



Smarter Philippines: Developing New Engines of Inclusive Economic Growth throughout the Philippines

March 22, 2013



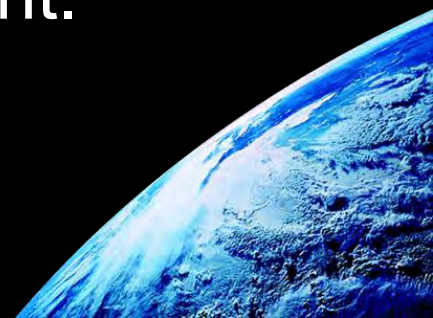
Alejandro P. Melchor III
Program Director, Smarter Philippines
Department of Science & Technology



SMARTER PHILIPPINES

Smarter Philippines is the DOST's umbrella S&T program to leverage S&T and ICT for an enhanced quality of life for all Filipinos and sustained, high and inclusive growth for the Philippines.

It has two major components: Smarter Provinces and Cities for urban development, and Smarter Countryside for rural development.





Department of Science and Technology



Smarter Cities

iGovPhil
Smarter LGUs
iTalentDev.PH
Global Leadership in IT-BPO
iCreativePhil
e-Business
Filipinnovation
Smarter SMEs
e-Business Permit Lic. System

Industry-driven curriculum

Transformative Learning Technologies
National Information Infrastructure
Smarter Traffic Management

Internet for All Community e-Centers

new Government CIO Training
DOST Scholarships
Smart Farming
MAKIBAYAN

High Value Electronics
UP Monorail
electric Jeepney
Smart Grids
Renewable Energy
Project NOAH
EWS



Smarter Countryside

NATIONAL DEVELOPMENT PLAN



DOST MANDATE

ENSURE THAT RESULTS FROM S&T EFFORTS ARE GEARED TOWARDS MAXIMUM SOCIO-ECONOMIC BENEFITS FOR THE PEOPLE



DOST PRIORITY PROGRAMS

ADDRESS PRESSING NATIONAL CONCERNS

COUNTRYSIDE DEV'T & INCLUSIVE GROWTH

INCREASE INDUSTRY COMPETITIVENESS

IMPROVED DELIVERY OF GOV'T SERVICES

APPLY ENABLING EMERGING TECHNOLOGIES

Smarter Philippines launched Feb. 20, 2013 in Davao City with 4 Strategic Partners



National ICT Confederation of the Philippines



DOST- UN Habitat MOU
Achieving Sustainable Urban Development



USAID



Linkage with European
Smart Cities Initiative
via European Chamber
of Commerce, Phils.

iGovPhilippines



Integrated Government Philippines Project

Government-Wide E-mail and Collaboration System

- Features:**
- Open-source and cloud-based, enterprise-class email solution
 - Collaboration Site will have e-mail, calendaring/scheduling, file repository, resource management, and contacts
 - Multi-platform access for users: desktop, web and mobile
 - Security features: anti-virus and anti-spam, and will be PKI-enabled
 - Extensible through mini-applications!

Benefits:

- "Layanan" clients - more than 100k (100,000) instead of 3M per agency (3,000,000) (Department)
- Secure e-mail
- Data sovereignty - collection and data to be installed and stored in its country servers
- Low maintenance and operations



Roll-out

- 1000 Premium accounts
- 5000 Standard accounts
- Others: community ed.
- 1Q 2013: Within DST for pilot testing
- Target agencies: starting with those without domain servers

National Records Management Information System

Making payments to the Government easier!

What is eBayad?

- Integrated financial applications system designed to handle payment
- Citizens can do payment almost anywhere, 24/7
- Users enjoy payment flexibility, convenience, and can do mobile banking, OTC and ATM

Why pay through eBayad?

- Convenient: web-based or mobile app
- 24/7: anytime, anywhere
- Flexible: multiple payment options
- Secure: encrypted transactions
- Cost-effective: no need for physical infrastructure

Why an Agency should adopt eBayad?

- Comprehensive payment facility
- No need to develop an in-house system
- No need to invest on IT staff for a particular function
- No need to negotiate with various providers for payment facility
- Secure: to ensure integrity and prevent fraudulent access
- Reduce risk of handling cash
- Reduce long queues especially during the peak payment periods

Data Center

What we envision for the Data Center

- Two sites
- Manila: MLC, Galis TELAP, NTP-Park
- Applications that will be hosted centrally, central government user services
- Cloud for localization (Embassy, CENs and MPS)
- Available for consultation and hosting services for (MAs)

Services:

Central	ML	MP
Govt	Local	Non-Resident

Features:

- Data will be stored in the "Cloud"
- High availability and disaster recovery
- Scalability and flexibility
- Security and compliance

Infrastructure Core Network

Connect 98 priority government agencies via Fiber Optic Link

Utilize LRT, LRT2 and MRT lines and MMDA ducts for the network

Cluster Implementation for NGAs

Fiber Optic Link - 314,292,278 meters
Invasive connection: 100 meters
Agency to Agency: 100 for the last mile, 1000 in the core network



Knowledge Workers with 21st Century Skills

Industry Partnerships in Education



- Computer Gaming for Leadership Development
- World-Class Curriculum Online
- Mobile, tablet-based Blended Learning System
- Technology Resources for Educators



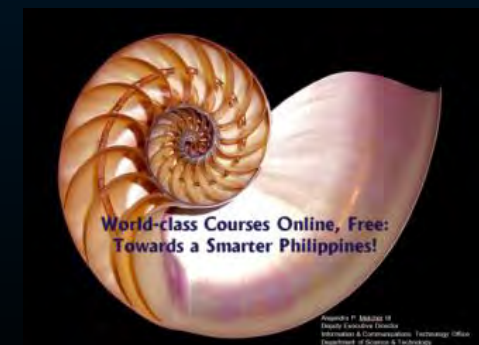
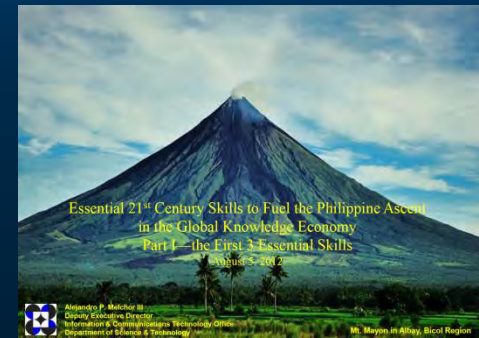


Knowledge Workers w/ 21st Century Skills

SEVEN ESSENTIAL 21ST CENTURY SKILLS*

1. Critical thinking and problem solving
2. Effective written, oral, multimedia and multilingual communication
3. Collaboration across networks and leading by influence
4. Creativity and innovation
5. Accessing and analyzing information
6. Initiative and entrepreneurialism
7. Flexibility and adaptability

*Loosely based on the framework of the Partnership for 21st Century Skills.
www.p21.org



Google these studies



Smarter Philippines builds on the broad shoulders of Filipinnovation: a DOST-led PPP for Innovation

Ecosystem



FILIPINNOVATION: the National Innovation Strategy In collaboration with the DOST, IBM Philippines, Intellectual Property Office of the Philippines, and AIM Policy Center



FILIPINNOVATION Network: 30+ members from government, industry and academe



The Department of Science & Technology (DOST) and its attached agencies



Congressional Commission on Science, Technology & Engineering (COMSTE)

Strategies & TWGs

TWG1 – Strengthening Human Capital

Formation of multi-sectoral consortia of institutions and/or experts working towards achieving strong technological R&D capabilities (tech) and management or services skills (non-tech) that will influence industries and public policy

TWG2 – Supporting Business Incubation & Acceleration Efforts

Encourage industry participation in incubation and human capital collaboration to ensure productivity and returns through innovation.

TWG3 – Regenerating the Innovation Environment

Engage stakeholders in the creation of sound and enabling policies that will encourage innovation on all levels.

TWG4 – Changing the Filipino Mindset

Filipinnovation: branding Filipino competitive innovation for sustainable development and global positioning

Projects



Engineering Research & Development for Technology (ERDT)



Technology Business Incubators



IBM Innovation Center
(Opened Dec 2009)



Board of Investments

Tax Incentives for Innovation and R&D by the Philippine Board of Investments (BOI)



Philippine IP Policy Strategy led by IP Philippines



Filipinnovation Magazine



Rapid Industrialization



Advanced Device Materials and Testing Laboratory (ADMATEL)— designed to enhance the productivity of the semiconductor and electronics industry by providing world-class testing facilities at affordable prices.

- Eliminates the need to send products abroad for testing, thus enabling higher value added.



Makibayan—a DOST program aimed at enhancing the productivity of the metals and engineering industry by providing S&T assistance and support to 3 major industry associations: Philippine Die and Mold Association, Inc. (PDMA); Metalworking Industries Association of the Philippines (MIAP); and the Electronics Industries Association of the Philippines, Inc. (EIAPI)

Smarter SMEs



Smarter Philippines will create a market for smart solutions, technologies and services.
Smarter SMEs will translate that demand into new Filipino-owned enterprises



DOST Innovation Centers in every region

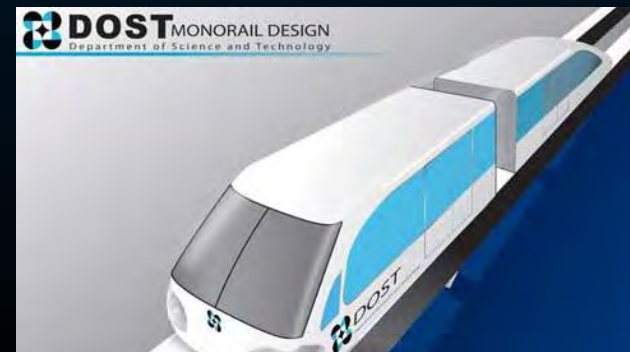




Automated Guided Transport System (AGT)



- fully-automated, driverless electricity-run monorail.
- Entirely Filipino-made, at 1/5 of prevailing costs.
- Electricity-run mass transport helps mitigate the effects of climate change.



Pilot project at UP Diliman



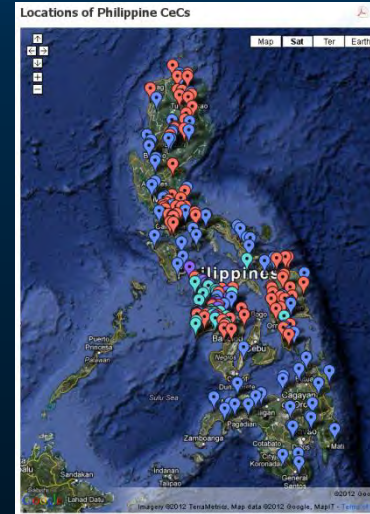
Internet for All: Connected Communities

TV Whitespaces Initiative

Aims to bring broadband-enabled services to rural areas

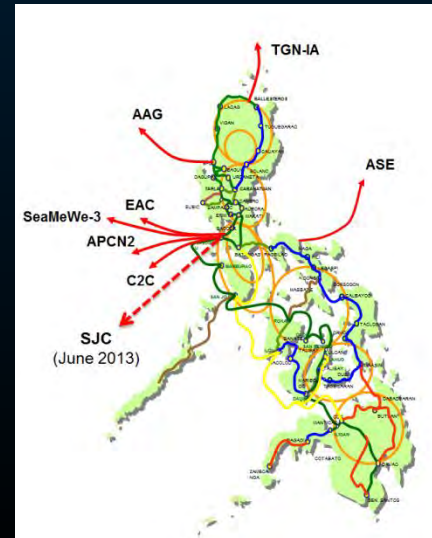


“... in low- and middle-income countries every 10% increase in broadband penetration results in 1.38% GDP growth.”
- World Bank



Community e-Centers Program

Aims to bridge the digital divide and provide affordable access to ICT services



Nationwide fiber-optic network
Reliable and redundant connectivity



Smart Computing

The *key elements* of IT infrastructure that enterprises need today to become tomorrow-ready.



Safeguarding critical information

Philippine Data Privacy Act of 2012
RA - 10173



Unlocking the power of Big Data



CHED-IBM MOU to turn PH into Global Center for \$160B IT Analytics Industry



Leveraging emerging smart computing technologies:

- Cloud Computing
- Social Networking
- Mobile Computing

Visayas Cloud Capability Project
P50M allocated by Congress

Project Noah



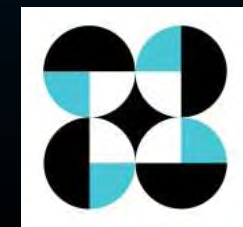
S&T and ICT for Climate Change Mitigation and Disaster Management



“Project Noah would serve as the Philippines’ ark against deluge. We would put an end to the ordeal that people have been accustomed to in rainy weather.”

- President Aquino

From Left to Right: Science & Technology Secretary Mario G. Montejo, President Benigno S. Aquino III, and Project Noah Director Dr. Mahar Lagmay





Smarter Healthcare

ICT for Health: the National Telehealth Service Program

The Problem: Six out of ten Filipinos die without ever seeing a health professional. Many areas lack doctors. Access to healthcare remains elusive for those living geographically far away. Health information in remote rural areas are left unrecorded. Early diagnosis of diseases and monitoring of vital signs are major challenges in places where health services are unavailable.

The Smarter Way of Doing Things: Better and more efficient healthcare services through ICT. What we lack in doctors, we make up for in Information and Communication Technologies (ICT). ICT tools can be used to diagnose patients remotely, let patients consult experts and specialists even when far away, monitor diseases, and generate and transmit health-related information. Patients with deadly diseases can immediately alert doctors even during daily tasks. Locally-developed telemedicine devices like the RxBox can be made available for geographically isolated communities. E-Health tablet devices can make it simpler to manage disease data.



Thanks to Telehealth, doctors can provide better health care to Pinoys in remote communities.

Smarter Healthcare: world-class technology solutions made by Filipinos, for Filipinos.

- RxBox
- E-Health Portal (www.ehealth.ph)
- Philippine Health Research Registry (PHRR)
- E-Health TABLET application
- Tablet-based Disease Data Management System for Dengue





Department of Science and Technology



Smarter Cities

iGovPhil
Smarter LGUs
iTalentDev.PH
Global Leadership in IT-BPO
iCreativePhil
e-Business
Filipinnovation
Smarter SMEs
e-Business Permit Lic. System
Industry-driven curriculum
Transformative Learning Technologies
National Information Infrastructure
Smarter Traffic Management



Smarter Countryside

One Bulacan PRIDE (Program for Rapid Industrialization and Development) launched March 8, 2013—Smarter Province Model

ONE BULACAN PRIDE

Program for *Rapid Industrialization and Development*

ONE BULACAN PRIDE

Program for Rapid Industrialization and Development

Our nation has always aspired for an economy where the growth powered by private enterprise is felt by a larger number of people.



President Benigno S. Aquino III

We want a vibrant economy driven by enterprise.

Gusto natin na ang nakararaming Filipino ay may kontribusyon sa paglago ng ekonomiya.

Para manggani ito, kinabangyan lamang ang produksyon, panatilihin at palawakin ang mga oportunidad at lahat dapat ay hazal at kabahagi.

Yan ang inclusive growth na sinasabi ng ating Pangulo.

Executive Secretary Rogelio Calma, Jr.



Our goal is to make Bulacan an engine of economic growth. Papandayin natin ang isang modelo ng ekonomiya na pinayabong sa pamamagitan ng entrepreneurship at pagtatama-sama ng pamahalaan, mga negosyante, at mamamagay.



Yan ang Bulacan PRIDE. Tanga sa pag-antad na kasama ang lahat.

Gov. Wilfredo B. Sg-Awarado

Kaiza po ang inyong lingkod sa lalawigan ng Bulacan at ng ating Pangulo na makapagtago ng mga industriya at negosyo upang magamit ng wasto ang ating likas na yaman, palakihin ang ating kapasidad, lumikha ng mga trabaho at oportunidad, at pataasin ang kita ng ating mga kababayan.

Comp. Isabela 'Jojoan' Mendonca





Executive Secretary Paquito Ochoa, Keynote Speaker

“We want to create **new engines of economic growth**, and Bulacan will be among the pilot provinces for this initiative.”



**Gov. Willhelmino M. Sy-Alvarado ,
Province of Bulacan**

“Our goal is to make Bulacan an engine of economic growth...”

The entire Bulacan will become a Smart Province!”

ONE BULACAN PROGRAM FOR RAPID INDUSTRIALIZATION & DEVELOPMENT

Clark Special Economic Zone

7 STRATEGIC INITIATIVES

Satellite Gov't center/ Eco-tourism hub: DRT

Agro-industrial hub: San Rafael, San Idefonso

Mineral industry hub: DRT, Norzagaray

Water Sports Eco-park: Angat After-Bay

Global Urban hubs: Plaridel, Baliwag, Pulilan

Technohub: Malolos

Jewelry Industry: Meycauayan, Marilao

Click on the town of your interest in the interactive map to view valuable information about each town.



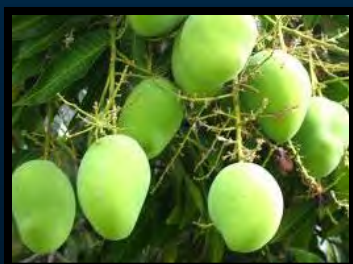
National Rice S&T Program



National S&T Program on Slaughter Goat



National Mango S&T Program

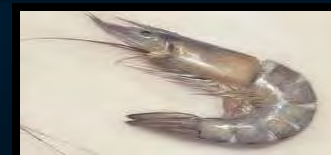


National Tilapia S&T Program



**SMARTER
FARMING &
FISHERIES
S&T
PROGRAMS**

National Shrimp S&T Program



National Swine S&T Program



National Milkfish S&T Program



National S&T Program for Coconut



National Seaweeds S&T Program

WE ARE IN THE EYE OF A PERFECT STORM...

A once-in-several-decades window of opportunity to dramatically accelerate economic growth, job creation and investment.

...to harness S&T and ICT as an engine of growth.

...to develop the entire countryside.

There has never been a better opportunity to build a Smarter Philippines!

Questions?

Thank You



Alejandro P. Melchor III
Program Director, Smarter Philippines
Department of Science & Technology
budmelchor@yahoo.com





TOMORROW starts here.