

Blue-sky Thinking for Small States: VUSSC Futures

9 November 2006

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Structure of presentation

- Trends
 1. Computer, Internet, Economy
 2. Energy
 3. Education
- Indicators of possible futures
- Discussion of long-term goals

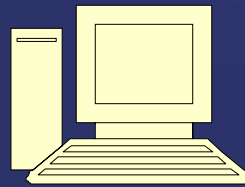
Trend 1

Computers

The Internet

The Innovation Economy

The kind of computing power
that put man on the moon



we were dumping
10 years ago as being too
old and weak as a desktop PC

What's on your desktop today,
you will wear tomorrow

Moore's Law

Moore was a founder of Intel -
the PC chip manufacturer

- Computing power will double every year, and
- The cost of computing will drop by half every year

Moore's Law

- The \$2,500 computer of 1981 has a tiny fraction of the power of the desktop of today
- The present day desktop exceeds the power of a super computer of 1981
- A good desktop in 2020 will exceed the power of today's super computers
- **Moore's Law continues to occur**

National Borders

- Predictions of the end of nation states
- How do you combine autonomy with collaboration?
- Predictions of MNCs controlling the world
- But we should consider the examples of:
 - The European Union vs. Microsoft
 - Cross border anti-corruption efforts by Lesotho
- **Borders may be treated differently, but they are here to stay**

Internet Borders

- The Internet is the greatest “leveller” of all time
 - All information to be available at all times from anywhere
- Nitin Desai, chair of the Internet Governance Forum (IGF) of the United Nations:
 - Changes in regulation as the internet, telephony and eCommerce come together
 - More internet users in Asia than Europe or America
 - More Chinese web pages than English pages
 - Types of uses for the internet different:
 - Western countries – commerce or media,
 - Eastern countries – public service applications
 - Desire to enter URL in alphabets other than Roman/Latin
- **Likelihood of interconnected, regional internet zones, catering to regional differences**

WikiPedia - A global community

- An online encyclopedia assembled from reader contributions and edited and maintained by those who care to get involved
- The community moved from an incentive model to being fully open
- Is a work in progress, a best effort by thousands of people to create an accurate, impartial and useful repository of human knowledge; more languages, than any other encyclopedia
- Criticisms by academics over accuracy and occasional vandalising of pages

Citizendium -

A free knowledge project

- A co-founder of Wikipedia is launching a service called Citizendium, including all Wikipedia's content, edited by experts who apply to help
- It will use experienced editors and subject authorities to tune information submitted by web surfers
- By engaging expert editors, eliminating anonymous contribution, and launching a more mature community under a new charter, more influential group of people and institutions
- **Future will include a permutation of fully open, managed and closed communities**

What to look out for in 2020

- The Internet is high-speed, wireless and pervasive, on desktop, hand-held and wearable devices
- All manufactured goods are online
- Telephone & TV are fully online
- 80% of information is online – and free
- eMail is video; is audio; is multimedia
- Collaboration drives trade; entrepreneurship and creativity drives demand

The Global Innovation Economy

- The 1/3 US GDP presently based on innovation will increase to 2/3 by 2015
- By 2015, 2/3 of the world economy will be dominated by innovation
- The over 1 billion people on the internet today will rise to over 3 billion by 2015
- High-tech penetration on computers, wireless and Internet will help make societies and productive economies more robust

Trend 2

Energy

Energy Demands

- World oil: Japan, China & US = 39%
- Increase energy requirements should increase by 50% to 100% by 2020
- 30 to 40 years of oil abundance left
- Outlook: \$300 per barrel by 2025
- **Future alternatives**
 - Hydrogen, Ethanol
 - Sun, Wind & Water

Trend 3

Education to meet
the challenge

Demands on Education (industrialised country)

- 97% of youth hope to enter post-secondary education
- 63% enrol for post-secondary education
- 30% receive a post-secondary qualification
- 75% of the workforce must be retrained to keep the jobs they have
- 80% of jobs will require a post-secondary qualification by 2015

Developing countries

- Post-secondary participation rates frequently below 10%
- Risk losing both those with post-secondary (skilled) and those without (labour) to migration to other countries
- Need to collaborate and increase post-secondary participation rates
- Need to radically increase numbers and appropriateness
- **Could encourage “reverse immigration”**

Intellectual property

- Review legislation in view of TRIPPS and education needs (COL copyright document)
- Establish structures to ensure copyright payments are only made where required and if no flexibility exists
- Participate in OER activities to create a large bank of materials for educational use

Cross-Border Education

- Not a major threat (high cost of development in industrialised countries)
- Presents opportunities for networks such as VUSSC
- Presents opportunities for the export of cost-effective education from smaller economies

“We need to help institutions and education systems to leapfrog their use of technologies in much the same way that cellular phone companies are helping countries to expand access to telephones and the internet.

This will involve educators working and collaborating online with colleagues from across the globe on a daily basis.”

Possible futures

- Educated populations in developing countries
- Widespread online access through PCs and mobile devices
- Economies that attract investment
- Quality of life that encourages immigration and repatriation of skilled people
- Offering (exporting) online programmes from developing countries
- **The key is in the education system – formal, non-formal, informal**

What can VUSSC do for your country?

- Looking 10 to 20 years into the future, what expectation should VUSSC countries have for a VUSSC?
- How could VUSSC help small economies participate in the globalised economy?
- How would you like to see your country positioned in the global economy in 15 years time?

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Thank you
and now for
a visioning exercise