Philippines

&

The Global Digital Economy

April 2011

Kitskoo

BACKGROUND
The Philippines is in an enviable position
The Philippines currently participates in the Global Economy, mainly through more than eight million Filipino's overseas. Overseas Filipinos generate almost $20billion a year or more than 13% of the Philippine GDP. The Philippines is also a leading world-wide destination for call center and business process outsourcing and off-shoring. Call Centers and BPOs employ more than half a million Filipinos and generate around $7billion a year.

But the Philippines is losing its advantage
While the current situation is impressive, other countries are improving their infrastructure and skills and investing at a much faster pace than the Philippines. The Asian Development Bank (ADB) reports that the amount of new foreign investment in the Philippines is one of the lowest in the region and less than a quarter of most of the other Asian countries. The Philippines must unlock the potential of the large young working population (18 – 35 years) by supporting and encouraging creativity, innovation and entrepreneurship as well as generating jobs. As such it is imperative that more attention be paid to the development of the Information and Communication Technology (ICT) infrastructure. Relatively speaking the Philippine ICT infrastructure is mixed, with very good texting and associated capability, but poor calling quality and limited wireless broadband coverage. There are significant investments which need to be made to ensure that the Philippines takes advantage of its human resources and talent. The infrastructure for information and knowledge based workers must be put in place today, to ensure that there is a economic and social growth engine to take over from OFWs and call center workers.

In a study last year, the World Bank determined that a 10% increase in mobile phone subscribers leads to a 0.8% increase in economic growth. But a 10% increase in high-speed internet leads to a 1.3% increase in economic growth or more than 50% higher than with mobile phones! It is not clear what the economic contribution of text/SMS is but it is probably lower than 0.8%. There are five components that have to be in place in order for the country to be competitive in the global digital economy.

FIVE COMPONENTS ARE NEEDED FOR THE PHILIPPINES TO ENABLE ITS INFRSTRUCTURE FOR THE GLOBAL DIGITAL ECONOMY

1: WIRELESS & MOBILE TOWERS - This is the first factor and it represents the all important access (or "last mile") to the customer. Given the extremely limited copper distribution in the country (less than 20% of homes or locations have access to a landline) the only way that the majority of the population will get broadband Internet is wirelessly. However, most wireless broadband technologies require the user to be within 0.5Km - 2km of the tower/base station particularly if it is mobile wireless (yes, there are technologies that allow users to be tens of kilometers away but these tend to be specialized and expensive). For example in order to support mobile broadband, the Singapore telecom company Starhub has more towers/base stations than the Philippines largest carrier SMART has in the whole of the Philippines! After many years AT&T has eliminated their unlimited mobile data plans as "unsustainable". While neither of these situations has a direct correlation to the Philippines, they never the less point to the fact that both building out mobile internet infrastructure and providing broadband Internet service is expensive. Significant tower expansion is the only way to ensure proper Internet access and quality for the majority of Filipinos. Yet tower expansion is expensive and broadband prices are generally fixed, usage is unlimited and the service is less profitable than voice and texting. In fact towers consume up to 50% of a mobile carriers capital expense and up to 60% of their operating expense! Many countries have found that regulating or encouraging tower co-location or sharing is the only way to ensure proper coverage and service. Therefore operators and carriers must take advantage of significant cost savings and the government regulator must push carriers to adopt cost saving measures that will ensure better coverage of the service. Sharing is good for telco's who can save up to 75% of the Capex cost of building new towers and 60% of their Opex cost for running and maintaining existing towers. It is good for the country as broadband becomes more widely available. It is good for subscribers who enjoy higher quality service at a lower price. And it is good for the environment as it reduces power consumption and pollution and eliminates the eye sore of multiple towers in the same location.

2: NATIONAL FIBER OPTIC BACKBONE - The second factor is fiber optical cables, which are the complement and backend connection to the wireless and mobile towers. Fiber optics are the "super-highway" on which all the other elements depend. It is divided into two categories International Cables and a National Backbone. Surprisingly the international cables are simpler and easier to build (no rights of way in the ocean!)

and the majority of the cost is borne by foreigners (local telco's primarily pay for the local cable landing station). The national backbones must reach deep into the tertiary cities and municipalities. High speed Internet can only occur when there is sufficient "bandwidth" or network capacity and this can only be achieved with fiber optic backbones. Therefore both high quality and mass market broadband cannot take place without extensive fiber optic backbones. This is extensive and time consuming. In many countries, the right of way is shared by all the utilities and there is either cooperation among the carriers or independent companies that specialize in building the fiber optic networks to be used by all industry players. Let's assume an initial target is to ensure that 80% of the population has access to affordable broadband. Given that target, in the Philippines, PLDT/SMART's fiber network coverage is probably at 40%, Globe 20%, Sun/Digitel and Bayan at 10% each. Unfortunately much of the current fiber overlaps so adding it all up only leads to a total coverage of 50%! An analysis indicates that the majority of the Philippines is unlikely to be provided with quality broadband that can reliably deliver voice, data and video anytime soon.

3: NATIONAL INTERNET EXCHANGE - The third factor is opening up the Internet for local business and entrepreneurship. Currently 15% - 23% of the internet traffic is domestic. Domestic traffic originates in the Philippines and terminates in the Philippines. The origination and destination may be as close as across the city or even across the street from each other but 40% - 70% is being sent out of the country to Hong Kong or LA before returning. The lack of a proper Internet exchange means that accessing and interacting with local web sites and the performance of many applications and games can take more than twice as long as it should. It also makes the country dependent on international cables. As was experienced during the major international cable break in 2008, even access to local sites, government websites and local email was disrupted. While the international cable diversity has significantly improved over the past two years, internet traffic has exploded and the dependency of business, commerce and personal communication has similarly increased. "Peering links" are where telcos exchange Internet traffic locally. However, while these do exist they tend to be small, congested, difficult to obtain and subject to various pricing agreements. An Internet Exchange allows internet traffic particularly local traffic to flow over the shortest route. It reduces costs for the carriers because it reduces the international bandwidth required to maintain a minimum level of service. Even though international costs have fallen, it is still many times more expensive to pay for international bandwidth rather than connecting locally. The lack of an Internet exchange costs countries foreign investment and job creation. It is a disincentive for foreign

companies or providers to locate their websites, services and businesses locally as even their local customers will experience more delays than if they located their servers and services in the U.S.! A broad spectrum of industry players agree that it is a problem that can be easily fixed, but many believe that although they are willing to cooperate others will not!

4: OPEN MOBILE PLATFORM - There is a global push for getting public and essential services into the hands of the general population. According to The Economist the mainstream economic view is to "get markets right first" and then to deal with any pockets of poverty afterwards. However, this "trickledown theory" is just that a trickle. In many cases poverty remains persistent. A new view is developing that there must be a specific push to deliver critical services, information access and communication to the general population directly. Some of these initiatives in the area of agriculture, social services, health, education and micro-finance are coming from international and multi-national organizations including the UN agencies, the World Bank, ADB, USAID and others. The mobile phone is the most important tool in reaching the broad population, be it for basic services or in preparation or response to a disaster. For today and the foreseeable future the mobile phone is the most pervasive and de facto technology that is able to reach, communicate, inform and educate 80% of the world's population. Unlike other technologies (e.g. radio) it allows for acknowledgement of the information and communication provided. It is two way and supports input, response, communication and participation. Today however, most carriers have virtually closed their networks to all but their own internally generated services. Outside or third party commercial service providers are seen as a threat. Or, if they are allowed to provide services over the telco's network they are reluctantly supported after many months of negotiation and testing and only after they agree to turnover the majority of their revenue to the telco.

5: INFORMATION & COMMUNICATION EDUCATION & TRAINING - This is the fifth and final component. The purpose of the previous four factors is to create an infrastructure that will unleash job opportunities, entrepreneurship and innovation. However, it will be critical that skilled and educated talent is available to both support the infrastructure and take advantage of it. While it is no less important than the other four components it is essentially different. This is because education and training is much more scalable than the other components and does not require an industry leader or industry cooperation to get started. In many ways, the Philippine education and training industry "naturally responds" to the global demand for skills. This is evidenced

by the significant response to the international demand for nurses which led to an explosion of nursing schools. If the education and training industry is properly informed and encouraged it is likely they will respond to the expanded opportunity.

THE SOLUTIONS ARE NOT COMPLEX BUT THEY DO REQUIRE LEADERSHIP
Implementing the National Internet Exchange primarily requires a neutral party and some attention from industry executives. While this is not easy it is a relatively simple problem to solve.

National Fiber and Wireless Tower sharing presents more of a challenge. Both of these concepts are well established in many countries such as India, USA and Singapore, and are either supported by the industry or mandated by the regulator. While a "neutral third party" will be helpful or even necessary it will not be enough. These two factors will require leadership both within the industry and in government.

The concept of an Open Mobile Platform is just starting to take hold within the industry. This "change of heart" is occurring mainly because Apple has scared both handset manufacturers and the telco's with the stratospheric success of the iPhone. A key factor of success for the iPhone is that Apple opened its platform to all software application developers. This generated tens of thousands of applications many of them free or less than $2. Apple also made the applications easily accessible to customers from the Apple app store on the Internet. Suddenly a model that discourages third party applications and makes them difficult to use and access has been called into question. In addition, governments are beginning to realize that information and communication are too important for the "common good" to be left completely in the hands of the private sector. However, visionary leadership either at the industry level or the government will be required to achieve the required breakthrough in this critical area.

THE BENEFITS ARE TOO BIG TO IGNORE AND FAILURE IS TOO FRIGHTENING TO CONTEMPLATE
Some studies have attributed up to one third of GDP growth to telecom investment. A 10% increase in broadband yields a 3% increase in non-farm employment. Widespread access to broadband reduces the challenges of low population density and physical remoteness from cities.

Information and Communication Technology (ICT) is an accelerator of economic and social development. It has well documented benefits including, job creation, improved

efficiencies of distribution of services, information and goods (including agricultural). ICT increases worker productivity, it provides more efficient and increased access to "basic" services such as healthcare and education.

Failure to accelerate ICT to the population in general, will contribute to the widening of the gap between rich and poor and significantly reduce the already falling competitiveness of the Philippines.

NEXT STEPS

➢ **Contribute to Public Policy**: Advocate the adoption of these components as part of the public policy of the DOTC, CICT, NTC and other relevant government agencies and bodies. Ensure it is put on the national ICT agenda.

➢ **Challenge the Industry**: Introduce the approach to members of the telecom and computer industry and encourage them to take a leadership position in pressing for what is good for their company, good for the industry and good for the country.

➢ **Gain the support of International agencies**: Some of the international agencies are already advocating or adopting some of these positions. They will be invited to support the key components of this approach.

➢ **Use traditional and online media**: Ensure the concept gets sufficient media and public attention. Online and ICT media in particular will be encouraged to be involved.

➢ **Convene meetings**: Convene meetings with the appropriate participants and build support.

➢ **Demonstrate a bias for action**: Move the easiest concepts such as the National Internet Exchange forward independently.