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Technical Report

Empowering a Nation through ICT

Philippine Strategic Roadmap for the Information & Communications Technology Sector

by the Commission on Information and Communications Technology (CICT),
with assistance from Atty. Jose Gerardo A. Alampay, Gaston Ortigas and
Cecille Reyes

Prepared for

Secretary Virgilio L. Peña, Past Chairman, and
Secretary Ramon P. Sales, Chairman
Commission on Information and Communications
Technology (CICT)
Republic of the Philippines

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Preface

This report is the result of technical assistance provided by the Economic Modernization through Efficient Reforms and Governance Enhancement (EMERGE) Activity, under contract with the CARANA Corporation, Nathan Associates Inc. and The Peoples Group (TRG) to the United States Agency for International Development, Manila, Philippines (USAID/Philippines) (Contract No. AFP-I-00-00-03-00020 Delivery Order 800). The EMERGE Activity is intended to contribute towards the Government of the Republic of the Philippines (GRP) Medium Term Philippine Development Plan (MTPDP) and USAID/Philippines' Strategic Objective 2, "Investment Climate Less Constrained by Corruption and Poor Governance." The purpose of the activity is to provide technical assistance to support economic policy reforms that will cause sustainable economic growth and enhance the competitiveness of the Philippine economy by augmenting the efforts of Philippine pro-reform partners and stakeholders.

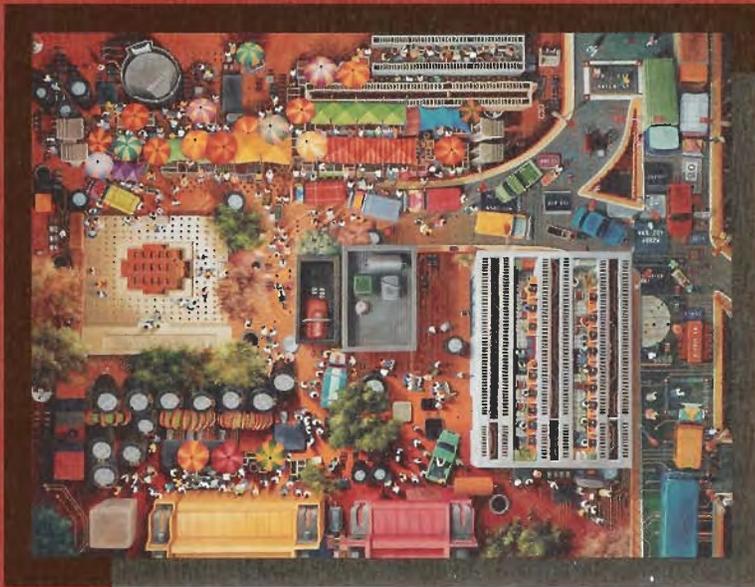
This strategic roadmap for ICT was prepared by the Commissioners and staff of the Philippine Commission on Information and Communications Technology (CICT) with technical advice and assistance from Atty. Jose Gerardo A. Alampay, ICT legal & policy advisor and team leader, Gaston Ortigas, business development/human capital expert, Cecille Reyes, e-government/information infrastructure expert, and Jenifer Marie V. Tiu, research associate, at the initial request of Secretary Virgilio L. Peña, CICT Chairman, by letter dated October 26, 2005, to provide direction to ICT investments in the Philippines over the next few years. The process lasted from February to October 2006 and involved several consultative workshops with prospective stakeholders before the CICT commissioners and their chairman, who was by then Secretary Ramon P. Sales, approved the final version.

The views expressed and opinions contained in this publication are those of CICT and the authors and are not necessarily those of USAID, EMERGE or the latter's parent organizations.

PHILIPPINE STRATEGIC ROADMAP
FOR THE INFORMATION & COMMUNICATIONS
TECHNOLOGY SECTOR

Empowering a Nation through ICT





The cover is based on "Information Society," an original oil and mixed media on canvas painting by multi-awarded Filipino artist, Norman Dreó. Depicting various contemporary and everyday Filipino scenes against a superimposed backdrop of a computer motherboard, the painting is a colorful and hopeful

expression of the ubiquitous role of information and technology in Philippine society today.

A carpenter's son, Norman Dreó has won wide acclaim and various prestigious awards including the Shell National Student Art Competition, the Metrobank National Painting Competition, and the ASEAN Art Awards (Juror's Choice).



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Message from the **President**



Greetings and congratulations to the Commission on Information and Communications Technology (CICT) on the preparation of the *Philippine ICT Roadmap (2006 - 2010)*.

Information and communications technology (ICT) is a powerful tool now employed in almost all countries in the world. Personal interactions, trade and businesses, learning, and governance have been more accessible, reliable and efficient because of ICT.

My administration recognizes the value of ICT not only in our everyday life, but more so in uplifting the socio-economic conditions in our country. The *Philippine ICT roadmap* becomes more significant in this regard because it sets strategic directions and policies to guide government, private sector, civil society, academe and the other stakeholders in their respective functions and responsibilities.

In my 2006 State of the Nation Address (SONA), I enunciated the immense benefits that we get from ICT. In fact, it is only fitting that we optimize them by developing the *Cyber-Corridor* program along the super region framework to focus on the development of education, technology and telecommunications. As such, from Baguio City down to the South, ICT becomes more pronounced as a way of life.

Mabuhay!


Her Excellency Gloria Macapagal-Arroyo
President of the Republic of the Philippines

Message from the Chairman



In 1989, the Berlin Wall fell, and together with it the Cold War, as a Global Regime, ended as well. 1989 was also the year reckoned to be the beginning of Globalization. Today, the Philippines had become a significant player in this Global Economic Regime as Offshoring & Outsourcing of Electronic Manufacturing Services (EMS) and Semiconductor Manufacturing Services (SMS), as well as, IT and IT-Enabled Services Industries developed and employed an increasingly significant number of our population. This had led our government to commit ever more deeply into capitalizing on ICT as one of the key driving forces of our economic development.

The Philippine Government, through CICT, would continue to commit to the achievement of the Millennium Development Goals (MDG), as well as, the pursuit of the World Summit on Information Society (WSIS) Plan of Action. In the past, this plan of action was implemented through ICT plans and programs, where institutional strengthening, capacity building, and setting up an enabling framework were focused on to address the challenges of building a citizen-centered, inclusive and development-oriented Information Society. At the same time, from a national perspective, the Philippine Government had institutionalized an enabling policy framework to pursue its national development agenda through the Medium Term Philippine Development Plan (MTPDP). This was further reinforced by the formation of super-regions as the country was divided into five economic sub-regions. One of these super-regions was the Philippine Cyber-Corridor.

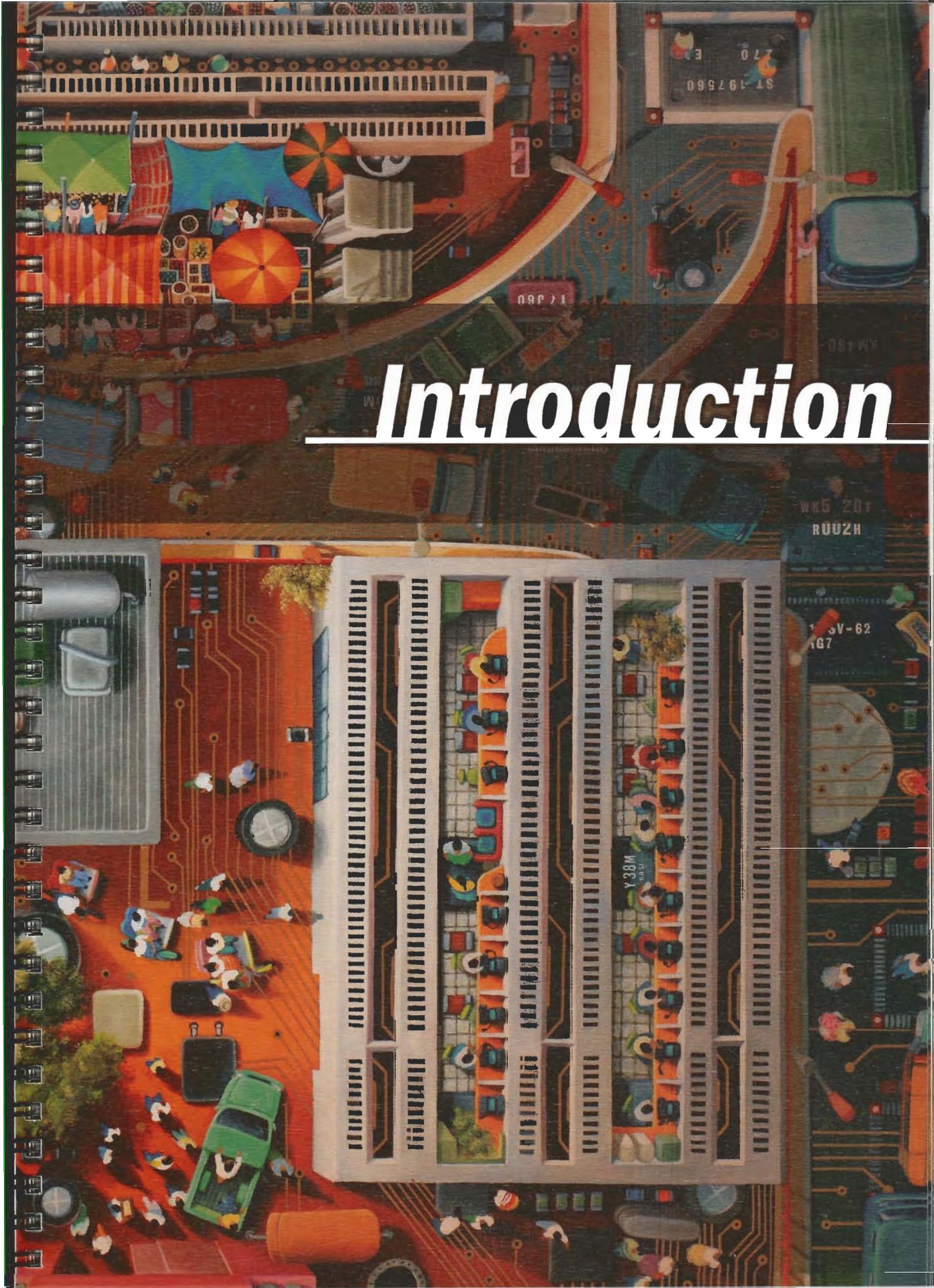
All together, these initiatives would continue to build momentum for the Philippines to be an effective and progressive participant in the Global Economy. This would require the continued development and modernization of our telecommunications infrastructure. With a national economy effectively participating in the Global Economy, it would be possible to continue producing globally competitive knowledge workers, creating an ICT-enabled labor force, improving the ability of government to use technology, and strengthening the capabilities of our enterprises. These would ensure the continued generation of high-value jobs.

Within the Cyber Market place & space, CICT would continue to play the role of "Enabler" and "Catalyzer," just as Private Sector would likewise continue to play the role of "Implementor" and at times "self-regulator" of this same market place & space. This Government - Private Sector partnership and collaboration would be essential to the continued success of ICT initiatives in the future. It was within this context that the ICT Roadmap had been prepared and eventually published. CICT had hoped that this publication would facilitate the continued CICT - Private Sector consultative dialogues regarding strategic directions. Lastly, it had been our hope that this publication would help the Cyber Industry develop breakthrough value propositions for the Global Economy and create New Markets, or Niche Markets, if not product or services "Category Killers" for the products and services of this industry. Through these ICT initiatives, we hope to improve and sustain our country's national competitiveness."

Mabuhay!


Secretary Ramon P. Sales

Chairman, Commission on Information & Communications Technology



Introduction

We are all contributors to the emergence of the global economy. Not only are goods, services and capital globally circulated, but for the first time, production on a planetary scale occurs in real time. Along with the emergence of the global economy have emerged global cultural exchanges and a new global political order.

Globalization, which is made possible by the revolution in information and communications technology (ICT)*, has profoundly changed the rules of the game.

Efficiency, more than ever, is now an indicator of competitiveness. Countries, corporations and citizens that find the means to become more efficient will advance and prosper.

Nations that provide better governance, with more transparent and efficient bureaucracies and that are able to provide a legal and regulatory framework that allows for free and fair competition, will see greater investment flows, create more jobs, and ultimately provide a better quality of life for their populace.

Companies that make the best use of scarce resources, and that are able to produce more and better goods and services using less inputs, will win in a competitive marketplace.

The same is true with each and every individual. Education and experience, though still critical, will no longer be enough. Each person will have to be able to adapt, and learn new technologies and new ways of doing business if he or she is to prosper in the 21st century. And the learning curve is only going to grow steeper, requiring everyone to become more efficient – doing and learning more, in less time.

It is this drive and demand for greater efficiency that is driving the growth of the ICT sector.

And yet, ICT itself is opening more and more opportunities for greater efficiency. ICT is not only a critical instrument for transforming businesses and making government more efficient and effective, but is also a means to empower citizens and communities.

ICT allows governments to deliver its services faster and with greater transparency. ICT enables companies to tap into the competitive edge of particular nations in order to provide higher quality services cost effectively, and on a global scale. And, with ICT, individuals now have more information at their fingertips. They have power, more than ever before. The Sovereign Individual is emerging.

ICT, in other words, is at the heart of a virtuous cycle that will empower the nation towards better governance, a more competitive economy and improved lives for its citizens.

The strategies and programs that are outlined in this Strategic Roadmap flow from a carefully developed vision for the Philippines' ICT sector – to create a people-centered, inclusive and development-oriented Information Society that promotes sustainable development and improves the quality of life for all.

This Strategic Roadmap is also a declaration of the Philippines' belief in ICT as a critical tool for economic growth and development, and ultimately, for empowering the nation, and its citizens as individuals. By this document, the Philippines reaffirms its commitment to provide equitable access to information and knowledge for all, and recognizes that ICT is the key to fulfilling this commitment to promote better governance, corporate performance, and individual achievement.

Finally, this Strategic Roadmap is meant to provide the framework for the next five years (2006-2010) that will help to provide overall policy direction, while rationalizing policy decisions and choices on ICT. It is envisioned to create wider awareness and appreciation for ICT; identify key initiatives to rally all stakeholders and encourage them to undertake initiatives that complement the short and medium-term ICT development plans of government; provide investment opportunities; lay out sustainable strategies for the further development of ICTs; define short and medium term objectives; provide the private sector with a reliable frame of reference to

heighten their action planning for the future; and increase coordination in implementing ICT programs and achieving the desired impact and outcomes.

Methodology

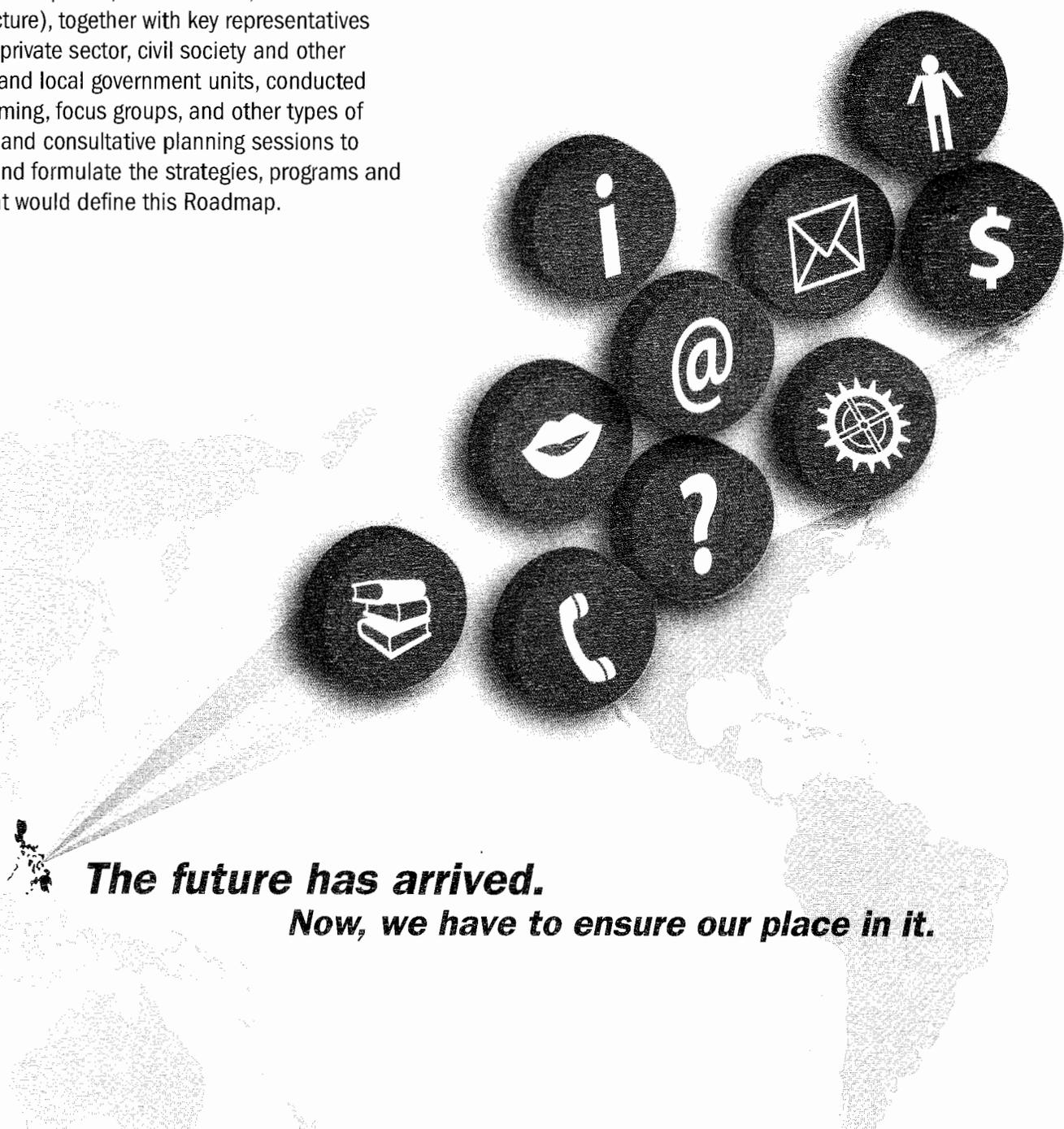
Prepared by the Chairman, Commissioners and staff of the Commission on Information and Communications Technology (CICT), this Roadmap lays down the Philippine government's strategies and programs, and signals the country's resolve and commitment to developing a vibrant, accessible and world-class ICT sector.

Over the past six months, each of the CICT's main groups (Strategic Business Development, Human Capital Development, eGovernment, and Information Infrastructure), together with key representatives from the private sector, civil society and other national and local government units, conducted brainstorming, focus groups, and other types of strategic and consultative planning sessions to identify and formulate the strategies, programs and plans that would define this Roadmap.

Two intensive workshops were also conducted for the CICT as a whole to identify synergies between and among the groups, and to consolidate the efforts into a unified and cohesive Roadmap.

Formal presentations, in addition to numerous informal discussions, were given to industry and civil society representatives to validate the Roadmap against their perspective and experience, and the Roadmap was subsequently refined to reflect the insights gleaned from the consultations.

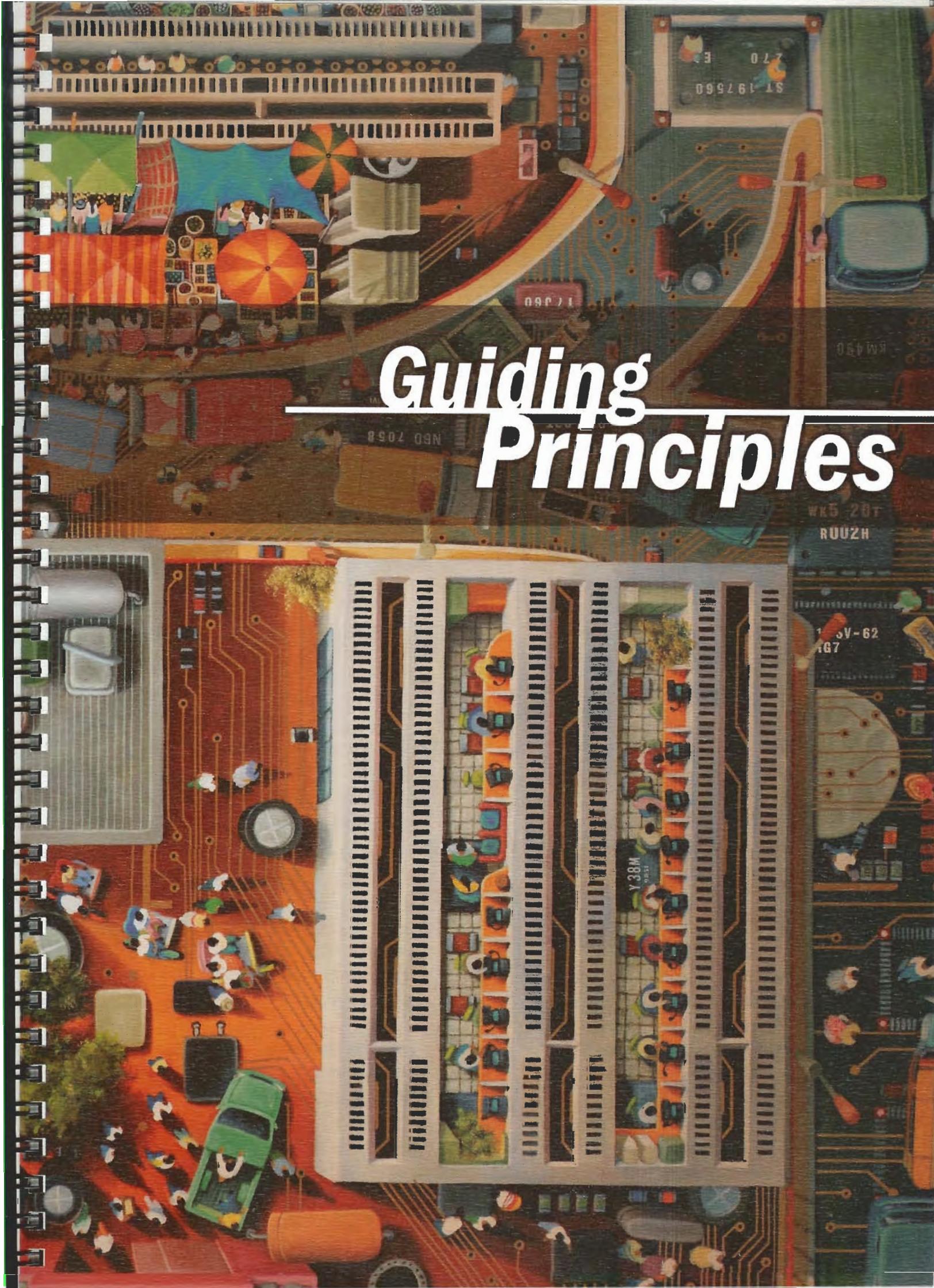
This initial strategic planning process culminated with the drafting of this present Roadmap.



The future has arrived.

Now, we have to ensure our place in it.

*Information and communications technology (ICT) as used in this document refers to "the totality of electronic means to collect, store, process and present information to end-users in support of their activities." It consists, among others, of computer systems, office systems and consumer electronics, as well as networked information infrastructure, the components of which include the telephone system, the Internet, fax machines and computers. (Section 2, Executive Order No. 269, dated 12 January 2004)



Guiding Principles

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1. The Philippines is committed to realizing the goal of a people-centered, inclusive and development-oriented Information Society that promotes sustainable development and improves the quality of life for all.

In this Information Society, everyone can create, access, utilize and share information and knowledge; and all individuals, communities and peoples are fully enabled to achieve their full potential.

All citizens should therefore have access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies. It should be the government's primary concern to ensure that appropriate connectivity is available in all local government units and public schools.

2. Government's primary role in ICT development is to provide an enabling policy, legal and regulatory environment that levels the playing field and allows the private sector to lead.

Initiatives and projects to develop the ICT sector will have a higher chance of success and sustainability if these are market-led, rather than government-led. The private sector should provide leadership through investments, capital and other resources.

Market forces alone, however, cannot guarantee the full development of an inclusive Information Society.

An enabling environment for ICT development requires good governance at all levels, and a supportive, transparent and pro-competitive policy and regulatory framework. Government must act as an enabler, and its involvement in the markets should be predictable, developmental, transparent and efficient. Regulation, where necessary, should promote a level playing field and should not hinder companies from competing in free and fair markets.

3. ICT is a tool for human and sustainable development.

The national objective is not only to develop the Philippine economy's ICT sector, but to ensure the propagation and widespread use of ICT in all aspects of the Filipino life.

Therefore, plans and programs to use ICT for developmental purposes should be:

- **Accessible.** Online access to services must be extended to all citizens and must cater to the needs of different stakeholders.
- **Available.** ICT services to all citizens anytime. It should be available 24 x 7, at home, at the office, in schools, in libraries and other convenient public locations.
- **Secure and Accountable.** Standards should be set for resolving security, privacy, non-repudiation and authentication issues to engender trust in the use of ICT services.
- **Interoperable.** Online services should be able to link seamlessly to existing back-end systems and across different agencies and platforms.
- **Sustainable.** It should eventually be transaction-based, cost-effective, revenue generating and self-financing.

4. The development of an Information Society requires a multi-stakeholder approach.

Its realization requires a full appreciation for the requirements and circumstances of the people and institutions that will benefit from ICT.

For this reason, all stakeholders – the private sector, civil society, civic organizations, international organizations and government – have an important role and responsibility in the development of the Philippine Information Society.

They should be given appropriate opportunities to directly interact, constructively criticize, and participate in the conceptualization, planning, and implementation of Philippine ICT for Development initiatives.

5. A Philippine Information Society requires the availability, accessibility and development of digital content that is relevant and meaningful to Filipinos.

The Philippines' stock of content must be made available online, and all citizens must be provided with easy access to the information that is important to their lives.

The development of digital content encompassing educational materials, national heritage collections, government information, research databases, literature, history and entertainment and resources in the various Philippine languages – particularly the 8 major Philippine languages – must be encouraged and pursued.

6. A safe and trustworthy online environment for all is a critical component of the Philippine Information Society.

As a tool, ICT can and is being abused by some. The Philippine government shall take preventive measures to guard against the dangers that arise from illegal and other disruptive uses of ICT, such as all forms of child abuse, including pedophilia and child pornography, and trafficking in, and exploitation of, human beings.

This need to take all appropriate security and preventive measures, shall however be balanced against the need to ensure that the privacy, and the right to freedom of thought, conscience and expression of individuals are fully respected and celebrated.

7. The undeniable role of ICT as a major driver of the economy requires the creation and/or strengthening of government's institutional arrangements for the facilitation of ICT development, and ICT for development in the country.

This requires the transformation of ICT-related institutions into a focused, “lean and mean,” and efficient organization equipped with the manpower, skills and equipment necessary to plan, manage, and where appropriate, outsource, government's projects effectively.



Background

Global Trends

The state and future of the Philippine ICT sector must be considered in the context of a number of powerful interrelated forces which have reshaped and continues to redefine market structures. Chief among these forces are:

- Technological developments;
- Convergence of telecommunications, broadcasting and multimedia;
- Globalization and internationalization of markets; and
- Emergence of broadband services.

Technology

The key technological development which has occurred is the emergence of the digital packet switched network architecture which effectively replaced circuit switched networks. This dramatically reduced cost, improved quality and enabled the development of a wide range of innovative applications.

The establishment of the Internet Protocol (IP) as the global open network service standard, in particular, facilitated the blending of different services (e.g., telephony, data, interactive video) via one infrastructure.

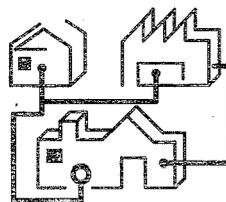
The delivery of services over IP is now a leading driver of change and innovation, the result of which is that new participants in the ICT sector now exclusively build IP networks.

Convergence

The deployment of digital packet switched technology also fueled the convergence of telecommunications, broadcasting and multimedia. Previously, each sector was treated as distinct in terms of the generic institutional structure models. As digital technology emerged with increasingly open interfaces between different applications, the distinctions between each sector have rapidly eroded.

In the digital world, the “network” is not confined to specific applications. The digital network is an ubiquitous platform, capable of transporting all digital data with equal ease. The network is “blind” to distinctions between voice, computer data, video, or transactional data. All are simply digital data.

The Internet is virtually substitutable for all forms of existing media and is a competitive threat to every provider of telecommunications, broadcasting, operating software and data communications. As a result of convergence, different content services (voice, radio, television, etc.) can now be delivered by a diversity of suppliers to virtually any person or location around the world.



Globalization

Globalization is the process in which the world is treated as one market without regard to national boundaries. Over the last decade, globalization and

ICT have gone hand in hand – the rapid spread of the use of ICT is both an outcome and a determinant of globalization.

ICT is a key enabler of globalization. The specialization of production through advances in manufacturing techniques has lowered costs and shortened economic distances. In addition, the systematic rationalization of procedures and documentation, and the wider and easier dissemination of market information have broken down the factors that have made markets distinct.

At the same time, globalization has fueled the demand for ICT. As new markets open up, buyers and sellers have turned to ICT for new financial instruments and services, and faster and cheaper ways to facilitate cross-border transactions.

Broadband

The emergence of the Internet has also seen the emergence of new, high bandwidth networks and new network paradigms that are rapidly displacing the traditional, narrowband public switched telephone network (PSTN) model.

Broadband services enable high capacity communications services characterized by both high data transmission speeds and high volumes of data. Broadband services also offer “always on” connection to the Internet.

The growth of high-speed broadband infrastructure, either wired or wireless, coupled with technological advancement on equipment, and the global proliferation of small mobile devices and other intelligent terminals that can be used to communicate and gather converged data, voice and video information and services anywhere, anytime, make the lives of people more convenient.

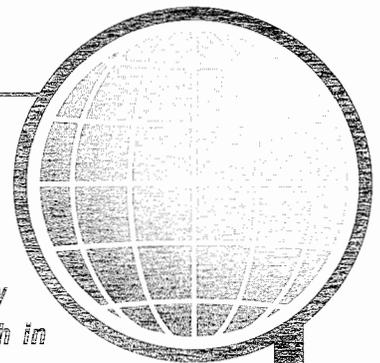
These forces have resulted in spectacular developments in nearly all fields of human endeavor, creating opportunities for countries, corporations and individuals to be creative, to flourish, and to lead even more meaningful and productive lives.

A biennial study produced by the World Information Technology and Services Alliance (WITSA), *Digital Planet: the Global Information Economy* expects global ICT spending to grow approximately 8 percent a year from 2003 through 2007, ultimately reaching US\$3.2 trillion. The study also cited that a primary reason for the turnaround is the rapid growth in emerging markets. Data and forecasts in the study were provided by Global Insight, Inc., a leading economic analysis, forecasting and financial information company.

Eastern Europe and Asia are projected to lead the growth curve over the next four years with compound annual rates of 11.9 and 9.3 percent, respectively, marking strong performance in much of the developing world. Meantime, North America is expected to see the slowest growth rate at 6.7 percent, Africa at 8.8 percent, ahead of Western Europe at 8.6 percent, Middle East at 8.3 percent and Latin America at 6.8 percent.

Other noted findings of the study include:

- Communications services and equipment has by far the largest share of global ICT spending, at about 53 percent.
- The consumer market currently comprises 24 percent of total ICT spending; government and business account for the remaining 76 percent.
- When viewed as a percentage of global GDP, ICT build-up during the second half of the 1990s reached its pinnacle in 2000, when total ICT spending accounted for 7.4 percent of GDP. The study also forecasted this to decrease to 6.9 percent in 2007.





The **Philippine** **Situation**

The forces of change and technological development underscore an undeniable need for change in the Philippines.

The liberalization of the telecommunications sector, which started in 1989, signaled a dramatic push to the evolution of a competitive ICT sector in the country. More and more Filipinos gained access not only to telephone lines, but more spectacularly to mobile phones, and to the Internet.

Despite these gains, however, major policy and regulatory reforms remain.

The absence of clear and updated policies and strategies to promote competition and ensure innovative and more efficient services at lower costs has discouraged the entry of new players and further investments in the sector. Moreover, the country's connectivity rates are currently considered among the highest in Asia.

This situation is highly noncompetitive, discourages investors, and limits the provision of services to benefit and empower the citizenry, especially the overseas Filipino workers and their families.

Human Resources

The Philippines is well positioned to become a globally competitive knowledge-based economy. Already, both government and the private sector recognize and are pursuing initiatives for using ICT as a means of (1) improving the knowledge and skills of Filipinos nationwide, and (2) providing opportunities for employment that will uplift the economic and social well-being of the people.

Filipino ICT workers continue to be well regarded, and increasingly, the country is emerging as the destination of choice for business process outsourcing, offshore contact centers, and medical transcription, among others.

There is, nonetheless, a continuing and urgent need to develop the quality of its human capital.

A study of the Information Technology and E-Commerce Council (ITECC), the forerunner of today's Commission on Information and Communications Technology (CICT), revealed that as of 2003, the lack of well-trained and competent trainers and educators in ICT and ICT-related subjects has contributed to the declining quality of education in general, and of the country's ICT and knowledge workers.

The existence of a non-formal training sector, operating without adequate regulation, further exacerbated





The Philippines is well positioned to become a globally competitive knowledge-based economy.

the situation, resulting in wide variances in the quality of ICT training in the country.

Moreover, the lack of accurate and comprehensive data on available ICT and ICT-enabled skills in the country has made ICT manpower planning and policymaking even more difficult.

Business

As an industry, ICT brought in \$2.1 billion in revenues for FY 2005, higher than that of most traditional industries like mining or agriculture. The upward trend of ICT in the Philippines is evident in its growth. Comparatively, in 2004 ICT brought in \$1.3 billion in revenues while providing jobs for some

100,000 Filipinos. This continued optimism of the world market on the Philippine ICT industry is cited in a 2005 McKinsey report which touted the Philippines' labor suitability as better than that of its competitors like Russia and China.

Meanwhile, the empowerment of SMEs through ICT resulted in 22,500 business broadband connections for the year 2005, more than doubling the 10,500 connections in 2004. With the jump in the use of ICT, SMEs have experienced significantly higher productivity and competitiveness, generating more jobs while increasing the demand for ICT products and services like workstations, customize business software, and increased use of

The Philippines has a skilled labor force of 29 million people

- 350,000 tertiary level graduates per annum
- 36,000 graduated from ICT-related degree programs (e.g., Computer Science)
- 100,000 received degrees in commerce or business administration
- 2000 META Research Group ranked the Philippines number 8 among knowledge workers from 47 countries.
- 1999-2000 Rubin Report ranked the Philippines as the no. 1 producer of knowledge workers.

FILIPINOS HAVE A COMMAND OF ENGLISH WHICH IS AN IMPORTANT DIFFERENTIATOR AND KEY COMPETITIVE ADVANTAGE IN THE GLOBAL MARKET.

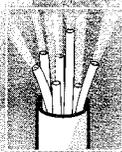
"According to most business leaders, Filipinos speak better English, have a better customer service mind-set and the cultural gap is less."

- Richard Mills, "Ask The Expert" section of CIO Magazine.

"...near flawless American accents (that) give the Philippines an edge in its battle with India for the fast-growing outsourcing market."

- excerpt from CNN International, "Call Centers Enliven City Scene." May 09, 2005

THE ICT SECTOR AT A GLANCE



TELEPHONE SERVICES

Telephone services in the country are provided by nine major telecommunication companies. With the roll out executed through the Service Area

Scheme, telephone availability in the Philippines varies widely from about 25 per 100 inhabitants in the National Capital Region (NCR) to less than 2 for other regions; nationwide telephone density is 7.83 as of December 2004.

PUBLIC MOBILE TELEPHONE AND RADIO SERVICES

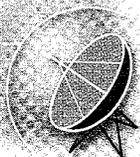
In 2002, there were seven Cellular Mobile Telephone Service providers. At the end of 2004, the number of subscribers reached 82,652,033, which produced a 39.85 CMTS density.



Public mobile radio communication services are provided by using public repeater networks or trunk repeater networks. However, the provision of this service has declined since 2002.

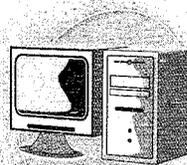
BROADCAST AND CATV SERVICES

Broadcast stations constantly increased in number over the years. As of December 2005, there are 375 AM stations, 580 FM stations, 232 TV stations, 1,480 CATV and 4 DTU.



INTERNET SERVICES

It is noted that the number of Internet Service Providers (ISPs) registered with the National Telecommunications Commission (NTC) has decreased for the last three years, from 64 in 2001 to 43 in 2004. One of the reasons for the decrease is the high cost of bandwidth which the ISPs are leasing from the enfranchised telecommunication companies. The number of subscribers nevertheless tripled from 500,000 to 1,200,000 during the same period.



Personal computer penetration per 1,000 inhabitants almost doubled its figure in 2004, from 27.70 in 2003 to 44.60, and the number of internet users increased considerably from more than 2 million in 2001 to 7.82 million in the first quarter of 2005. ■

telecommunications facilities and services. All these redound to a more vibrant trade environment for the SME sector.

Several niches have emerged where the Philippines appears to enjoy distinct competitive advantages:

Animation

The Animation industry in the Philippines is a testament of the strength and staying power of local ICT industry players in the global economy.

For the past twenty years, the Philippine animation industry has carved a name as one of the best in the world. Filipino animators are highly preferred among other animators globally because of their innate creativity and impressive technical skill, particularly in the areas of 2D and 3D animation, interactive gaming for both PC and console gaming, medical animation, visualization and e-learning courses. As of the First Quarter of 2006, there are about 40 animation studios in the country, employing some 4,500 animation artists full time. Last year, animation brought in an estimated \$54 million in revenues while posting a 38% growth rate.

Contact Centers

The Contact Center industry is the fastest growing segment in the Philippine ICT industry, with 112 Customer Contact Centers nationwide. It boasts of a total capacity of 70,000

The Philippine Situation

seats employing 179,000 skilled workers. In 2005, Contact Centers brought in an estimated \$1.6 billion in revenues and has garnered an impressive 75% growth rate.

Software Development

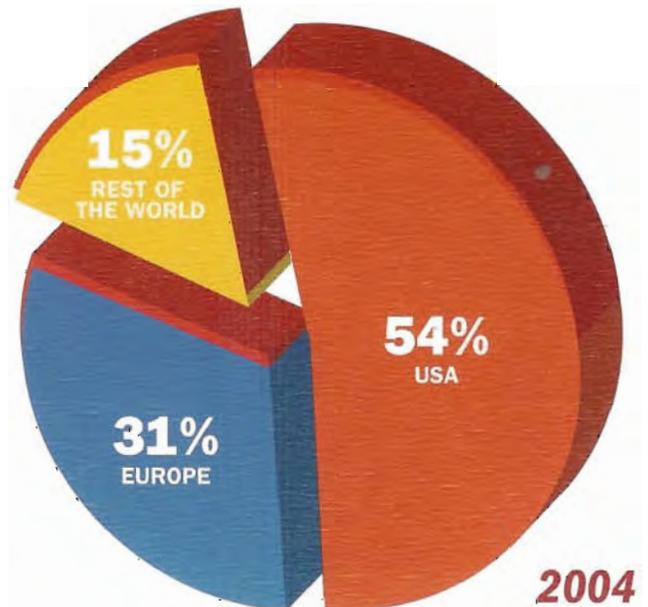
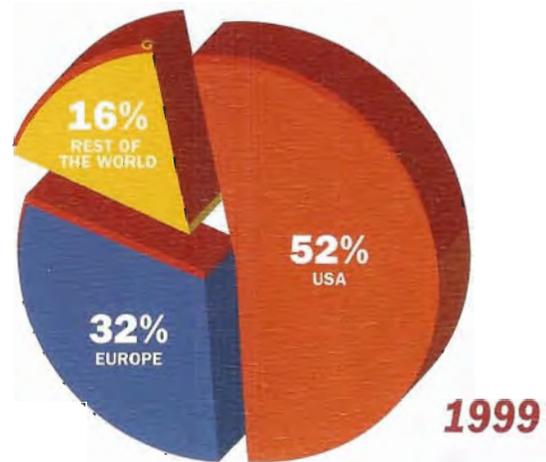
The Software Development industry has also made its mark in the ICT business with its high value services backed up by a highly talented workforce. In 2005, the software industry posted \$204M in revenues while growing at a steady pace of 20%. It has over 300 software development companies providing work for 12,000 skilled IT professionals. Recently, the Philippine Software Industry Association launched its own roadmap, the 2010 Fly High Program.

Medical Transcription

Medical Transcription (MT) is a recent addition to the ICT industry. When the US passed the Health Insurance Portability and Accountability Act (HIPAA Law), it mandated that all medical records be converted electronically. The legislation opened the way for the Philippine ICT players to provide transcription services to convert dictated medical records into electronic data. The high requirement of accuracy and turnaround time made the Philippines a preferred option for outsourcing medical transcription requirements. Thus, in 2005 the medical transcription industry generated \$70M in revenues with an impressive 80% growth rate. It currently has around 50 MT companies providing jobs for some 5,500 highly skilled ICT workers, and maintaining a 98 to 99% accuracy rate with a turnaround time of 12 to 24 hours. To cope with increasing demand for more skilled medical transcriptionists, 13 MT schools have, to date, been established.

Business Process Outsourcing (BPO)

BPO in the Philippines, on the other hand, is not a new phenomenon in the Philippine ICT industry. The deregulation of Philippine telecommunications in



The demand for business process outsourcing services is very high, and creates tremendous opportunities for the Philippines. Between 1999 and 2004, the worldwide BPO market is estimated to have doubled from US\$208B to US\$543B, according to Gartner Dataquest. The US is the largest BPO market, with Europe coming in second.

**Worldwide
BPO Market
By Geography**

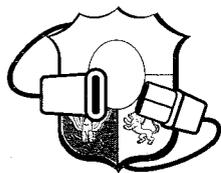
PHILIPPINE COMPETITIVE NICHES Earnings from Selected ICT Sectors 2001 vs 2004

The Philippines enjoys competitive advantages in selected niches that it can and should exploit.

	2001	2004
Customer Contact Centers	\$173M	\$864M
Medical Transcription	\$40M	\$483M
Software Development	\$115M	\$268M
Animation	\$21M	\$40M
TOTAL	\$249M	\$1,655M
(Financial & Admin) BPO	5-6 firms	30-50 firms

Source: Department of Trade & Industry

the mid-1990s led to dramatic investments in ICT infrastructure, helping to establish the Philippines as a top outsourcing destination. Multinational Corporations brought their non-core functions for outsourcing here, maintaining back offices outside their original locations. Companies like CALTEX, HSBC, and Citibank are just among the many clienteles who outsource some of the function of their operations in the Philippines. Today, there are about 60 Business Process Outsourcing companies in the Philippines providing high-income jobs for some 22,500 skilled employees like accountants, human resource specialists, finance, and legal professionals among others. In 2005, it generated for the country some \$180M in revenues while chalking up a 50% growth rate.



e-Governance

Since the advent of computers, and more recently the Internet, pressure on governments to perform better has increased, and

information and communication technologies (ICTs) have provided them with the capacity to do so.

E-government is here defined as “the use of ICTs,

and particularly the Internet, as a tool to achieve better government.” ICT enables better policy outcomes, higher quality services and greater engagement with citizens.

In its simplest form, e-governance is manifested in the bureaucracy by agencies that provide cost-effective government-related information through websites.

NCC Memorandum Circular No. 2002-01 and 2003-01 prescribe the guidelines on the creation of government agency websites which would enable agencies to comply with the Five Stages of e-Government of the United Nations-American Society for Public Administration (UN-ASPA). As of the third quarter of 2006, out of the 375 national government agencies (NGAs), 92.8% or 348 agencies have web presence, while 7.2% or 27 agencies remain without a website. The graph on the following page shows the distribution of NGA websites according to the UN-ASPA stages of e-government.

The Philippine Situation

FIVE STAGES OF E-GOVERNMENT

STAGE 1 **Emerging Web Presence**

1 A country has a formal but limited web presence through a single or a few independent government websites that generally serve as public information sources. The site(s) provide users with static information on the government and or its ministries, agencies, elected officials, etc. Contact information like addresses, phone numbers, office hours, calendars, etc are posted. Special features like frequently asked questions may be found.

STAGE 2 **Enhanced Web Presence**

2 A country's web presence expands as users can access dynamic and specialized information that is regularly updated through an increasing number of official websites. An official national government website or homepage may serve as an entry point linking users to other branches, ministries, departments and sub-national government sites. Official government publications, legislation, newsletters and other useful documents can be downloaded or ordered online. Search

features, e-mail and areas for posting comments are accessible.

STAGE 3 **Interactive Web Presence**

3 A country's presence on the internet expands dramatically with an increase in the number of official websites providing access to a broad range of government institutions and the services they provide. A national government website frequently acts as a portal directly linking users with ministries, departments and agencies. Formal interactions between citizens and service providers take place on a more sophisticated level allowing users to directly access information based on their specific interests or needs. Users can search specialized databases; download forms and applications or submit them online; make appointments with officials; participate in online town-hall meetings. Secure sites and user passwords begin to emerge.

STAGE 4 **Transactional Web Presence**

4 Users will have the ability to conduct complete and secure transactions online like obtaining visas, passports, birth and death

records, licenses, permits or specialized government services. A single national government website will allow the user to customize a secure one-stop-shop portal that will enable direct access to most government services. Such portals will allow direct access to services based on a user's specific need or priorities rather than by the functions of a department or agency. Sites will ultimately be secure making it possible for citizens to safely file and pay taxes online, pay parking fines, automobile registration fees, utility bills. Digital signatures will be recognized.

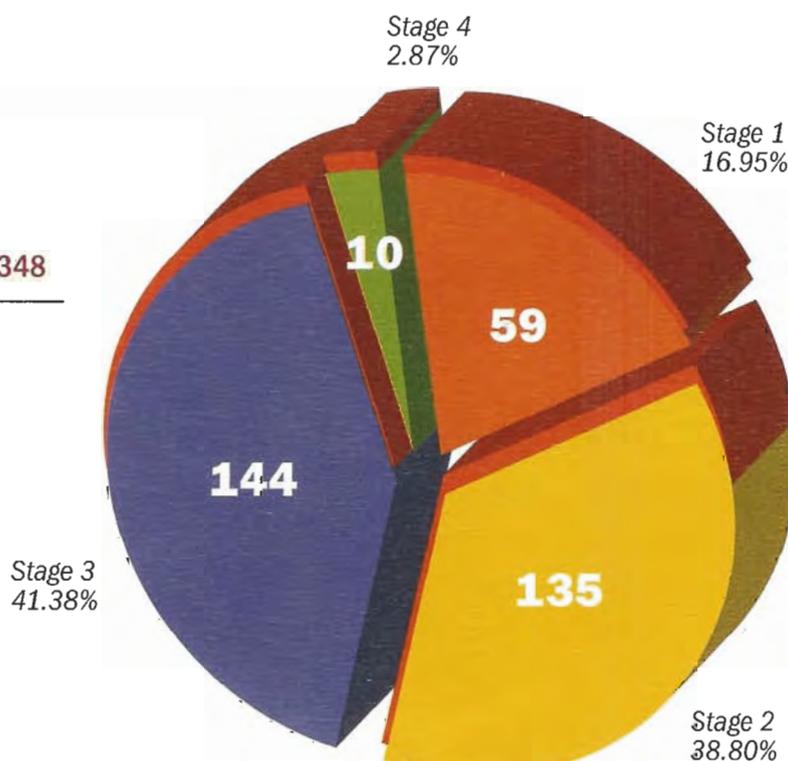
STAGE 5 **Seamless or Fully Integrated Web Presence**

5 Country provides all services and links through a one-stop-shop portal. By clicking on the national government's official site, users will have the ability to instantly access any service made available in a "unified package." Ministerial/departmental/agency lines of demarcation are blurred in cyberspace. Governments will cluster services along common needs through one universal portal. All transactional services offered by government will be available online.

Source: UN-ASPA

3rd Quarter 2006

Total Website Examined: 348



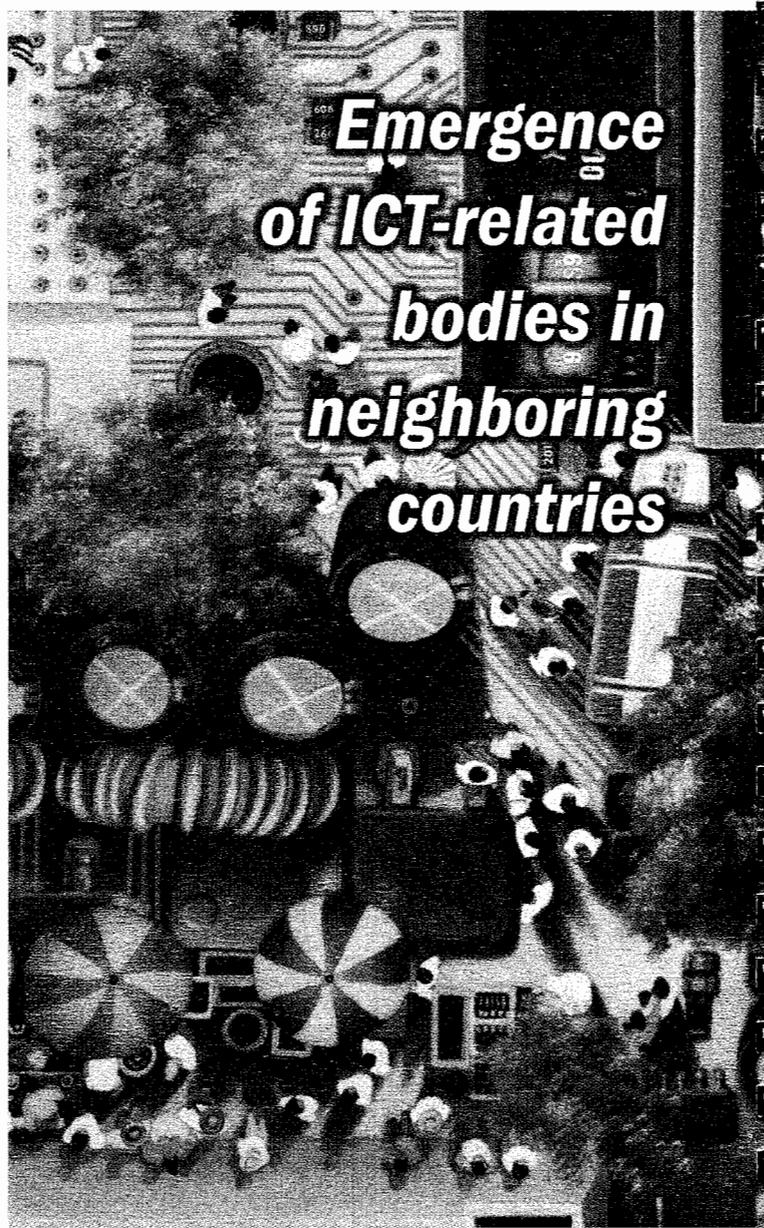
The commitment of the government to enhance the online delivery of government services is demonstrated by the creation of the e-Government Fund in 2003. This fund was included in the annual General Appropriations Act to finance priority government frontline ICT projects such as the following:

- **The Bureau of Internal Revenue's Integrated Computerization Projects**, which include the electronic filing and payment system, and BIR Data Warehouse.
- **The National Computer Center's Jumpstarting Electronic Governance in Local Government Units (eLGU) Project** which assists LGUs in the computerization of priority revenue-generating systems, as well as the establishment of community e-centers.
- **The Food and Nutrition Research Institute's e-Nutrition Project** – an internet-based information system that will allow electronic transactions involving a series of National Nutrition Surveys (NNS) data. This will be an automated knowledge center that will allow the electronic dissemination and utilization of nutrition survey data and results.
- **The Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) - Interactive Climate and Weather Information Network (PICWIN) Project** which seeks to establish an interactive-based weather-related information system through the use of cellular technology to promote PAGASA data and information traffic, including graphical details of weather satellites and radars.
- **The National Library of the Philippines (TNL) Philippine e-Library Project** which aims to become the network of major government libraries in the Philippines focusing on Philippine materials.

Legal & Regulatory Framework

Certain steps need to be taken to make government more effective, both in promoting the use of and access to ICT, as well as in using ICT itself to become more efficient and effective in the delivery of its services.

First, the institutional framework underlying ICT policymaking must be rationalized and strengthened. ICT policymaking and implementation of government's ICT-related initiatives presently is a mandate of the Commission on ICT. The Commission needs to be streamlined, rationalized, fully empowered to implement its plans and funded, and ideally, elevated by law into a cabinet-level department to



The **Philippine** **Situation**

signal the government's commitment to the full development of the sector. The National Telecommunications Commission's (NTC) legislative mandate and regulatory functions, similarly needs to be revisited and updated to reflect the new realities of convergence and competition.

Second, the legal framework to govern the ICT sector must be strengthened, principally through the development of a comprehensive legislative and policy agenda. The formation of such an agenda must be made in partnership with all key stakeholders in government and the private sector, and supported by adequate media and public awareness campaigns to generate support from as wide a

section of the general public as possible. Existing laws, rules and regulations that are inconsistent with the realities of the information age must be amended and modernized.

And finally, support mechanisms to strengthen the capabilities of agencies to enforce the law, and the government's rules and regulations, as well as to provide incentives and support for entrepreneurship, investment, research and development, skills training and e-governance must be put in place and upgraded as necessary.

○ SINGAPORE

The Infocommunication Development Authority (IDA), under the Ministry of Information, Communication and the Arts (MICA), was formed in 1999 as a result of integrating Telecommunications Authority of Singapore and National Computer Board. The IDA's main responsibilities include:

- Fostering a competitive world-class infocommunication industry in Singapore;
- Preparing residents for living and working in the "New Economy;"
- Spearheading the delivery of citizen-centric e-government services, regulating the telecommunication industry in Singapore;
- Building and operating the Government's IT infrastructure

⊖ MALAYSIA

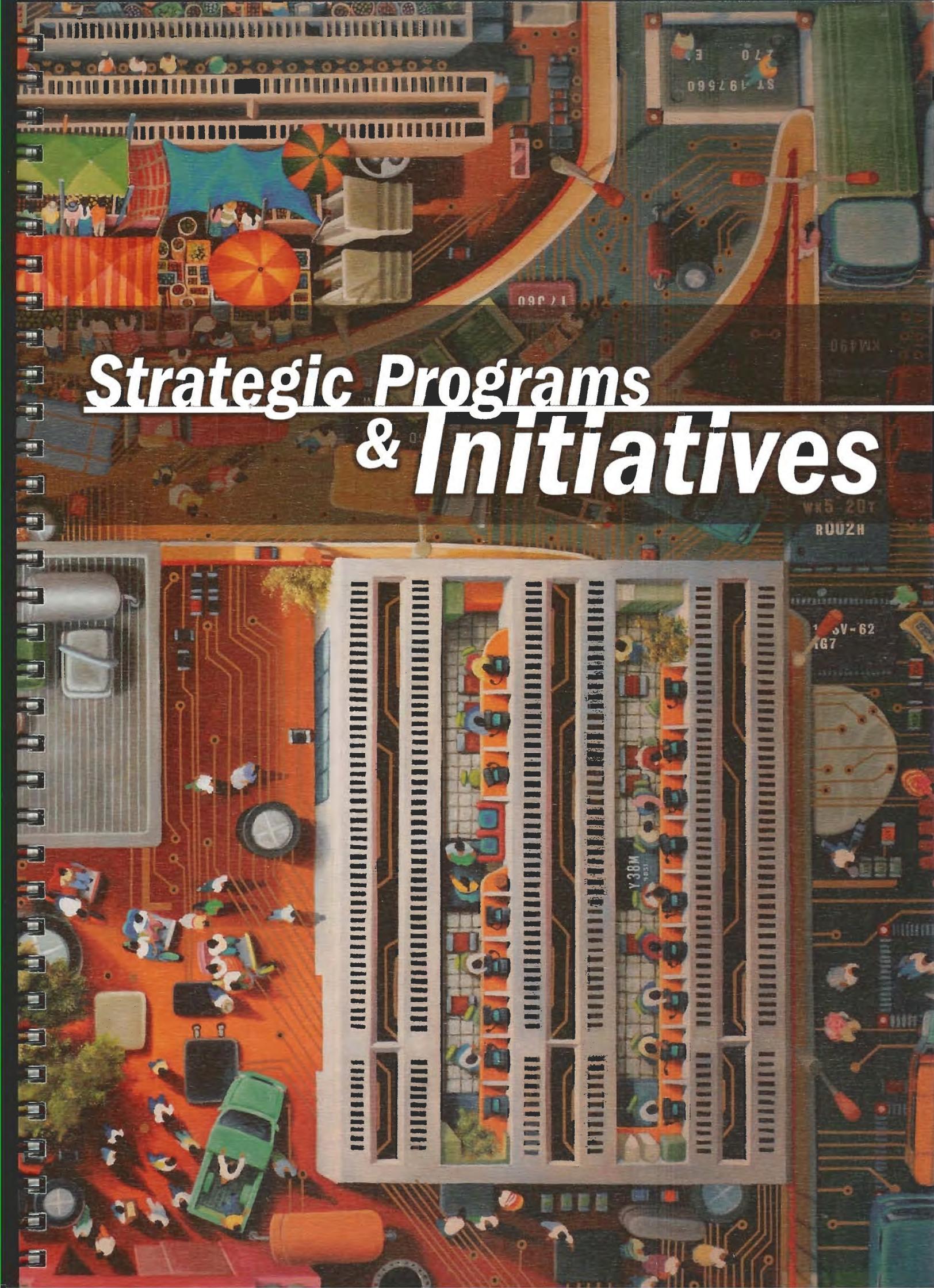
Malaysia has issued the Communications and Multimedia Act of 1998 to provide for and regulate the converging communications and multimedia industries.

⊖ THAILAND

Thailand has recently established its National Telecommunications Commission (NTC) to be national telecommunications regulator in the country.

⊖ INDIA

Department of Information Technology (DIT) is one of the Departments under the Ministry of Communications and Information Technology (MCIT). It acts as the facilitator, motivator, promoter of IT development in India. It is also responsible for the spread of IT to masses and ensures the speedy IT-led development.



Strategic Programs & Initiatives

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Ensuring Universal Access to ICT

All citizens should have access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies. The Philippine government is committed to ensuring universal access to ICT, and will prioritize programs to benefit marginalized sectors and underserved areas.

The Community e-Center Program



At the heart of the government's efforts to bridge the digital divide is the Community e-Center (CeC) Program.

Partnering with private sector, local governments and civil society stakeholders, the Philippine government helps to establish various community-based options for telecommunications and internet access. Various trainings, specifically adapted to particular needs, are also provided to ensure the sustainability and effective operations management of the centers.

• **Internet in Schools (iSchools) project** aims to provide public high schools with computers with broadband internet connectivity, complemented by educators' training (ICT Literacy/Competency Training for Teachers, Lab Management, Sustainability), tech support, and monitoring and evaluation.

• **eCare Centers** are specially designed to provide access and training programs for Persons with Disabilities (PWDs). The target is to establish one eCare Center in each region.

• **eLGU CeCs** enable local government units to deliver services more efficiently, while providing their respective constituents with access to the Internet and other ICTs. The project also recognizes model websites and best practices in the local government to encourage replication of useful and innovative applications.

• **Regional ICT Centers** will spur regional development through the use of ICT in education, commerce and governance and spearhead the building of local e-marketplaces or one-stop-shops for e-commerce, e-learning and e-government services.

Low Cost Computing



PC ng Bayan initiative was launched by CICT in 2005 in order to provide low cost computers to the population. At present these computers are available through the Department of Budget and Management's procurement service.

To further reduce the cost of access to ICT goods and services and to help combat the use of unlicensed software particularly in government agencies and educational institutions, CICT is promoting the use of Free and Open Source Software (FOSS) as an alternative to pirated commercial software. Towards these goals, it is distributing **FOSS CD Kits** which compile software options that come with quality features that match those on commercial products and are supported by the open community of developers and users.

National Broadband Plan

The provision of adequate bandwidth is key to ICT development. Government will ensure that adequate bandwidth to support widespread and intensive ICT use is available throughout the country. The targets are as follows:

**Provision Of Broadband Connectivity –
Number of Public Access Points**

LOCATION	TARGET
Key cities, municipalities, & urbanized barangays	100% by 2010, to be undertaken by the private sector
1st, 2nd, 3rd, & 4th class municipalities	100% by 2010, to be undertaken jointly by CICT and the private sector
Rural barangays	55% by 2010, to be undertaken jointly by CICT and the private sector

**Provision of Broadband Connectivity –
Capacity & Quality of Access**

LOCATION	TARGET
Key cities, municipalities	200 simultaneous users for each access point; at least 5 access points by 2010, to be led by the private sector
1st, 2nd, 3rd, & 4th class municipalities	100 simultaneous users for each access point; at least 2 access points by 2010, to be undertaken jointly by the CICT and the private sector
Remaining municipalities	5 simultaneous users for 1 access point by 2010, to be undertaken jointly by the CICT and the private sector
Urbanized barangays	100 simultaneous users for each access point; at least 5 access points by 2010, to be led by the private sector
Rural barangays	1 user for 1 access point by 2010, to be undertaken jointly by the CICT and the private sector

**Provision of Broadband Connectivity –
Public High Schools**

LOCATION	TARGET
Key cities, municipalities, & urbanized barangays	100% by 2010, jointly undertaken by the private sector, LGUs, DepEd, & CICT
1st, 2nd, 3rd, & 4th class municipalities	80% by 2010, jointly undertaken by the private sector, LGUs, DepEd, & CICT

SUCCESS STORY: *Finding Opportunities via the Community e-Center: Bukidnon town becomes center of employment**

The Municipality of Manolo Fortich recently set up a Community e-Center by dedicating a portion of its Public Employment Service Office to provide opportunities for its constituents to go online to find jobs being offered by Manila-based Internet jobsites. The CeC also arranged for interviews with Manila-based employment agencies using webcams and the VoIP facilities of the center.

Assisted by the Last Mile Initiative – Philippines, a USAID-funded project that supports the CICT's Community e-Center Program, the CeC is the brain-child of Congressman Neric Acosta and Manolo Fortich Mayor Socorro Acosta.

"We would like Manolo Fortich to serve not only as a gateway to central Mindanao but also as the gateway of Mindanao to the 21st century. Through this CeC, this Municipality will be the model of others in taking the last mile initiative to a new future," Cong. Acosta said.

"Ultimately, we want our Municipality to become the center for people looking for opportunities through our job database," Mayor Socorro Acosta added. "Through our CeC facilities, applicants can now arrange for online interviews and eventually land jobs."

Next Generation Networks

Next Generation Networks (NGNs) can provide the foundation of connectivity for both wired and wireless platforms, and be utilized to deliver new communications services to enable people to communicate and exchange business opportunities, not just in the Philippines, but also abroad. To this end, government, through the CICT, will engage in a continuing effort to review the country's existing information infrastructure and to create new sets of policies and models, to encourage and provide incentives, as necessary, and to encourage private sector investments in NGNs.

The Last Mile Initiative

Government firmly believes in the pre-eminent role of the private sector in providing ICT goods and services to the public, and that the role of government in this respect is to ensure that the ideal legal, policy and regulatory environment is in place to ensure free and fair competition in the marketplace.

Nonetheless, government also realizes that there are many places in the Philippines, particularly in rural and remote areas, which currently do not have access to ICT and which the private sector is unable to reach or invest in at the present time.

Consistent with its commitment to provide access to ICT for all, the Philippines' Last Mile Initiative (www.lastmileinitiative.ph) will take all steps necessary to ensure that all citizens have access to ICT goods and services, and will, principally through Community e-Centers (CeCs), provide

Ensuring Universal Access to ICT

the last mile bridge to these unserved areas. The Last Mile Initiative will continue to partner with the private sector, national and local governments, and civil society, and capitalize on their strengths and expertise to set up, encourage, identify and document best practice models of Community e-Centers that hold the promise of widespread replication.

Use of emerging technologies that can provide broadband connectivity and enhanced services to the users over the last mile, such as standardized WiMAX (Worldwide Interoperability for Microwave Access) or Wi-Fi (Wireless Fidelity) and third generation mobile communications systems (3G) will be pervasively utilized. Cable systems, using second generation Asynchronous Digital Subscriber Lines (ADSL 2/2+) will also be tapped for areas where existing fixed line services are available.

Finally, in addition to providing ICT equipment and connectivity options, the Last Mile Initiative will provide support designed to ensure the sustainability and long-term relevance of the CeCs including community preparation, trainings in business development, trainers' trainings for computer and internet literacy and identification of appropriate technologies and applications such as VoIP.

Already, pilot initiatives have yielded success stories that demonstrate the power and potential of such access to provide jobs, support education, promote tourism and provide alternative and affordable means of communication. (See box.)

SUCCESS STORY: *Finding Opportunities... from page 28*

Mayor Acosta spoke with pride over the immediate impact of the CeC, as she related how numerous job interviews between locals and Taiwan-based firms were made possible by access to VoIP and webcam facilities. This resulted in the successful placement of 10 applicants in the first month of the CeC's inception.



CeC personnel at Manolo Fortich, Bukidnon assist job applicants in their online interview with employers here and abroad.



The commitment of LGU chief executives is critical to the full and rapid implementation of reforms. Above, Manolo Fortich Mayor Socorro Acosta participates in the training program provided by LMI-Philippines.

News of the services and benefits being provided by the CeC in Manolo Fortich traveled fast, and nearby municipalities in Bukidnon and provinces such as Misamis Oriental have already inquired with Mayor Acosta on how they can participate in or replicate the CeC in Manolo Fortich. This early success, and the interest shown by other local governments

and communities, provide encouraging signs for replicating and scaling up the model to other community e-centers throughout the country. ■

*For other success stories, visit CICT's Last Mile Initiative website (www.lastmileinitiative.ph).



Developing Human Capital for Sustainable Human Development

A well-developed human capital base of a nation plays an important role in its development.

While education and training are the most important investments in human capital, expenditures on medical care, and even lectures on the virtues of punctuality and honesty are also investments in human capital. Thus, government's human capital agenda vis-à-vis ICT is not simply to develop the ICT skills of its people but to harness the power of ICT for education and life-long learning.

But investing in human capital is unlike other capital investments. Human capital investments are typically on an incessant basis. However, they enjoy long term continuous returns. While it may be possible to shorten the gestation period of physical infrastructure investment, human capital investments will necessitate a fixed number of years.

Programs to develop human capital in the country include the following:

ICT Competency and Standards Development

The Philippine Government, through CICT, partners with concerned government and private sector stakeholders, as well as internationally recognized bodies to develop and formulate ICT competency standards. These competency guidelines and standards be used and applied in education and training, and help to professionalize ICT human resource in government and private sector through the design, formulation and administration of competency-based certification exams.

Specific projects include the creation of:

- ***National ICT Competency Standards*** which would indicate and rank (vendor-neutral) ICT-related knowledge and skills that an individual must possess at a recognized level of competence in specific ICT fields/areas. To date, the following draft standards have been formulated: National ICT Standards (NICS) - Basic; NICS - Advanced; NICS - Teachers.
- ***An ICT Competency Assurance Body*** which would be the implementing body that allows for the collation of necessary information to maintain the approved ICT standards by means of accreditation, certification, and coordination with concerned stakeholders.

ICT for Education (ICT4E)

This Program aims to support the efforts of the Education sector to incorporate the use of ICT in education as well as in determining and gaining access to the infrastructure (hardware, software, telecommunications facilities, etc.) necessary to use and deploy learning technologies at all educational levels.

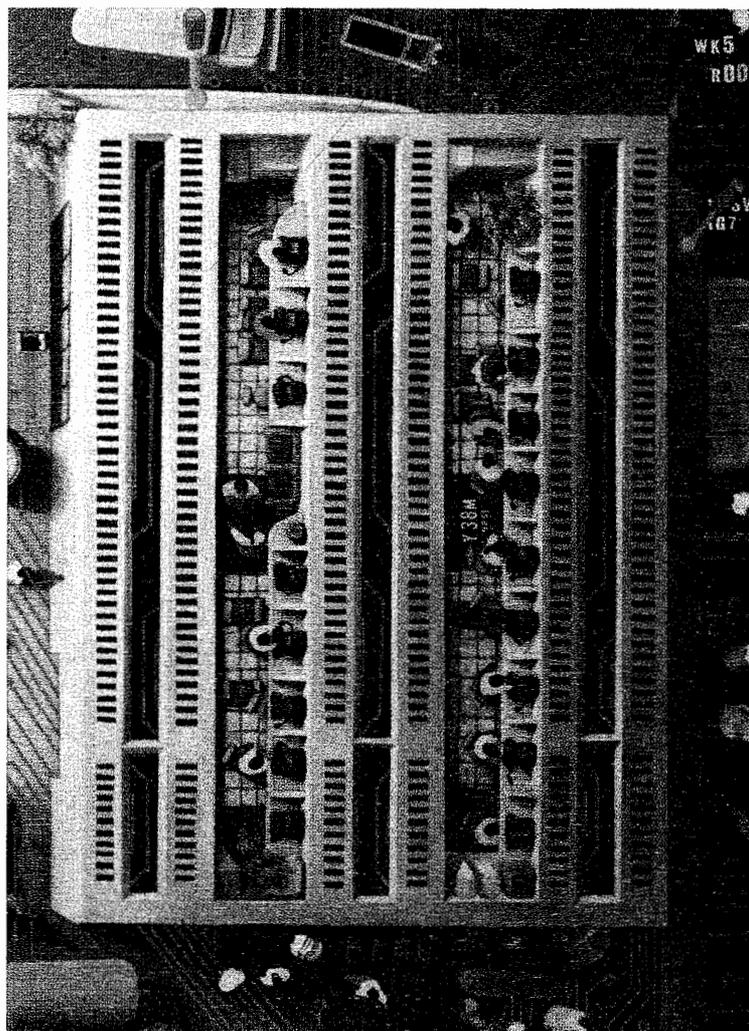
Ongoing initiatives under this Program include:

- ***ICT in Education Masterplan*** for all levels, including a National Roadmap for Faculty Development on ICT in Education. In 2005, CICT assisted the Department of Education and the Foundation for IT Education and Development in formulating the National Framework Plan for ICTs in Basic Education (2005-2010).
- Content and applications development through the ***Open Content in Education Initiative (OCEI)*** which will, among others, convert Department of Education's materials into interactive multimedia content, develop applications for use by schools, and conduct student and teacher competitions to promote the development of education-related web content.
- ***iSchool WebBoard***, which will enable teachers to build and share online self-learning materials; and facilitate immediate access to useful references and interactive facilities in the Internet.
- ***PhEdNet***, which is a "walled garden" that hosts educational, learning, and teaching materials and applications for use by Filipino students, their teachers and parents. All public high school will be part of this network with only DepEd-approved multimedia applications, materials, and mirrored Internet sites accessible from school PCs.
- ***eSkwela*** which establishes Community eLearning Centers for the out-of-school youth (OSY), providing them with ICT-enhanced alternative education opportunities.

• ***eQuality Program*** for tertiary education through partnerships with state universities and colleges (SUCs) to improve the quality of IT education and the use of ICT in education in the country, particularly outside of Metro Manila.

• ***Digital Media Arts Program*** which will build digital media skills for government using Open Source technologies. Particular beneficiary agencies include the Philippine Information Agency and other government media organizations, the Cultural Center of the Philippines, National Commission for Culture and the Arts and other government arts agencies, State Universities & Colleges, and local government units.

• ***ICT Skills Strategic Plan*** which will develop an inter-agency approach to identifying strategic, policy, and program/project recommendations to address the ICT skills demand-supply gap.



e-Governance: Using ICT to Promote Efficiency & Transparency in Government

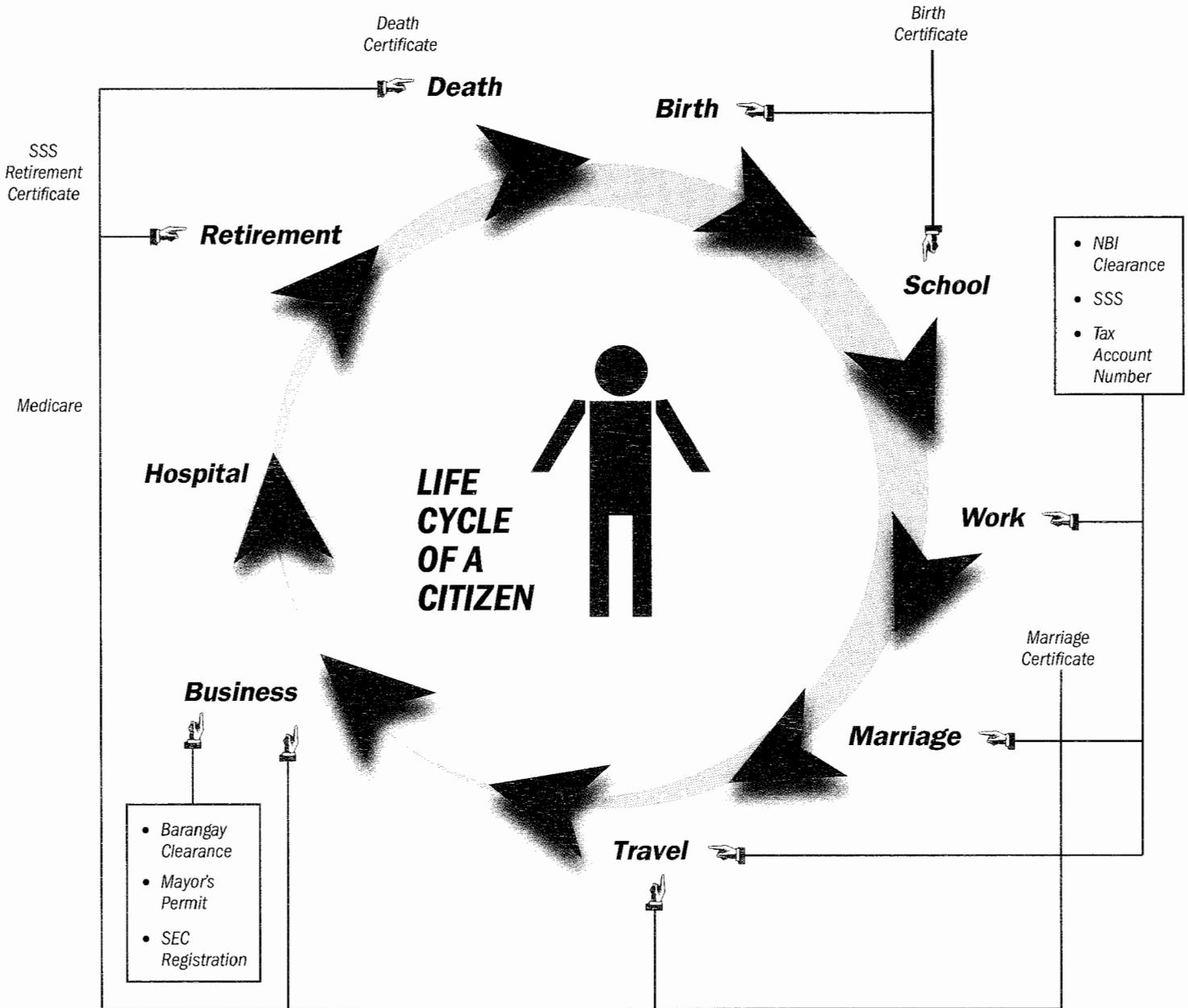
Like the private sector, the Philippine government seeks to use ICT to become more efficient and responsive in the delivery of its services – from processing business permits to more effective revenue generation to ensuring better law enforcement to providing social security benefit, among many others – to the general populace.

Equally important, ICT will also make government transactions and processes more transparent, increase accountability and reduce losses from graft, corruption and unnecessary leakages. Private sector bidders in competitive procurement transactions will have greater information, which should result in more informed bids, as well as greater confidence in government's credibility and trustworthiness. Processing of government-required applications or permits will be more open, and applicants be able to track the progress of their respective transactions. In this manner, government agencies and personnel will be held accountable to a higher standard of service, as well as a greater expectation of integrity and straightforward dealing.

Numerous opportunities exist where the use of IT can impact the accessibility, efficiency and transparency of processes between government agencies and businesses...

Government -to- Government (G2G)	Government -to- Business (G2B)	Government -to- Citizen (G2C)
<ul style="list-style-type: none"> • Procurement • Consolidation of government networks • Consolidation of provincial & regional networks • Budget and financial management • Asset management 	<ul style="list-style-type: none"> • E-Filing of Taxes • E-Registration of Businesses (Securities & Exchange Commission, local government units, other national government agencies) • Paperless Customs (import and export) Processes 	<ul style="list-style-type: none"> • Online application and follow-up of benefits (social security, workmen's compensation, retirement, etc.) • Requests for documents (birth certificates, etc.) • Driver's license and passport renewals • NBI and police clearances

The use of ICT in frontline services can positively benefit citizens by reducing red tape and lessening opportunities for graft and corruption.



CASE IN POINT:

The use of ICT will benefit OFWs, who presently need to get 70 signatures (73 for seafarers) from at least 10 agencies in order to work abroad!

OPPORTUNITIES FOR GOVERNMENT TO CITIZEN ICT SERVICES



This is the vision of e-government: A smart ICT-competent government providing innovative and efficient online services that respond to the needs of Filipino citizens and institutions worldwide.

The mission is geared towards championing the rational and optimal use of ICT in the government for the effective and efficient delivery of public services through innovative solutions. This implies using available technology to its fullest to attain the greatest advantage for the bureaucracy for better service delivery.

Recognizing then that the efficiency and credibility of government is a critical component of the legal and regulatory environment that businesses and investors consider in making decisions, the Philippines has designed and will implement the following strategic programs, projects and initiatives:

Government Information Systems Plan (GISP)

The Government Information Systems Plan (GISP) or Philippine Government Online will establish an electronic bureaucracy that is widely and readily accessible to the Filipino people.

Synchronized with the government's 10-Point Agenda and the Medium Term Philippine Development Plan 2004-2010, all frontline government services systems, oversight and common application systems, sector-specific information systems (ISs), LGU-specific ISs, and other mission-critical systems will be enhanced and developed to ensure citizen-centric and transactional service delivery.

e-Government Portal

The Philippine Government will create an e-Government Portal to serve as the primary gateway for e-government, and to break down the organizational barriers that have often made it difficult for citizens and businesses to interact effectively with the government.

The e-Government Portal, will make access to government services and information easier by presenting all government services and information in citizen-centric and immediately useful categories such as Health, Employment, Education, and Social Services, rather than by agency or department. Information and services will therefore be structured according to what is important to the citizen and to business, and presented in practical terms, such as looking for a job, applying for a passport, securing a birth certificate, payment of taxes, applying for business permits, and other common real life situations of interaction between citizens/businesses and government.

Jumpstarting e-Governance in Local Government Units (eLGU)

The local government units (LGUs) shall continue to be assisted in their e-government initiatives thru the eLGU project. eLGU aims to give LGUs a headstart in computerization by making them more capable of embracing information and communications technology in their operations for increased revenues and better public service.

By 2010, all provinces, cities and first class municipalities will be able to do complex transactions online. Common revenue application systems shall be deployed and operationalized in at least 50% of all LGUs.

Information System Strategic Plan (ISSP)

The ISSP program will steer and guide government agencies in the computerization of their vital government operations and key frontline services, thereby ensuring government services to be widely and readily accessible to the people.

Advocacy programs and technical assistance will be provided to ensure that all agencies develop their respective ISSPs. The CICT will be responsible for the thorough review, evaluation and monitoring of submitted ISSPs, and their endorsement to the Department of Budget and Management for appropriate funding.

Developing Common Applications and Standards for National Government Agencies

To facilitate efficient and transparent delivery of services, as well as coordination of efforts between and among government agencies, common applications and standards will be developed, particularly applications of common use and utility such as

- 1.) Financial Information and Management Systems; and
- 2.) Procurement.

Guidelines and standards will also be issued to ensure the quality, ease of use, accessibility, and interoperability of all government websites.

E-Government Fund

To ensure successful completion of high-impact projects that would jumpstart the development and implementation of e-Government throughout the country, CICT shall continue to lead the review, evaluation, selection, and monitoring of priority mission-critical, cross-agency frontline ICT projects in government that will be funded from the e-Government Fund. The selection of priority projects to be funded shall be based on the Government Information Systems Plan and the Medium Term Philippine Development Plan.

Government Communication Network

The government will aggressively pursue the development of an IP-based, nationwide communications network that will connect all government agencies.

Common, Shareable Government Intranet

Phase I	CICT-wide	<ul style="list-style-type: none"> • By end of 2007, 100% of all functional units of the CICT will share a common ICT network
Phase II	National Government Agencies	<ul style="list-style-type: none"> • By end of 2006, 100% of all existing and planned ICT networks of NGAs will be inventoried • By end of 2008, 100% of all NGAs will share a common ICT network
Phase III	Provincial and Local Government Units	<ul style="list-style-type: none"> • By mid 2007, 100% of all existing and planned ICT networks of all provincial and local government units will be inventoried • By end of 2008, 100% of all provincial and local government units will share a common ICT network

Establishment of Government IP Gateway and Internet Exchange

Phase I	Cebu as Main Hub	<ul style="list-style-type: none"> • By end of 2006, an IP Gateway and Internet Exchange will be established at the Cebu Toll Center through the collaboration of CICT and an IP Gateway Operator
Phase II	Davao as Secondary Hub	<ul style="list-style-type: none"> • By mid 2007, another IP Gateway and Internet Exchange will be available at the Davao Toll Center to back up the Cebu Toll IP Gateway

This IP-based government network will not only provide data communications but also VoIP services for all national government agencies (including their regional, provincial and other local offices).

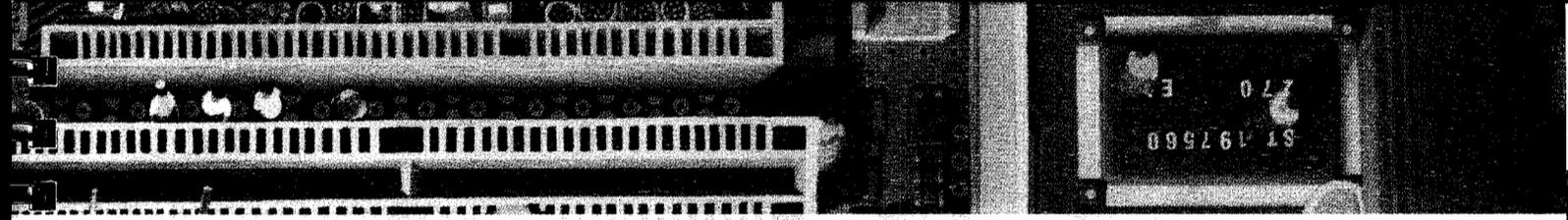
CIO Council

Chief Information Officers (CIOs) shall be appointed for every agency of government. Collectively, they will constitute the CIO Council and will work together to maximize the use and effectivity of government's ICT resources, and ensure better information on, and monitoring of the use of ICT to implement government's programs and priorities.

Under the leadership and guidance of the Commission on Information and Communications Technology (CICT), the CIO Council will coordinate, and improve data sharing and network interoperability among the various agencies of government, subject to legal and policy considerations to protect privacy and security of information.

Enhanced ICT Training for Government

The government is committed to developing a corps of highly skilled ICT professionals in government. The CICT therefore will design continuing initiatives to support the development of an ICT-enabled civil service, including the development of Government ICT Professionals' training and certification in e-Government Project Management, IT Services Management, Applications Development, and Technology Solutions.



Strategic Business Development to Enhance Competitiveness in the Global Markets

The continued rise of the ICT sector in the Philippines is largely dependent on initiatives and the necessary resources that will help sustain its competitiveness. The roles of both private and government in this endeavor must be well established. The private sector should remain as the prime mover of the ICT industry with government playing the role of advocate — laying the ground work for regulations and policies that level off the playing field for entrepreneurs and providing a business environment that can power and enable the economic dreams of the 21st century Filipino.

Given the present landscape of the ICT industry, critical programs and projects designed to facilitate and sustain growth should be implemented with expediency and resolve.

Philippine Cyber Corridor

Launched in 2005, the Philippine Cyber Corridor is an ICT belt stretching over 600 miles from Baguio City to Zamboanga designed to provide a variety of cyberservices at par with global standards. Supported by a \$10 billion high bandwidth fiber backbone digital network, the Cyber Corridor has been identified by President Arroyo as one of the five super regions during her State of the Nation Address (SONA) in July 2006. Super regions are focus areas of development that would ensure socio-economic upliftment for the country.

The Cyber Corridor is envisioned to strengthen our education, telecommunications, and technology resources. It will support government's priorities to develop information and communications technology and the knowledge economy. Physically, it encompasses the territories covered by, among others, the Fiber Optic Cable Networks of three of the country's backbone common carriers:

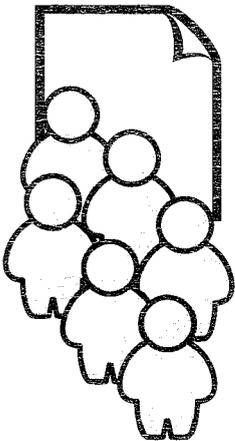
- 1.) PLDT Digital Fiber Optic Cable Network (DFON) and its nationwide Radio Microwave Terrestrial Network;
- 2.) Globe Telecom Fiber Optic Backbone Network (FOBN) and its Nationwide Microwave Radio Network; and
- 3.) Telephil's Nationwide Digital Telecommunication Network (NDTN). The first two are NGN or Next Generation Networks, characterized by the use of Internet Protocol (IP), Multi-Protocol Label Switching (MPLS), and Wave Division Multiplexing (WDM). Both are implemented using IP Version 4, and are preparing for the migration to IP Version 6.

Cyberservices are defined as those services provided over cyberspace by some 555 companies in the Corridor. These companies are primarily engaged in contact center services, animation, medical transcription, software development and business process outsourcing.

By 2010, it is expected that some 1,082,800 workers will be employed in the Cyberservices sector, with total revenues projected to reach US\$12.793B.

Regional development is being undertaken in coordination with the Department of Trade and Industry, local government units, private sector, and other stakeholders.

Workforce Mobilization Program



A partnership between the CICT and concerned agencies such as the Commission on Higher Education (CHED) and the Technical Education and Skill Development Authority (TESDA) and other private training institutions, the Workforce Mobilization Program seeks to ensure a suitable match between available jobs and quality workers. A review of the

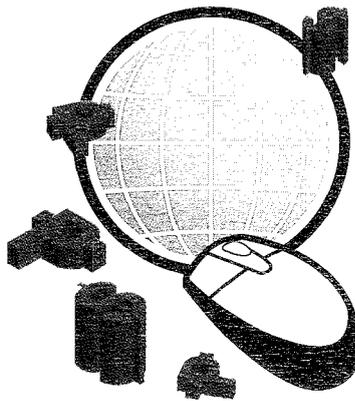
existing curriculum is presently being undertaken in consultation with the private sector to create and establish relevant course outlines that would increase the competency skills of graduates.

Key areas of interest include:

- English competency, particularly spoken English skills, is a key area of interest not only because it is a main consideration for the global BPO market. It is already a huge competitive advantage for Filipinos that must be protected if the country is to maintain, if not improve, its position as a premier BPO investment destination.

- In coordination with industry associations, industry certification programs are being institutionalized to rationalize the competency of ICT workers and provide the industry players with a benchmark for its human resources.

Marketing the Philippine Brand and Making the Philippines the Country of Choice for Investors

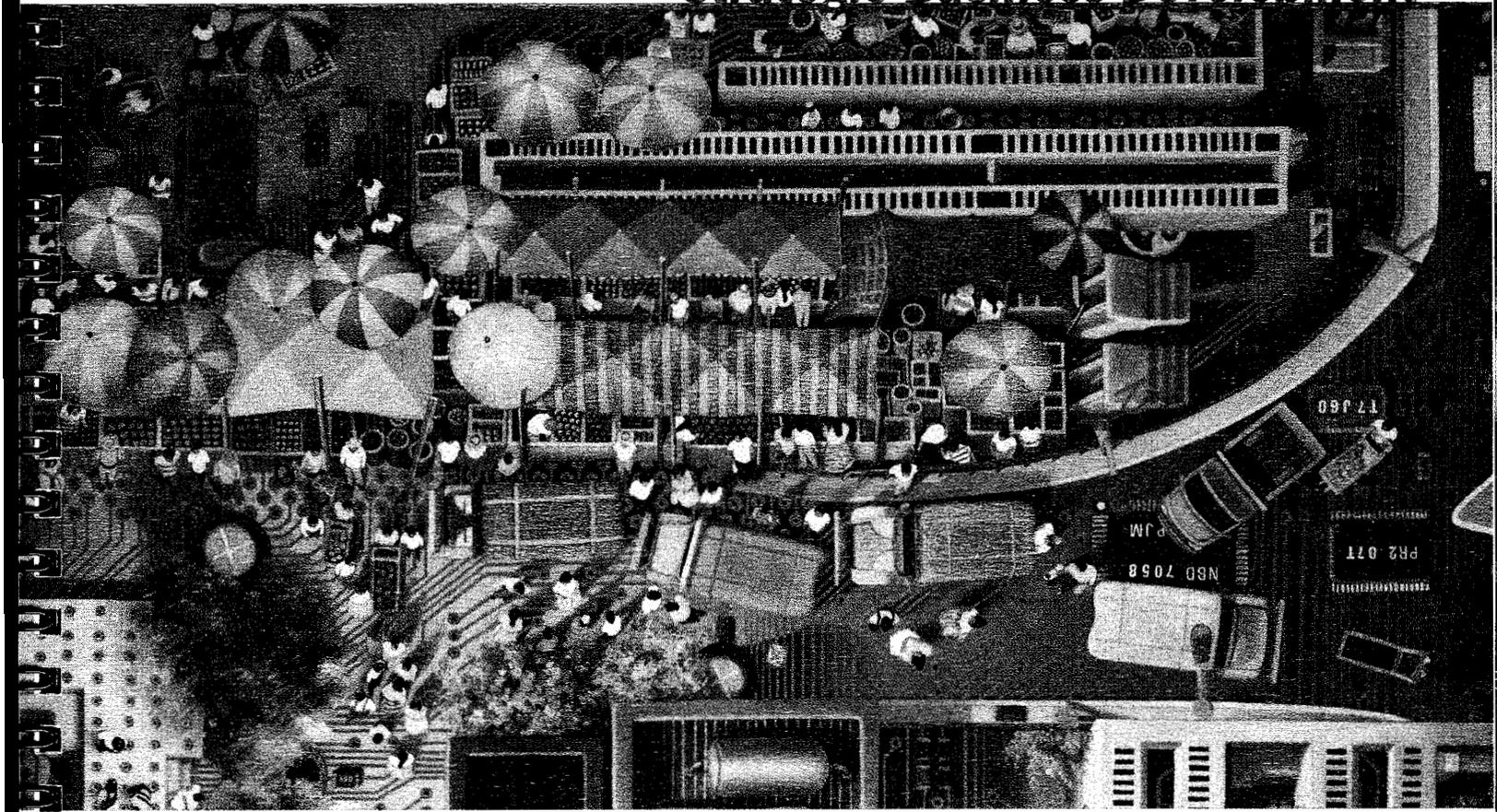


The Philippines is already a major player in the global ICT market, particularly in the area of e-services. This position needs to be strengthened and solidified into a Philippine brand that evokes quality, innovation and world class sophistication, and that then

provides Philippine companies with an additional and immediate competitive edge.

This effort to create a strong Philippine brand includes such efforts as:

- Creating an Industry Portal to provide a virtual business matching service;
- Entrepreneurship Education to help stimulate the expansion of homegrown companies;
- Support for the establishment or strengthening of a private-sector led e-Services Association which will promote the Philippines as a whole, as well as support the efforts of Filipino companies to compete in the global market, and ensure a continuing partnership and commitment between the private and public sectors towards a common vision and plan for the Philippine ICT industry.



Through the association, the government and the private sector can also work together in areas such as:

- Data Collection that will provide accurate measurements of trade-in-services and workforce statistics;
- Research & Development that will help develop new niches where the country has a competitive advantage;
- Market development to collect market intelligence on country-specific rules and regulations affecting Cyberservices;
- Incentives monitoring to ensure competitiveness and a level playing field;
- Common interests for a public-private sector legislative and policy agenda for ICT.

Creating and Strengthening SMITEs

More than half of all small to medium enterprises (SMEs) do not currently use ICT as a tool for increasing revenues. Empowering the SMEs through ICT translates to bigger earnings for the entrepreneurs as well as government. Turning SMEs into small to medium information technology enterprises (SMITEs) requires increasing the awareness of the SMEs and introducing them to the power of technological advancements.

This also requires support activities such as:

- Financing and Incubation to stimulate the formation of SME IT enterprises (SMITEs);
- Entrepreneurship Education to stimulate the expansion of homegrown companies.



Legal and Policy Agenda for the Philippine ICT Sector

An enabling legal, policy and institutional environment to develop, promote and advance information and communications technology (ICT) is a prerequisite for the continued growth of the Philippine economy, the competitiveness of local industries and firms, and the achievement of national development goals.

Thus, the Medium-Term Philippine Development Plan 2004-2010 outlines Philippine priorities for legal and regulatory reforms that are necessary to promote the country as a global knowledge player and world-class ICT services provider.

Creating the Department of Information and Communications Technology (DICT)

The creation of a DICT will ensure effective coordination and implementation of the national ICT agenda. The proposed DICT is envisioned to be the primary policy, planning, coordinating, implementing, and administrative entity of the executive branch of the government responsible for the promotion and development of the country's ICT industry. Its creation is broadly supported by the private sector, which is keen to work closely with government to encourage ICT-related business and investment, enhance the skills of the country's workforce, pursue meaningful legal and regulatory reform, continue to enhance the nation's information infrastructure, and promote e-governance.

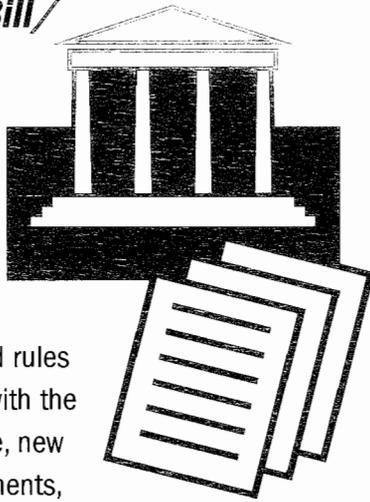
NTC Reorganization Bill

The National Telecommunications Commission (NTC), the country's telecommunications regulator must be transformed into a politically independent, fiscally autonomous regulatory body to insulate it from political and other outside pressures.

The NTC's role and mandate, particularly in an era of fast changing and converging technologies and services, need to be clarified. Equally important, it must be given the powers and resources necessary to effectively regulate the whole ICT sector in a manner that promotes free and fair competition in the sector.

Convergence Bill/ Revisiting RA 7925

A review of the Public Telecommunications Policy Act of the Philippines (R.A. 7925) is long overdue. New laws and rules that are more in tune with the realities of convergence, new technological developments, new ways of doing business, and the effects of these on universal access goals is necessary to further promote investment capital into the Philippine ICT sector.



E-Government Bill

Government efforts to fully exploit the use of ICT as a tool to improve access to and delivery of government services must be supported by laws and policies on e-Governance.

A comprehensive e-Government bill will outline how the government would manage, procure and use information technologies to more efficiently deliver services, and institutionalize the e-Government Fund that would help to meet the requirements of major ICT projects of the government.

Some of the key policy issues that such a law will address include:

- Data sharing among government agencies;
- Interoperability of government systems;
- Data privacy in government;
- Management of the e-Government Fund, including formalizing the systems and procedures in the management of the e-Government Fund, including the selection, approval and monitoring of projects.

Privacy and Data Protection Act

As more government agencies adopt ICT and engage in electronic transactions, there is an increasing importance to ensure the protection and privacy of

the personal data that is being collected by these agencies. Doing so will encourage more citizens to deal with government.

From the private sector side, a trustworthy legal environment that ensures privacy of data and other information will result in higher trust and confidence in the Philippine ICT environment especially considering this matter is a major consideration of business process outsourcing and call centers.

The importance of being able to assure the privacy and security of confidential data is also particularly important considering how the European Union's 1995 Directive on Data Protection could preclude Philippine companies from tapping into opportunities in the EU.

Cybercrime Bill

The Philippines recognizes the importance of protecting and safeguarding the integrity of computer, computer systems, networks, and database, and the confidentiality, integrity, and availability of information and data stored therein, from all forms of misuse, abuse, and illegal access.



A Cybercrime and Cyberfraud Prevention law would provide the legal basis for enforcing security measures and protecting the general public interest.

Freedom of Information Law

A Freedom of Information Law will provide clear guidelines on:

- public access to government data;
- sharing and exchange of information among government agencies; and
- the use of information obtained under such a law by the recipient.



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