

# **Strathmore University**

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- At some time or other, most industry sectors have undergone a period of profound and rapid change, forcing companies to transform their entire business. Currently, it's the turn of the communications industry.
- The rise of modern communications as a force for economic good is creating spectacular growth. The sheer pace of social, economic and technological change is generating business opportunities everywhere.
- Mobile Telecommunication technologies have evolved in successive generations. The first generation (1G) appeared in the 1950's. The second generation (2G) or GSM technology is used massively, but challenged globally by the next (third) generation (3G) technologies and future fourth generation LTE (Long Term Evolution and Mobile WIMAX). This sequence of generations is characterized by increasing capacity (higher transmission speeds with 3G enabling up to 7.2Mbps downloads and 4<sup>th</sup> generation indication of upwards of 21Mbps downloads on the move). The success of 3G lies in the integration of telecommunication services and multi-media services.
- The introduction of mobile communication is associated with profound changes in people interaction. What once was the usual way to call someone changed from using the telephone booth or fixed telephone line to using a personal phone kept in the pocket. Now using a phone increasingly means using a mobile phone instead of a fixed phone. The strong driver for demand was primarily price decrease, extended availability and the emergence of a mobile culture (and pay as you use in Africa – pre-paid). Being in constant touch and instantaneous gratification is today an important need for many people.

- The challenge for traditional mobile operators (voice) is increasing subscriber base with declining average revenues per subscriber. Naturally wireless data services have emerged as a newly cultivated growth point. For fixed network operators, as fixed voice services evolve into mobile voice services, it is inevitable that these operators will enter the mobile voice and data market. ISPs and TV/broadcast operators with rich content and exclusive users have gradually realized that expanded content and more consumers using mobile communications provide a new business opportunity. They are actively entering the field of mobile data.
- The phenomenon of social networking; the convergence of telecoms and media: accelerating innovation in content and applications; hundreds of millions of new subscribers in new growth markets; and the bundling of mobile, fixed, cable and TV services are all helping to create an insatiable hunger for communications from us all. A powerful introduction into the world of mobile communication is the INTERNET. A rich source of information which needs to be accessed and / or conveyed via e-mail services.
- There are two sides to the equation – mobility and the internet. The data speeds on traditional mobile networks (2G and 2.5G – Edge) have never managed to liberate the internet. New technologies 3G / WiMAX present a superior platform to enable millions have access and take the Internet Mobile.
- It is estimated that by the year 2015 the world will have more than five billion people connected to the internet – most of them will have a mobile/portable wireless connection.
- The kind of applications and services you use now {on a desktop} also make sense on the move but it's also about convenience and connectivity. The capabilities of the technology will shape its usage. You tube is an example of a service that is becoming popular on mobile devices as networks have evolved to provide enough capacity for access.
- As the world of business demands instantaneous access to information and speedy turnaround in decisions and executions, the concept of mobile office, working from home and anytime, anywhere is driving business communication

to go mobile. Value added services and applications, for both consumer and business sectors, will grow significantly faster. The application packages will include **communication** (including VoIP, e-mail and other messaging); **entertainment** (including internet searching news and podcasting); and **mobile office/mobile workforce solutions** (covering VPN, intranet access, e-mail and scheduling applications).

- With existing technologies such as 3G/WIMAX this kind of development is already feasible **in Kenya**.

#### **New Revenue Streams - Mobile Payments, M-banking, M-Commerce, Advertising:**

- As mobile communication evolves from basic voice, to mobile broadband, advanced multimedia applications such as video on demand, more advanced forms of payment will be required. In some advanced markets, such as Japan and Korea, and Kenya (**through M-Pesa**) mobile payments have already developed into systems which are more akin to “bricks and mortar” world credit cards.
- While a mobile or portable device may not necessarily have the same large screen form factor as a TV, it has the key advantage of being permanently switched on and always being accessible.
- Advertising revenue will start later but will show the fastest growth of the new revenue streams. Chief amongst these assumptions is the move towards convergence, which is likely to continue, causing the fixed and mobile telecoms segments to merge to enable new integrated services. Similarly, there is a continuing trend for the telecoms industry (fixed and mobile) to merge with media (notably broadcasting) to support the introduction of new services, application and content across multiple networks.

- In conclusion, in Kenya and much of the emerging world of Africa, we have scarcely scratched the surface on the power and growth of mobile communication and opportunities it presents. Whereas we have penetration of 35% on basic mobile voice, (estimated to grow to 70% in 5 years), we have barely started the revolution to fixed mobile convergence, mass Internet access and related services, Mobile office applications and multi-media applications. The future is very bright for mobile communications and the communication industry in general.