ICT: INNOVATION COLLABORATION TRANSFORMATION

High speed broadband connectivity is being touted as a means to national development and job creation: the basis for future prosperity.- By Tim Lyddiatt

Web 2.0 is a horrible phrase that means practically nothing, apart from denoting a paradigm shift in all our online activity. Whereas the web used to be almost completely static - they talked, we listened - Web 2.0 is much more omni-directional and much, much more interesting. Web 2.0 exists 'in the cloud' and can be characterised by websites like Flickr and YouTube which allow users to share picture and videos online, but also by sites like Facebook and Twitter and other social networking sites that allow real time communication and collaboration. Web 2.0 is changing the way we work and play; it is linking disparate ideas and people, connecting them to create things that have never been seen before. Some say that Web 2.0 has the power to change the world and increasingly, technology is being touted as the fasted way to develop the MENA region.

But Web 2.0 would not be possible without the creation of a global Information Communications Technology (ICT) infrastructure providing an always-on, high bandwidth connection to the rest of the world. You might view YouTube as merely a frivolous distraction, but as Ahmad Hamzawi, Google's MENA head of engineering told us: "the region is one of the largest consumers of video in the world." That means that the 450 million strong MENA region has found a way to engage with the internet despite the fact that, according to Google's databases, "only one percent of all content on the web is in Arabic." As such, if where you happen to be does not have the kind of ubiquitous ICT infrastructure required for Web 2.0 inclusion, and can only speak Arabic, you are effectively excluded from the opportunities that ICT affords. This then, is the digital divide.

In April, Hamzawi was part of a US State Department sponsored technology delegation to Baghdad. The purpose of the trip was, as Wired Magazine's Steven Levy put it, "to use the brains of this small collective to give ideas to Iraqi government officials, companies and users that will help them rebuild Iraq." When Gulf Insider spoke to Hamzawi, he put the problems into perspective. "Many people have more than one mobile phone and, depending on where they are and the state of the network that day, will try each one until they get a signal." Whilst Baghdad might be an extreme example, it is still fair to say that much of the MENA region lags along way behind the developed world in terms of ICT access and utilisation.

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Charlie Nagy, Chief Technology Officer at Qatar's Silatech Foundation, knows all too well the technology problems facing much of the region. "There is almost zero internet connectivity, let alone broadband, in some parts of the region." Indeed, according to the CIA, in 2007 Yemen's 24 million strong population counted just 320,000 internet users amongst them. Similarly, there were less than a million phone lines installed, "but everyone has a mobile," says Nagy.

According to Silatech, 100 million jobs need to be created in the Arab world by 2020; indeed, their website claims that "MENA has the highest rates of youth unemployment and under-employment of any region in the world - even higher than sub-Saharan Africa." These are issues that must be addressed, and soon, if the nightmare scenario of regional unemployment reaching 30 percent is to be avoided, prompting the kind of civil unrest that former World Bank President, James Wolfensohn, told us as being "very dangerous for the region."

Can ICT play a part? Fahad AlShirawi, CEO of Bahrain's 2Connect thinks so: "[new] ICT infrastructure will play the most significant role in the future of job creation and the region's economic diversification. Without it, the region cannot hope to be competitive globally in any of the sectors that rely on ICT to function." Nagy agrees: "leveraging existing technologies whilst waiting for new infrastructure to be built is critical to our success, and the future success

of the region." In Bahrain, Telecoms Regulatory Authority (TRA) General Director, Alan Horne, told Gulf Insider that investments in telecom to create low-cost, high capacity, diverse, competitive international connectivity was central to achieving the kingdom's 2030 Economic Vision.

The Numbers Game

George Bernard Shaw thought it, "the mark of a truly intelligent person to be moved by statistics" whilst 19th century British Prime Minister, Benjamin Disraeli, thought there to be, "three types of lies: lies, damn lies and statistics." Whatever the truth, it is in the name of statistics that billions of dollars are being committed worldwide by governments and private companies in the pursuit of growth promised by an online digital future.

For example: in April, Australian Prime Minister Kevin Rudd announced that the government would commit A$43 billion (US$30 billion) to building a broadband network across the country as a means to, "turbo-charging Australia's economic future."

Perhaps he had Singapore in mind when announcing the move. According to the World Bank, the city state witnessed a massive spike in exports of goods and - more significantly - services as a percentage of GDP in the second half of 2002. This, according to the graphs, could be seen as being in direct correlation to a fivefold increase in the number of broadband subscribers: better ICT infrastructure as a means to developing the services sector. By 2006, that spike represented a growth of some 76 percent but as Andy Haire, Deputy Director General of iDA, Singapore's Infocomm Development Authority, pointed out, not everything might be as it seems. "Singapore and Hong Kong - which witnessed a similar substantive spike - are trading nations, and as such will always be 'high' up on the exports axis. I don't really believe the domestic broad band penetration success is necessarily linked with export levels."

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Other numbers might be more persuasive. In 2007 OECD surmised that there was a discrepancy of 2.2 percent in GDP growth between those countries consistently in the top five for broadband penetration - growing at an average of 3.85 percent - and those consistently in the bottom five, who grew by just 1.65 percent between 2002 and 2007. The same report reveals that South Korea, with broadband penetration levels close to 30 percent in 2002, saw labour productivity growth of nearly five percent; in Italy, where broadband penetration hovered just below 5 percent, productivity growth languished at less than half a percentage point.

Put simply, the numbers suggest that there is a direct correlation between the creation and utilisation of advanced ICT infrastructure and the creation of new industries and jobs, diversification into new industries - in the Gulf, away from oil - and the rapid development MENA so badly needs.

But Singapore has a fully liberalised telecoms sector - indeed, it is the regulatory model upon which Horne is basing the TRA - in a region that has such a young and disparate ICT landscape in terms of liberalisation, deregulation and implementation, where 10 years ago ICT was almost exclusively a government run closed shop, how will such a digital future be envisioned and instilled? And what tangible benefits will its people see?

In terms of market liberalisation, the news so far is good. According to Bahjat El-Darwiche, a Principal at Booz & Company, "all MENA territories have at least two mobile operators and fixed line is not so far behind."

This is important because, in order for new and existing network operators to feel comfortable in committing the billions required to create advanced ICT infrastructure, they must first feel confident that the regulatory framework will support them going forward. They must believe that markets will remain fully liberalised with no operator being given unfair advantages by government intervention or unevenly distributed investment. Of this, El-Darwiche says: "incumbents, whilst obviously initially resistant, have learned to play the competition game; some have even found ways to increase revenue by embracing deregulation."

In Bahrain, liberalisation has been overseen and driven by the TRA. When Gulf Insider met him Alan Horne, used the phrase 'co-opetition' to describe the future telecoms landscape in the region and Bahrain. "Not everyone can build everything they need in order to compete in every market; no one would make any money. Worse, such would be the fear of never achieving ROI that no investment would be made, nothing would ever be built and Bahrain could not move forward." Comparing Bahrain's future ICT landscape to that of the UKs privatised rail network, he said: "it was not viable for firms to build new railway infrastructure to run trains and, in the same way, we just want to ensure that access to international capacity is given to all operators on fair and equal terms." He envisages multiple infrastructure providers selling bandwidth and access to other operators to provide additional services that will tap into new markets hitherto unseen in the region.

The foundations of this vision lie in Bahrain's legislative decree 48 of the 2002 telecommunications law which stipulates that Bahrain's telecommunication sector is open and fully deregulated. In 2004, the year that National Fixed Services were opened for competition - mobile having been opened the year before - then TRA Director, Andreas Avgousti, told Reuters that "the market will be fully free and open to everyone to invest in and fully own a business. There will be no further restrictions in the sector in Bahrain. " In other words, Horne's 'co-opetition.'

How will this competitive landscape help development? Horne, El-Darwiche and Haire all agree that "there are both direct and indirect benefits from ICT development." Direct benefits can be understood as increases in revenue and employment in the sector, and by the number of players in the game. In Bahrain, TRA figures show that there are 15 active licensees offering retail services to the public, up from just one; and that the sector has seen a 99 and 37 percent increases in revenues and employment respectively since 2003, when liberalisation began. In Singapore, Haire says that their studies predicted the direct effect of their ITC infrastructure initiatives would be GDP growth of 5.8 percent.

The Indirect benefits are harder to quantify. Haire would only commit to a vague "more than 3 times that," response, saying that, "when we first crunched the numbers, we couldn't believe what we had found." When asked about his predictions, Horne made references to the lengths of pieces of string. One thing is clear however: the indirect benefits will almost certainly dwarf the direct benefits.

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Building Blocks

If Google's mission is to organise the world's information and make it universally accessible and useful,' then MENA represents a particular challenge to achieving their goals. It is all very well organising the world's information but it is not very useful to MENA if it remains inaccessible because 99 percent of the internet is not created in Arabic. "It is more fundamental than just not being able to read information," says Hamzawi; "once found, websites can be translated. A bigger problem is searching in the first place."

Whilst Google will accept search terms in Arabic, its Arabic content databases are small and often returned very patchy results. "That's why when searching in Arabic today, our servers automatically translate the terms into English, thus enabling access to much more content." Similarly, Ta3reeb allows phonetic Arabic to be typed on a western keyboard and then transliterated into English to exactly the same effect. "Our aim in MENA is to provide the tools for the region to tap into the potential offered by ICT; part of that is in promoting the creation of more local content."

Local content could well be key to driving broadband penetration in the region, a point that Haire made when comparing Singapore to South Korea. "Usually the poster child for broadband deployment, South Korea's success lies in three factors: development of local content; government participation in infrastructure deployment and below average dependency of foreign telecoms capacity which kept subscriber prices low." In Bahrain, the TRA is augmenting a similar triptych as a means to increasing broadband penetration here. For Hamzawi, local content means more than simply Arabic web pages; "it is about creating the kind of online community we take for granted in Europe or the US."

The example he uses to demonstrate this is well known to anyone discussing how the internet is used in the region. In the UK, if you want to go to a new restaurant , you look online to find it, can read reviews online and make the reservation before using online maps to find its physical location. In MENA, "we ask our family and friends and then their family and friends." On one level, this anecdote explains simple cultural differences but on another, "it reveals an interesting point. Why don't people look online to find a business, because the business aren't online. And if they aren't online, how will they ever be found by anyone with no knowledge of their existence: how will their business grow?" A bigger online presence creates opportunities for everyone, he says: "the consumer in terms of finding information and services; businesses, by being able to reach more people and better serve customers; and society as a whole, by new services like e-Government and Learning coming online."

Hamzawi's approach makes sense for his company too: the more people

that are online, the more people will use Goggle's products and the more advertising they can sell. But their moves into 'services in the cloud,' where applications exist not on local computers but on Google's servers, could also help fix access problems too. "Shared computers become more useful when all your data can be stored securely and protected from viruses and malware."

This last is something that is crippling the good intentions of aid agencies across the world. In Ethopia, ICT4D[evelopment's]Tim Unwin told Gulf Insider, "many [aid] donated computers are effectively crippled by viruses that go unchecked because their donors do not also bequeath antivirus protection, due to the ongoing support costs involved."

Certainly the cloud approach is fundamental to Silatech's vision, but they have other strategies in mind as well. Nagy told us: "we will be creating a portal that provides access to e-learning and learning management systems, will have EPR capabilities to enable business to grow their presence online; all of these will be hosted in the cloud.

"Right now, access is still a serious problem, whether in terms of cables being laid, of language, or of IT literacy: what opportunities exist online and how can I access them?" Silatech is looking to address all of these issues and is partnering with companies, governments and NGOs in order to create an ICT ecosystem that, "best leverages what is available now, and will maximise the potential of what comes next. The region cannot wait for universal fibre to the home."

That means using the tools that people currently have to "connect people and opportunity. In huge parts of the region, that means a 2G mobile phone." Silatech envisages walk-in computer centres supported by call centres manned by Silatech trained staff - itself creating employment - that will complete ICT transactions for individuals that cannot make it to a centre and do it themselves. "A priority is changing the mindset across the region toward knowing what can be done with these tools and in creating the infrastructure that allows them to best harness their amazing potential." In short, transforming the region toward a knowledge economy.

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MENA is a region divided, with some countries far more developed than others, but it is worth remembering that when Singapore first embarked on its ICT development, it was hardly a third world country. If ICT can have such a profound effect on the economy, education and employment there, should we not all hope that it can be repeated here: even the oil rich GCC still lags far behind the OECD in terms of innovation and patents registered. Infrastructure investment is expensive but should be viewed from a long term developmental perspective. Competition, usually the mark of a healthy market, might not be the best fit in developmental terms. The industry should consider joint ventures, Horne's co-opetition. The key is that all concerned - governments, operators, businesses and users - understand what ICT offers and how it can be utilised to drive business, the economy and the delivery of social services.

ICT has to play a part in MENA's development and for that to happen, further market liberalisation must be encouraged and investments made in order to foster the kinds of innovation and imagination described here. After all, it was these qualities that allowed the developed world to steal the march on the rest of the world in previous centuries. Is the 21st century the time for the rest of the world to catch up? If ICT is allowed to flourish, the numbers say it is. GFI