  
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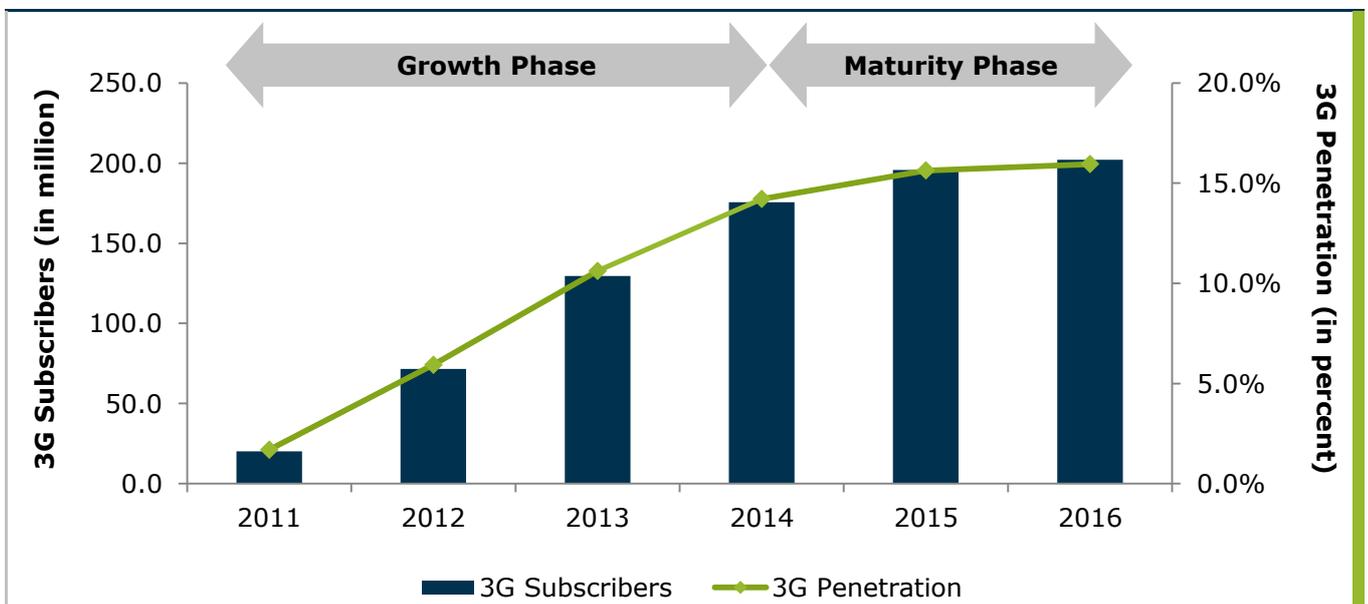
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## Executive Summary

After a prolonged period marked by regulatory delays, 3G<sup>1</sup> services were finally launched in India in the last quarter of 2010. Evalueserve had predicted in its September 2009 whitepaper, *Uptake of 3G Services in India*, that 3G subscriptions in India will cross the 275 million mark by end-2013. However, licensing delays resulted in 10-month worth of subscriber loss vis-à-vis our previous estimates. 3G performance in 2011 was also negatively affected by network issues at operators' end. Nonetheless, Evalueserve believes that the current inhibitors to 3G uptake are short term in nature, and 3G subscription will increase at a rapid pace (30% CAGR - Compound Annual Growth Rate) between 2012 and 2016 to cross the 200-million mark (see Figure 1).

Along with 3G services, the number of 3G-enabled mobile handsets will also continue to grow, reaching an active installed handset base<sup>2</sup> of 680 million by 2016. Boosted by better handsets and data speed, mobile value-added services (MVAS) will also boom in the future; Evalueserve expects total MVAS users to reach 430 million during the period.

**Figure 1: India's 3G Subscriber Base Forecast**



Source: Evalueserve Analysis

This whitepaper sheds light on the current and future outlook for 3G services and highlights the drivers, inhibitors, and success factors that will impact its growth in the dynamic Indian market. It discusses the future of the mobile subscriber base in India and 3G in greater detail, with special focus on 3G-enabled handsets and MVAS.

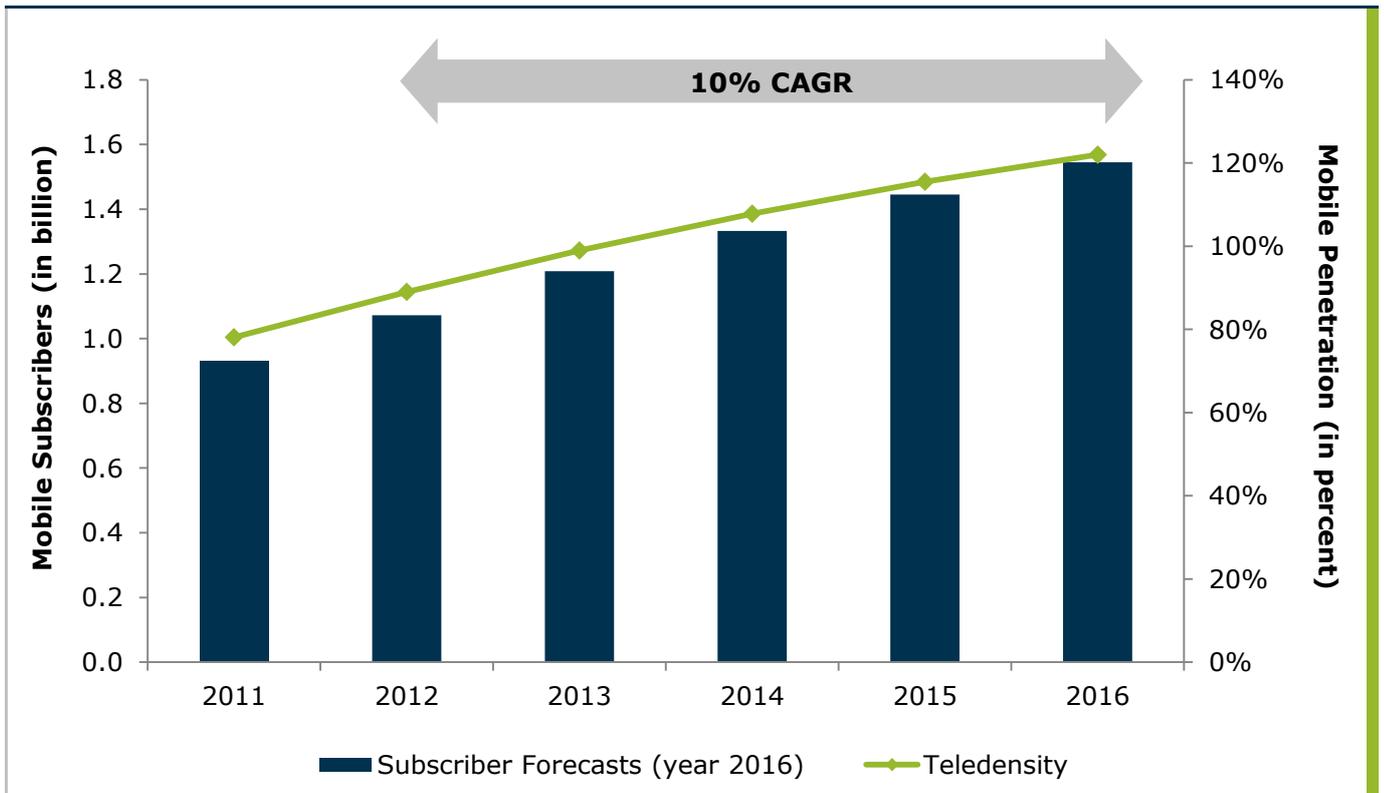
<sup>1</sup> The standard definition of 3G (Third Generation Wireless Technology) as per the International Mobile Telecommunications (IMT) guidelines has been followed in the whitepaper. According to these IMT-2000 guidelines, a technology must provide a minimum of 200 kbps/s of peak data rates to be considered a 3G technology.

<sup>2</sup> Active installed handset base for the purpose of this whitepaper refers to all mobile handsets that support 3G services (Wideband Code Division Multiple Access and/or High Speed Packet Access). This will include even those handsets that support 3G services but are not being used to access such services.

## Mobile Subscriber Base in India

The Indian telecom sector registered among the strongest growth rates in the world with regard to mobile subscription during the last four years. The sector has surpassed former industry estimates influenced by recessionary factors. Evaluateserve expects the momentum to continue, and the mobile subscriber base in India to grow at a compound annual growth rate of 10% between 2012 and 2016, reaching 1.5 billion by 2016 (see Figure 2).

**Figure 2: India's Mobile Subscriber Base Forecast**



Source: Evaluateserve Analysis

The following are expected to be the drivers of India's mobile subscriber growth in the next five years:

- Rural Growth:** The rural mobile subscriber base is anticipated to grow at a compound annual growth rate of 12% between 2012 and 2016, at nearly twice the expected growth rate of the saturated urban market. It is likely that 62% of the new mobile subscribers added in the next five years will be from the rural market.
- Aggressive Operator Strategies:** The strong focus on subscriber acquisition by operators is expected to continue in the next five years. Aggressive pricing and innovative targeting strategies will expand the addressable market for mobile services and reduce cost-based entry barriers.

## Uptake of 3G Services in India (2012–16)

- **Increase in Multi-SIMing:** The recent increase in the number of multiple SIM users will be the primary reason for uptake in urban regions. This uptake will be backed by device availability (dual-SIM phones) and lifestyle preferences (keeping separate SIM cards/phones for work and personal use or for voice and data access).

Evalueserve expects the dynamism in the Indian telecom industry to continue. In the future, 3G services will not only be a key differentiator for operators, but also the next domain for price wars.

## 3G Subscriber Base

Evalueserve expects India's 3G subscriber base to cross the 200-million mark by 2016 (see Figure 1). The years 2011–14 will be the take-off period with 3G subscriber growth achieving a compound annual growth rate of 106%. Beyond 2014, growth will slow because of the introduction of faster technologies, such as 4G and Wi Max, and relative market maturation.

### The Story So Far

The slow uptake of 3G services in India in the initial 12 months after service launch can be attributed to the following factors:

- Indian operators have not actively migrated 2G subscribers to 3G in order to ensure network stabilization, thereby ensuring that quality of service (QoS) does not deteriorate. Further, the limited 3G network availability has been unsuccessful in creating the desired user impact, hence hampering 3G adoption.
- Operators have not been aggressive in pricing 3G services.

Evalueserve sees these problems as mere initial hiccups rather than long-term challenges.

### Outlook for 3G Services – Drivers

Evalueserve expects the following factors to drive growth in the 3G subscriber base:

- Operators will address network problems by improving coverage and enhancing quality.
- The improvements in quality and coverage will help operators provide a better foundation for the aggressive migration of existing 2/2.5G customers to 3G.

#### Drivers and Inhibitors of Future 3G Subscriber Growth

##### Drivers

- Aggressive push to migrate customers to 3G
- Improved network coverage and quality
- Lowering of service pricing by operators
- Increased handset availability and affordability

##### Inhibitor

- Introduction of more advanced technologies

## Uptake of 3G Services in India (2012–16)

- Traditionally, service pricing has acted as a determining factor for subscriber acquisition in the price-sensitive Indian market. Evalueserve expects the trend to continue for 3G services. Reduction in 3G prices by operators will thus reduce the cost-based barriers to the mass 3G uptake of the technology.

### Outlook for 3G Services – Inhibitors

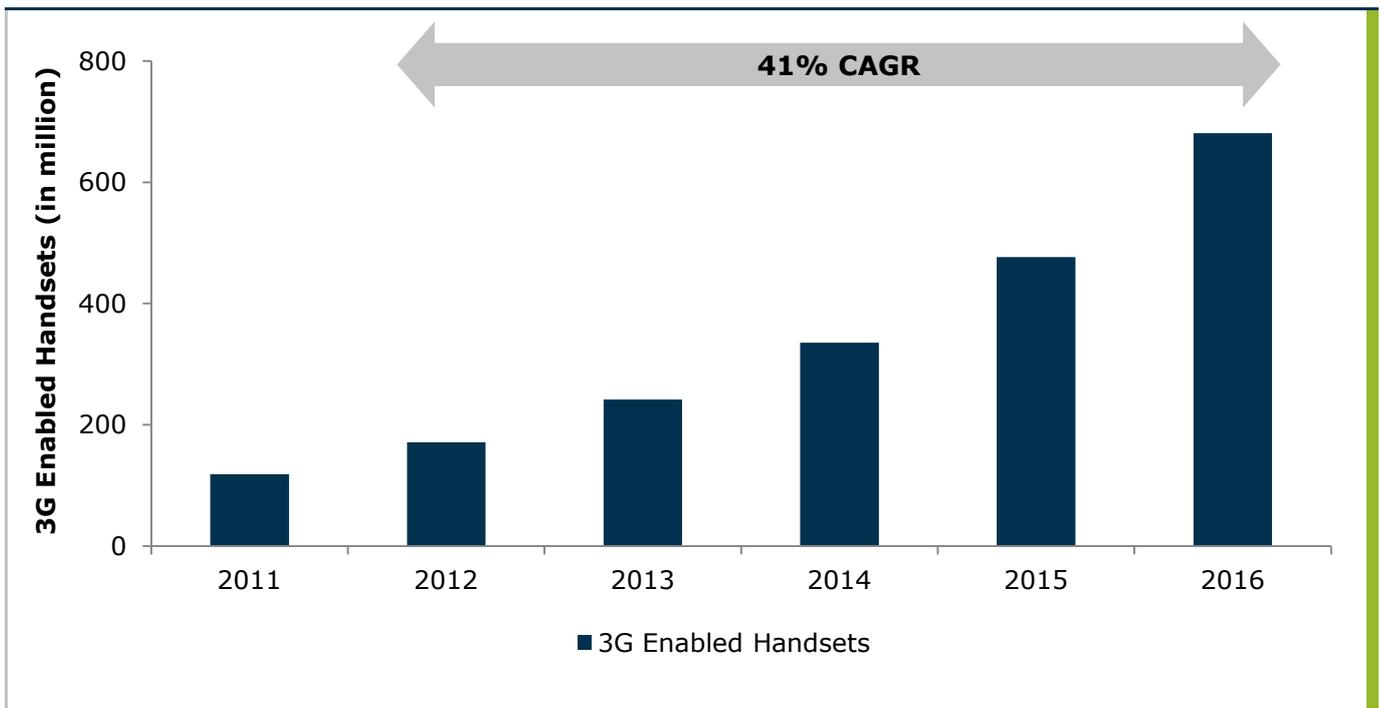
3G subscriber growth will slow down after 2014 because of an expected increase in the prominence of more advanced technologies such as 3.5G and 4G. It is speculated that the launch of 4G in India will coincide with that in the rest of the world. In spite of that, Evalueserve expects only a mild success rate in 4G adoption during the initial years, with the technology gradually affecting the 3G subscriber pie as it establishes itself.

Apart from the above factors, the availability of 3G handsets will also play a crucial role in determining the success of 3G services.

## Outlook for 3G-Enabled Handsets

According to Evalueserve estimates, 3G-enabled handsets (active installed handset base) in India are expected to grow at a compound annual growth rate of 41% between 2012 and 2016, to reach 680 million. The estimate was revised in light of the delay in 3G licensing. The negative effect of the delay is expected to be relatively feeble in the case of handsets as compared with 3G subscribers.

**Figure 3: 3G Enabled Handsets**



Source: Evalueserve Analysis

## Uptake of 3G Services in India (2012–16)

With time, handset vendors are likely to focus on adding a wider variety of 3G-enabled handsets to their portfolio. The availability of smart phones and feature-rich as well as low-cost 3G handsets has divided the handset market into two sub-segments:

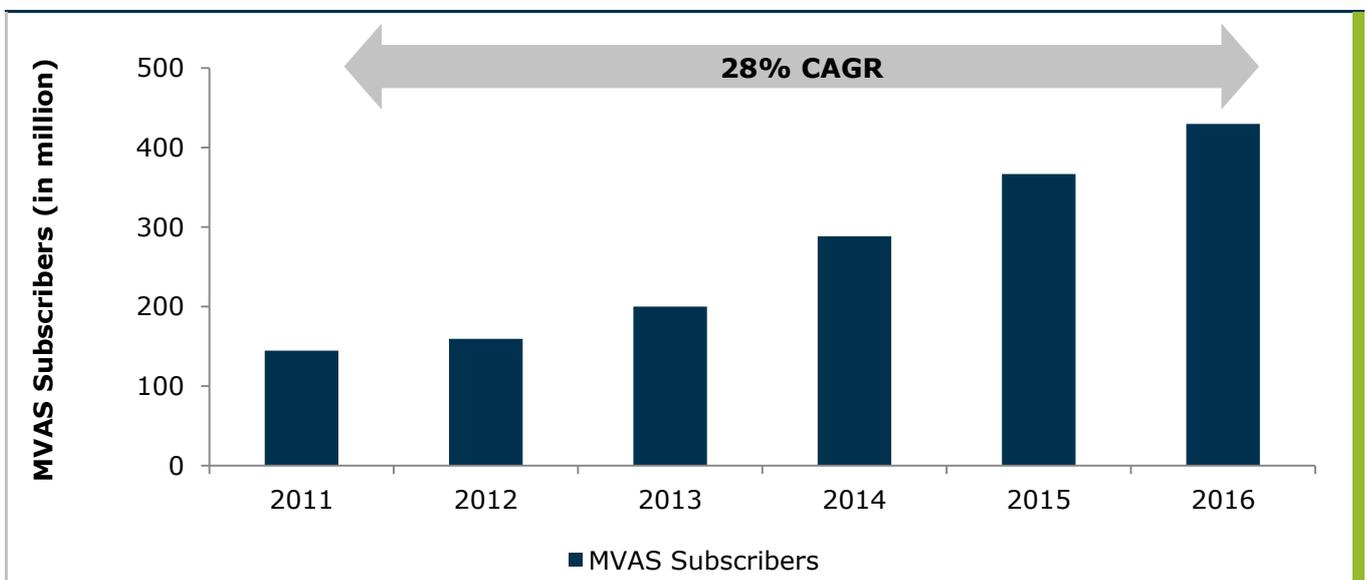
- High-End User Segment:** This category consists of users who demand high data volumes. Industry sentiments suggest that the average Indian user is spending more time browsing data applications as compared with traditional voice telephony channels. With this trend of shifting from voice to non-voice services, these users are adopting the best of what mobile technology has to offer, and are high users of advanced MVAS.
- Low-End User Segment:** This category comprises users who have purchased 3G-enabled handsets, but are currently not using any 3G plan. This user set represents an important characteristic of the 3G trend prevalent in India thus far, that of increasing affordability of W-CDMA-enabled low-cost 3G devices but relatively costlier 3G services offered by operators. With the trend in 3G services set to follow the device trend, this user segment is expected to gradually start interacting with 3G services.

While the aggressive promotion given to 3G services and the availability of a wide range of 3G handsets will drive the uptake of 3G services, the monetization of 3G will depend on the use of MVAS services by 3G subscribers. These trends will contribute to the 3G success story in India.

## Mobile Value-Added Services (MVAS)

At present, the mobile business is saturating, as far as the financial returns of operators are concerned. MVAS has the potential to improve this situation by monetizing 3G services on small-screen devices. Evalueserve expects the active MVAS subscriber base to grow at a compound annual growth rate of 28% and reach nearly 430 million by 2016 (see Figure 4).

**Figure 4: Mobile VAS Subscriber Forecast**

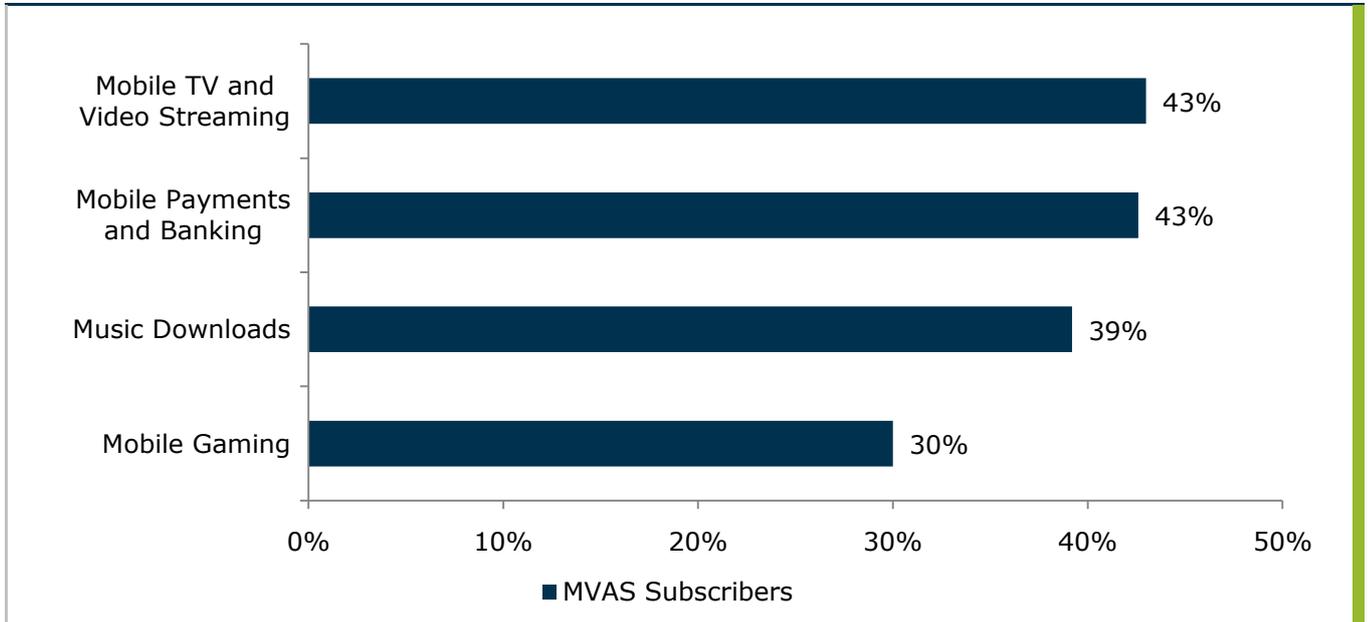


Source: Evalueserve Analysis

## Uptake of 3G Services in India (2012–16)

The high-growth MVAS services in the future will be content services (such as mobile video<sup>3</sup> streaming, mobile TV and music downloads), mobile payment and banking services, and mobile gaming (see Figure 5).

**Figure 5: High-Growth MVAS Services Compound Annual Growth Rate (2012–16)**



Source: *Evalueserve Analysis*

Each of the high-growth services will have specific growth drivers, as discussed below:

- **Mobile TV and Video Streaming**
  - Increase in third-party and 'Over the Top (OTT)' partnerships
  - Availability of affordable devices that support various video formats
  - Increase in content and aggressive content pricing
  - Improved data speed
- **Mobile Banking and Payment**
  - Implementation of stringent security protocols and increased public trust
  - Increased focus on rural areas
  - Push from financial institutions
  - Launch of mobile proximity services (e.g. Near Field Communications<sup>4</sup>)

<sup>3</sup> Mobile video includes video streaming and video download services provided on mobile phones by operators and third-party content providers. Videos include clips and movies.

<sup>4</sup> Near Field Communications is a set of protocols defining the guidelines for inter connection of portable devices (specifically Smartphones) within short distances. It is applied for contactless transactions and data exchange, among others.

## Uptake of 3G Services in India (2012–16)

- **Music Downloads**
  - Availability of low-cost handsets that support all audio formats
  - Improved variety and availability of content
  - Ease of use in downloading music to handsets
  - Promotion of music downloads by operator
- **Mobile Gaming**
  - Increase in youth-targeted content
  - Launch of mobile games already available on personal computers (PC) and gaming consoles (e.g., 3D games, multi-player games)
  - Increased focus on 'app stores' by leading telecom operators

Apart from the above mentioned MVAS segments, mobile Internet is expected to grow significantly in terms of the number of users. Mobile social networking will be a significant contributor in this regard—Evalueserve expects it to grow by 28% over the next five years in India, strengthened by the availability of pre-loaded social networking apps and the launch of social-networking-focused devices. Social services such as m-learning and m-health, being offered on the mobile platform, form another area that is expected to benefit from increased speeds offered by 3G. These services are expected to gain importance as a result of strengthened 3G performance:

- **m-learning:** These services are already making steady progress, following an increase in the uptake of portable devices, and are expected to witness rapid penetration among the mobile workforce and the student community for instantaneous transmission of information. This will include the delivery of digital educational content (documents, web-pages, audio clips and/or videos) via mobile phones.
- **m-health:** There is considerable scope for improvement in India's health care facilities. m-health has the potential to take audio-visual medical expertise and education to a wider base. m-health services can facilitate audio-visual expertise, the delivery of clinical data and health care information, and real-time patient monitoring.
- **m-governance:** It will make routine government services available to citizens 'anywhere and anytime'. m-governance services can include access to information and application filling, and official document submitting facilities. Although at a nascent stage in India, the Indian government has taken the first step in this direction by proposing the formulation of a policy framework governing the segment and its usage. Regulation and compliance to policies, along with the integration of various departments, will play a vital role in determining the outcome for m-governance in India.

While MVAS will be a key component of the 3G value proposition, heavy usage and revenues are also expected to result from big-screen usage (laptops and PCs) with 3G dongles<sup>5</sup>.

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<sup>5</sup> 3G dongle is a portable device that enables internet connectivity through a Universal Serial Bus (USB) port on access devices such as personal computers and laptops.

## The Way Ahead

While operators will push for 3G uptake, Evalueserve expects some key factors, as listed in the box on the right, to determine the ultimate fate of 3G services in the country.

### Success Factors for 3G in India

Effort by stakeholders to improve affordability

Customer awareness and improved user experience

Learning and deploying best practices from other countries

Operator approach to more advanced technologies

The case for 3G success in India is yet to be justified by the market. However, Evalueserve maintains its optimistic stand on 3G uptake, and expects rapid growth and an expanded market in the next five years. This will not only transform the telecom ecosystem in India, but also be a key driver for the country's socio-economic development.

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## About Evalueserve

Evalueserve is a global specialist in knowledge processes with a team of more than 2,600 professionals worldwide. As a trusted partner, Evalueserve analyzes, improves and executes knowledge-intensive processes and leverages its proprietary technology to increase efficiency and effectiveness. We have dedicated on-site teams and scalable global knowledge centers, in Chile, China, India and Romania, which provide multi-time-zone and multi-lingual services.

Evalueserve's knowledge solutions include customized research and analytics services for leading-edge companies worldwide. By partnering with us, clients benefit from higher productivity, improved quality, and freed-up management time. We provide our clients with better access to knowledge and information across all parts of their organization, thereby adding to their capabilities.

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