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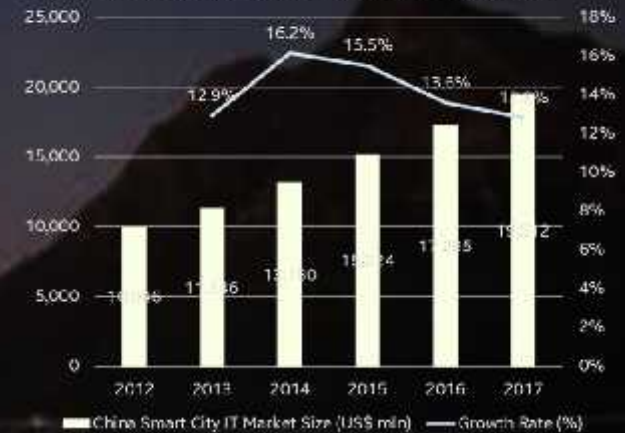
India: Cabinet puts US\$15.4 billion into 100 smart cities, urban development



JAPAN: Fujisawa Sustainable Smart Town - 1000 homes.



CHINA: By 2014, 100% of T1&2, 89% of T3&4, and 47% of T5/6 cities in China have been on Central Gov's various smart city trial lists.

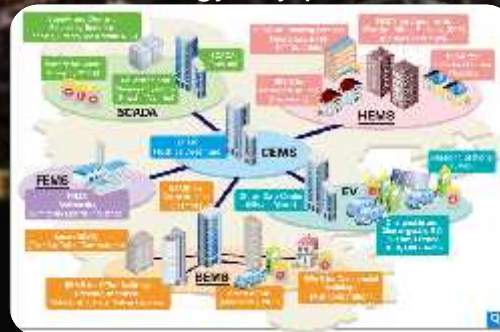


No one's waiting for now.

\$40Billion: Songdo Smart-City Implementation



YOKOHAMA: CO2 reduction – smart energy city plan.



Singapore: Embarks on Smart Nation initiative



Demand Creation: Motivation for technology adoption

“What do People want to use it for?”



Services

Delivery of government services to populations, inc. Healthcare, Agri, Finance, etc



Education

Furthering your **education**, your career and providing benefits for the whole family



Connection

Staying connected to your friends, family and to what's going on in the world



Entertainment

Having the ability to access a PC anywhere, anytime for convenience and to keep your data safe



Local business

Being connected to customers, markets, suppliers helps grow business



"This isn't about faster Internet or fewer dropped calls. It's about connecting every part of America to the digital age. It's about a rural community in Iowa or Alabama where farmers and small business owners will be able to sell their products all over the world. It's about a firefighter who can download the design of a burning building onto a handheld device; a student who can take classes with a digital textbook; or a patient who can have face-to-face video chats with her doctor."

- President Obama, State of the Union Address, 2012

THE AUSTRALIAN BUSINESS REVIEW

NEWS OPINION BUSINESS REVIEW NATIONAL AFFAIRS SPORT LIFE TECHNOLOGY ARTS TRAVEL

STOCK QUOTES

MARKET ▲ 4.89	CSL ▲ +0.28% 90.81	NAB ▲ +1.82% 26.86	QBE ▲ +0.84% 12.84	SUN ▲ +0.88%
S&P/ASX 200 ▲ +0.94%	AUD/USD ▲ +0.09%	TOP GAINER NST ▲ +7.18%	TOP LOSER LNG ▼ -9.20%	
5077.6000	\$0.69	\$2.09	\$2.27	

NBN could boost GDP by 1.8 per cent

SEPTEMBER 04, 2015 9:05AM

Australian News Sept 4th 2015

The State of Broadband 2014:

broadband for all

A REPORT BY THE BROADBAND COMMISSION

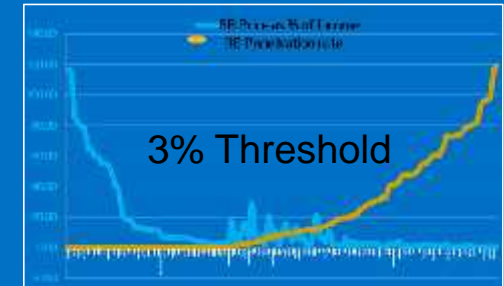
ITU UNESCO

United Nations Educational, Scientific and Cultural Organization

ITU, UNESCO 2014



Connecting the Next Billion People(3B) Market gap Program



BB cost represents 2/3 of overall cost

Apply pre-paid business model to Broadband

Provide the appropriate device

Relevant Local Content and Training

Model is sustainable because is in Telco's interest

Need to address Affordability and Desirability



Education is #1 family motivation for technology adoption



Prepaid Broadband helping Education across 4 GEOs



Indonesia: Internet for Everyone

"Intel-powered computers will come bundled with affordable internet packages" ZDNet, May 13, 2013

Problem statement

- Broadband cost represented 2/3 of the overall cost of the solution (PC+BB in 3 yrs).
- Less 10% of Indonesian pop. could afford BB cost (3% threshold), so roadblock for getting in the digital era
- Reduce BB cost to reach more Indonesians

1

Solution: Free Internet with IA-devices

- May 2013 launched with Telkom Free 120 hours + 240 hours with \$0.50 Top-up for 6-mo for all Intel-based Devices
- Eliminated BB affordability for IA-based devices

2

Intel assets brought to Telkom

- 5M potential customers/yr.
- Expertise, know-how and trusted role
- Broad channel / recognized brand
- Technology leadership

3

Telekom: ~1M new subs. due to Intel in first 3 months!

4



Smart Subsidy: Tax Reductions on ICT to Stimulate Demand

Colombia

- Colombia provides a particularly compelling example of the economic impact of PC tax relief, both because the country has eliminated its VAT on PCs for multiple years and because a consulting firm (IDC Colombia) conducted an in-depth analysis of the economic effects of the VAT exclusion.
- In 2007, Colombia reduced its 16 percent VAT to zero for the majority of PCs. The IDC analysis found that the tax reduction facilitated:
 - > A 110% increase in PC sales revenue from 2006 to 2008.
 - > A 83% tax revenue benefit for 2007 and 2008
 - > A 466% growth in Internet use from 2005 to 2008.



Kenya

- The cost of access has been widely recognized as a barrier to adoption and, in recognition of this, the Kenyan government exempted mobile handsets from VAT in 2008.
- In the three years following, the VAT reduction contributed to an increase in handset sales of 200% and a penetration rise from 50 to 70%.
- Over the same period, the contribution of mobile telephony to the Kenyan economy grew by almost 250%, while mobile-related employment has increased by 67%.
- Combined with wider market price reductions, the VAT exemption helped to increase access to a wide range of mobile services, with mobile usage increasing by 113%. This has been recognized as improving economic growth, productivity and economic/social equality.
- More recent government proposals to re-introduce VAT across the ICT sector have caused widespread concerns around the negative impact on rural poverty, mobile penetration and economic growth.



Turkey

- In 2009, Turkey's government provided \$100 million in financial support for ICT purchases by small and medium businesses, in addition to reducing the VAT on PCs from 18% to 8% for three months.
- By June 2009, just three months after the VAT was reduced, the benefits predicted by the ICT Economic Model were evident:
 - Increased nominal tax revenue for the government
 - Increased demand for ICT-related purchases due to favorable public responses to the price reductions
 - Greater local PC production, which increased 4.2% in April 2009
- Shortly after the initial three-month period expired, the policy's success convinced the government to extend the VAT reduction an additional three months.
- Turkey's ICT Economic Model is now being used to evaluate other stimulus-program options such as providing cash rebates to first-time PC buyers and subsidizing the cost of broadband for PCs purchased by teachers.



India

- Prior to the tax reduction, the ~40% local tax on PC was the highest in the Asia Pacific region and one of the highest in the world. The heavy tax burden was constraining the growth of the market with PC penetration tottering at less than 1% (less than 10 PCs for 1000 people).
- The Finance Minister announced a cumulative 19% tax slash on computers in February 2004. The sharp duty reduction placed India on par with other countries in the region.
- The significant duty reduction made PCs more affordable and helped boosting their sales in India with a record 37% year-on-year growth in 2004.

USP IN MALAYSIA



- EVOLUTION



CELLULAR
COVERAGE
EXPANSION
(2009)



PC device & 3G
2010 ~ 2014
1.5m units



FROM RURAL
TO NOW
URBAN POOR
CBC (2010)



WIRELESS
VILLAGE (2010)

Summary

- The end game is adoption, not just supply
- National Broadband Plans have to identify specific policies to stimulate demand and bridge the gap
- Use all financial options available;
 - Market Gap, Smart Subsidy, Tax Reductions ,USF, Spectrum Fee's, other Gov't subsidies.
- Education transformation is one of the best options available for demand creation programs
 - Train Emerging Workforce, child-family training, maximizes local jobs & consumer surplus
- Public Private Partnerships with Gov't, Telecoms & Industry for sustainability
- SME, innovators, IP, business and government all have a role

