The nature of the information society:
A developing world perspective[1]

EXECUTIVE SUMMARY

The vision of an information-enabled globally-connected knowledge-based society is driven in large part by the smooth integration of new media (information and communication technologies or ICTs) with traditional media, coupled with technical skill sets, forward-looking government policies, an attitude of lifelong learning, and a desire to improve efficiencies and harness innovation in a humanely and environmentally sustainable manner.

This paper explores dimensions of "breadth and depth" of the information society vision, by presenting a framework for comparing the maturity of different information societies as well as the progress that an individual country has made in its various national ICT initiatives. This framework is used to strengthen existing analyses of the information society and present new roadmaps for researchers and policymakers.

It charts the instrument and industry aspects of ICTs in developing nations, using a comparative framework developed over the years by the author called the "8 Cs" of the digital economy (parameters beginning with the letter C): connectivity, content, community, commerce, culture, capacity, cooperation and capital (see Table 1 below).

There are two ways of looking at ICT: as an instrument, and as an industry. As an instrument, affordable and usable ICTs can indeed transform the way societies work, entertain, study, govern and live at the individual, organizational, sector, vocational and national levels. As an industry, ICTs represent a major growing economic sector covering hardware, software, telecom/datacom and consulting services.

Coupled with these two aspects of ICTs (usage and creation), the "8 Cs" framework is used to tease apart some of the key challenges in implementing the vision of knowledge societies, such

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as increasing ICT diffusion and adoption, scaling up ICT pilot projects, ensuring sustainability and viability of ICT initiatives, creating ICT industries, and systematically analysing research on the global information society. The role of local stakeholders, multilateral agencies, donor institutions and the development community is highlighted. Based on a combination of the "instrument" and "industry" aspects of parameters like connectivity, content, capacity and culture, the information societies of the world can be divided into eight categories: restrictive, embryonic, emerging, negotiating, intermediate, mature, advanced, and agenda-setting.

Through both lenses, instrument and industry, the performance of developing nations lags that of developed nations, but interesting patterns of variation and pockets of excellence are emerging. For instance, India has a thriving content sector and IT industry but it also has a looming digital divide where ICTs are not accessible or affordable as instruments for a majority of the population. Countries like China have emerged as IT powerhouses -- but are still nervous about the impacts that unfettered flows of Internet information can have on their political system.

Table 1: The 8 Cs of the Information Society

	ICTs as an instrument	ICTs as an industry
Connectivity	How affordable and widespread are ICTs (eg. PCs, Internet access, software) for the common citizen?	Does the country have ICT manufacturing industries for hardware, software, datacom solutions and services?
Content	Is there useful content (foreign and local) for citizens to use in their daily lives?	Is content being generated in local languages and localised interfaces? Is this being accessed/used abroad?
Community	Are there online/offline forums where citizens can discuss ICT and other issues of concern?	Is the country a hub of discussion and forums for the worldwide ICT industry?
Commerce	Is there infrastructure (tech, legal) for e-commerce for citizens, businesses and government? How much commerce is transacted electronically?	Does the country have indigenous e-commerce technology and services? Are these being exported?
Capacity	Do citizens and organisations have the human resources capacity (tech, managerial, policy, legal) to effectively harness ICTs for daily use?	Does the country have the human resources capacity (tech, managerial, policy, legal) to create and export ICTs?
Culture	Is there a forward-looking, open, progressive culture at the level of policymakers, businesses, educators, citizens and the media in opening up access to ICTs and harnessing them? Or is there nervousness and phobia about the cultural and political impacts of ICTs?	Are there techies, entrepreneurs and managers pro-active and savvy enough to create local companies and take them global?

Cooperation	Is there adequate cooperation between citizens, businesses, academics, NGOs and policymakers to create a favourable climate for using ICTs?	Is there a favourable regulatory environment in the country for creating ICT companies, M&A activity, and links with the diaspora population?
Capital	Are there enough financial resources to invest in ICT infrastructure and education? What is the level of FDI?	Is there a domestic venture capital industry; are they investing abroad as well? How many international players are active in the local private equity market? Are there stock markets for public listing?

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