Towards Smart Digital Communities, Cities and Nation - Digital Services Innovation Empowered by IoT-Cloud-Big Data Analytics-Mobility-Citizens (12 March 2016)

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The communications and multimedia (C&M) market in Malaysia has been steadily growing since the launch of the national broadband plan in 2004 which is then catapulted to an exponential growth in 2010 owing to the tremendous amount of promotional activities. From 2010-2015, the penetration rate has skyrocketed from 31.7% to 72.3%. This gargantuan growth is reflected by these statistics:

1. Over 15.6 million active facebook users
2. More than 20.1 million internet users
3. More than 3.5 million twitter users
4. More than 2.0 million LinkedIn users
5. Approximately 27.9 million total broadband subscriptions
6. About 24 million 3G mobile subscriptions
7. 96.8% cellular coverage at populate areas
8. Approximately 1.4:1 ratio of mobile phone owners to Malaysian population.

Inevitably, this digitalization of Malaysian communities has reshaped the communication and multimedia scenario by bringing along declination in voice and SMS revenues, rise in online video and OTT (over the top) attack on TV, growth in mobile/wireless penetration and traffic, formulation of new business outside of the core by the telco key players, rapid exploitation of IT and digitals among the public and private sector and rise in social media abuses and cyber-attacks just to name a few. In fact, the number of complaints handled by Malaysian Communications and Multimedia Commission (MCMC) has increased by a factor of 2.5 within a mere 5 years starting from 2010.

In this march towards a smart digital nation status by 2020, there are 3 main challenges which must be overcame namely Information Communication Technology (ICT) readiness, ICT usage intensity and ICT capability index. Sufficient infrastructure must be in place to ensure that accessibility, quality and speed of service is deliverable. It is projected that this digital economy would contribute to 20% of Gross Domestic Product (GDP) in 2020. Key trends that would severely impact the C&M sector includes:

1. Global- changing demographics with rapid urbanization as well as regional integration with ASEAN
2. Technology- cheaper computing power, rise of broadband and mobile connectivity, Internet of Things (IoT), 3D printing, AI and robots, and evolution in network architecture towards all-IP network
3. Business and Government- demand for e-government agencies, big data and advanced analytics, rise of cloud computing and new business models using new technology to drive productivity and to satisfy consumer needs
4. Consumer and society- increasing content fragmentation, rise of the "Youtube" generation and the social media

Smart city is another product expected out of a highly digitalized nation. In the simplest explanation, smart city is a city which houses a community with life quality improved as the result of effective harnessing of ICT. To ensure the sustainability of smart cities, there are 6 main pivots:

1. Smart governance- interconnecting of governmental organisation
2. Smart economy- regional/global competitiveness giving rise to high levels of productivity and electronic business
3. Smart mobility- enhanced accessibility, safety, efficiency and intelligence across transportations system
4. Smart environment- pollution monitoring, use of sustainable technologies and consideration of environmental sustainability
5. Smart people- citizens which use ICT based smart services
6. Smart living- high quality of life, education ,healthcare, home automation

Empowered digital citizens complete the recipe of this pandemic of digitalization of the nation. Great opportunities for innovation and growth would be unraveled from IoT in industry, government and digital lifestyle as it becomes embedded or hidden in many aspects of our lives. The potential of open data would be increasingly tapped to produce a sustainable and good quality life for the "ever-smarter" community living in "ever-smarter" cities.