ASEAN e-Measurement Initiative and Thailand Case Study

The Needs and Challenges of e-Measurement in the Developing Countries

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UNCTAD Expert Meeting
Measuring Electronic Commerce
As an Instrument for the Development of the Digital Economy
8-10 September 2003, Geneva

Topics

- Needs of Enhancing ICT-related Competitiveness and Monitoring the Development in ASEAN
  - e-ASEAN Framework Agreement
  - ASEAN e-Readiness Assessment 2001
  - Lack of Statistical Data & Methodology
- Challenges of Measuring e-Commerce/ICT
  - ASEAN e-Measurement Framework & Forum
- Some Approaches in Thailand
- Recommendations to UNCTAD

Goals, Policy Framework & Assessment

Goals

Chinese proverb:
If you don't know where you are going, any road will do.
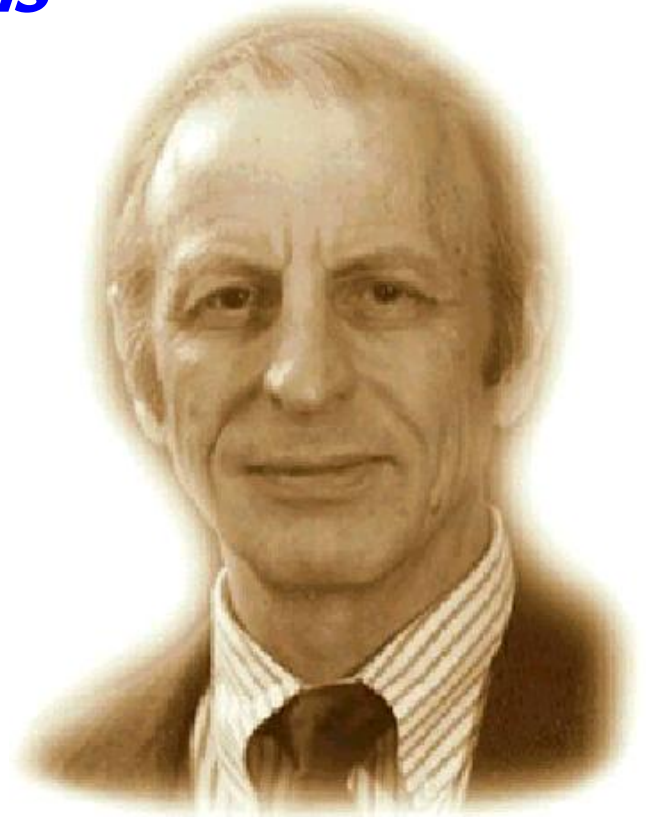
Humphrey proverb:
If you don't know where you are, a map won't help.
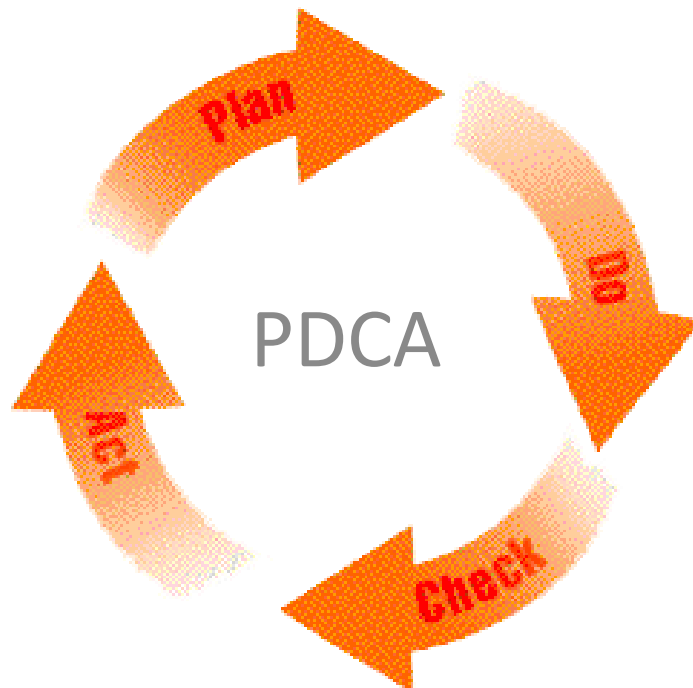
Assessment
(Measurement)

Policy Framework
(Map/Guidelines for improvement)

#1

Embracing Continuous Improvement (CI) Framework within our National and Regional e-Strategies

e-ASEAN Framework Agreement
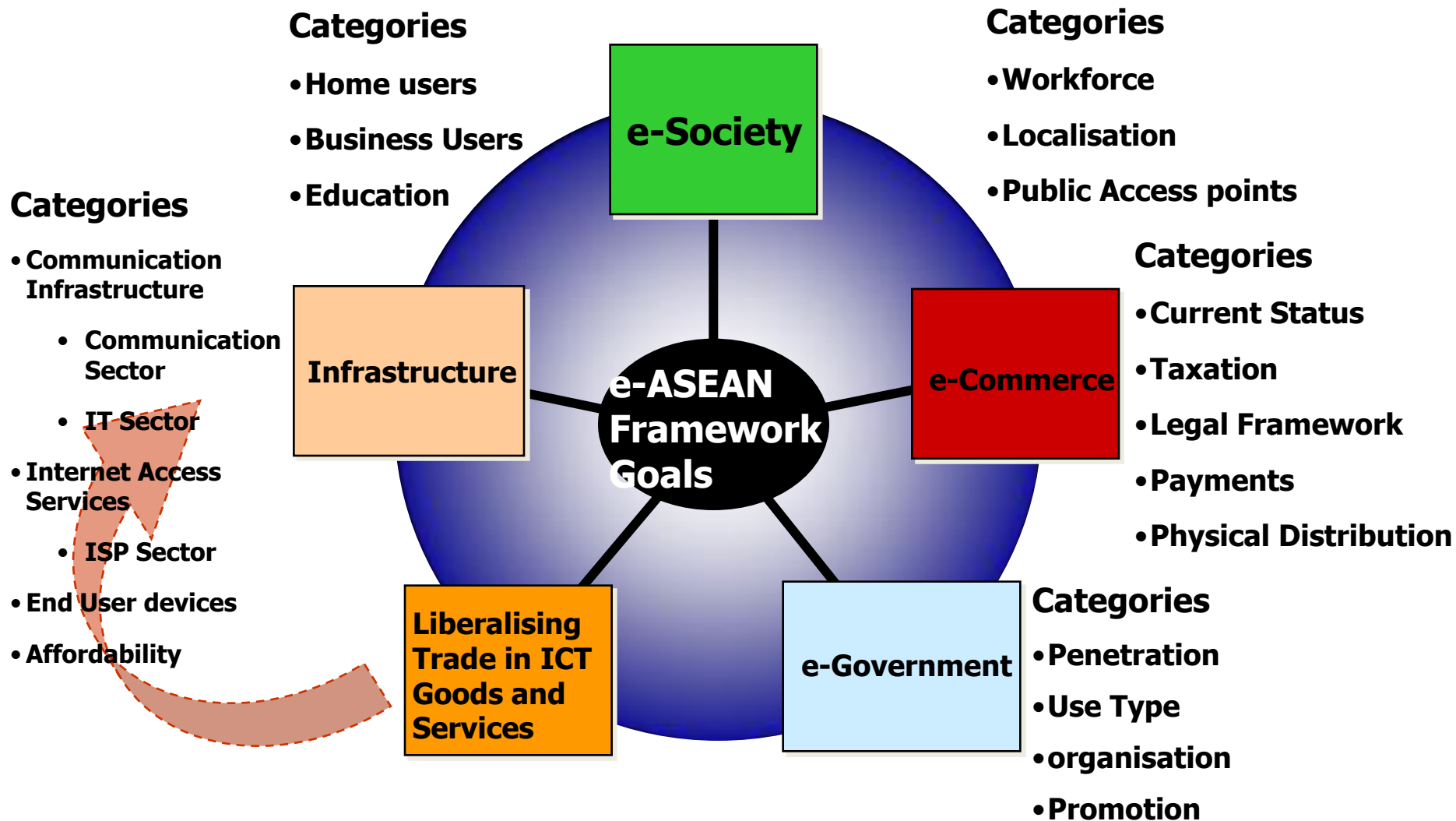
- eASEAN Framework Agreement signed by ASEAN Leaders at ASEAN Summit in Singapore in November 2000
- Six main thrusts:
  - Establishment of ASEAN Information Infrastructure
  - Growth of electronic commerce
  - Liberalisation of trade in ICT products and ICT services, and of investments
  - Facilitation of trade in ICT products and services
  - Capacity building and e-Society
  - e-Government

The Needs of
Measuring e-Commerce/ICT
in developing countries
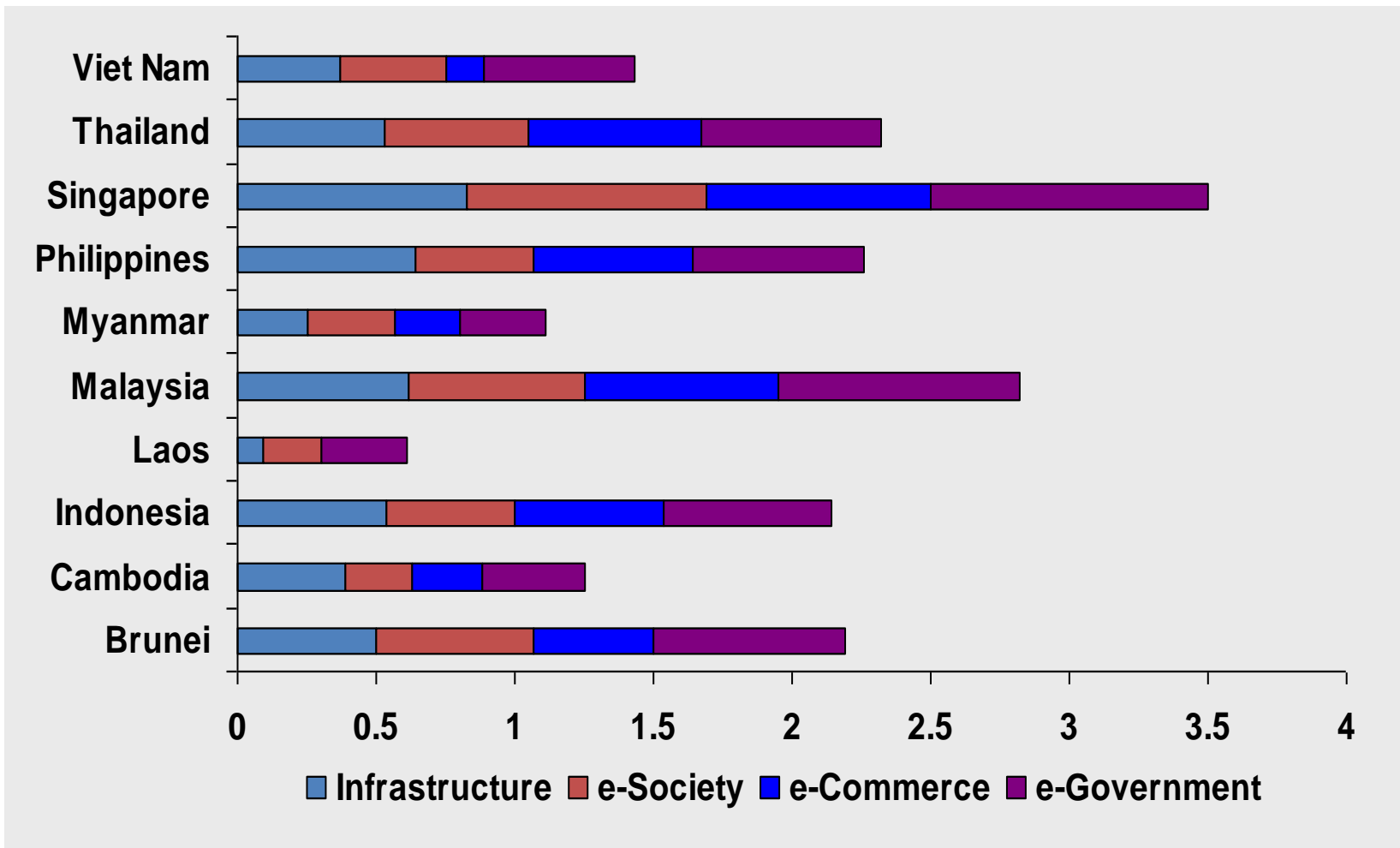
ASEAN e-Readiness Assessment 2001

ASEAN e-Readiness Assessment (2001)

153 Indicators

Categories

- **Home users**
- **Business Users**
- **Education**

Categories

- **Communication Infrastructure**
  - **Communication Sector**
  - **IT Sector**
- **Internet Access Services**
  - **ISP Sector**
- **End User devices**
- **Affordability**

Categories

- **Workforce**
- **Localisation**
- **Public Access points**

Categories

- **Current Status**
- **Taxation**
- **Legal Framework**
- **Payments**
- **Physical Distribution**

Categories

- **Penetration**
- **Use Type**
- **organisation**
- **Promotion**

e-Society

Infrastructure

e-ASEAN Framework Goals

e-Commerce

Liberalising Trade in ICT Goods and Services

e-Government

Overall Mean Scores (infrastructure, e-Society, e-Government, e-Commerce)
Varying Stages of e-Readiness (2001)

ASEAN e-Readiness Assessment (2001)

Different Stages of e-Commerce Development need Different e-Commerce Strategies

The countries with similar levels of development were clustered using the four stages of development to identify their common challenges and potential focus areas
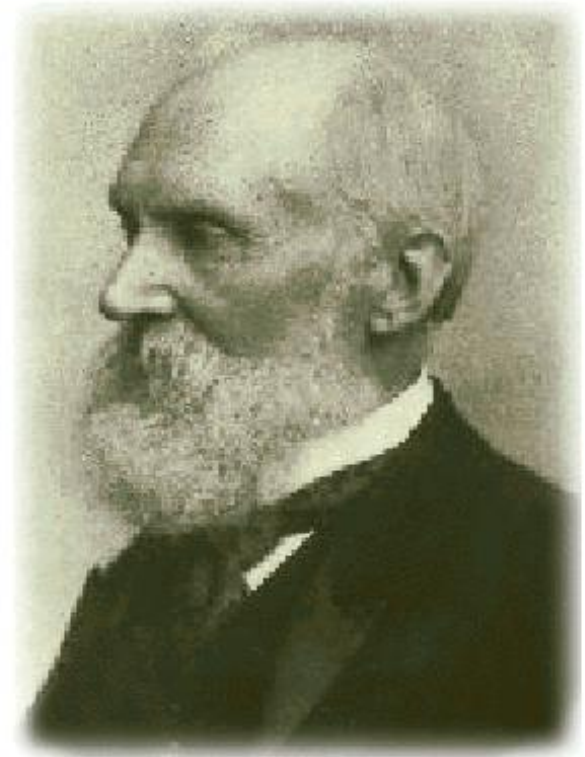
e-Commerce – Readiness Level

Emerging	Evolving	Embedding	Extending
Vietnam	Brunei	Malaysia	Singapore
Cambodia	Indonesia	Thailand	
Myanmar		Philippines	
Laos			

Lessons Learned
from ASEAN e-Readiness Assessment

- Recognizing the needs in monitoring and measuring e-Commerce & ICT development

- Lack of many primary data

  - Lack of appropriate measurement methodologies to collect several reliable statistical indicators.

  - Ambiguity over definitions & scope of coverage (internationally comparable data are needed).

When you can measure
  what you are speaking about,
  and express it in numbers,
  you know something about it;

  but when you cannot measure it,
  when you cannot express
  it in numbers,
  your knowledge is of a meager
  and unsatisfactory kind.

  —Lord Kelvin

Challenges of Measuring and Monitoring e-Commerce/ICT Development

ASEAN e-Measurement Framework

initially proposed during
"The 1st ASEAN Workshop on Measurement of Digital Economy", September 2002

then endorsed by
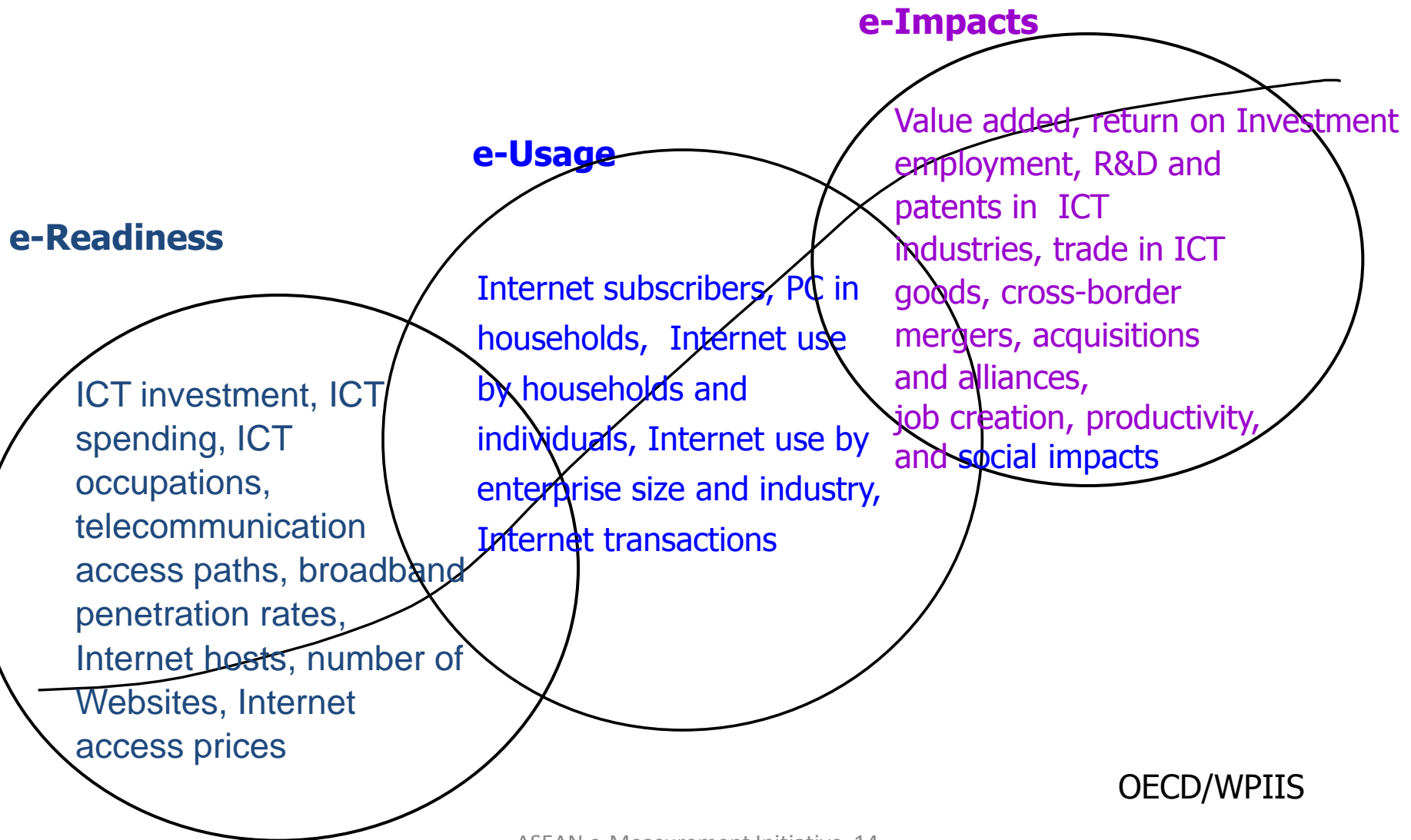e-ASEAN Working Group & e-ASEAN Task Force, October 2002, Bangkok

ASEAN e-Measurement Framework

Recognizing the challenges & needs of measuring and monitoring the digital economy.

- To develop a common reference framework
- To establish guidelines
  on the definitions, data collection and measurement methodologies of ICT and e-commerce indicators (including e-readiness, e-usage and e-impact),
- To exchange methodologies & lessons learned
- To ensure comparability of data across ASEAN+3 member countries and internationally;

*Endorsed by
e-ASEAN Working Group &
e-ASEAN Task Force
October 2002, Bangkok

Measuring ICT/e-Commerce Development

e-Impacts

e-Usage

e-Readiness

ICT investment, ICT spending, ICT occupations, telecommunication access paths, broadband penetration rates, Internet hosts, number of Websites, Internet access prices

Internet subscribers, PC in households, Internet use by households and individuals, Internet use by enterprise size and industry, Internet transactions

Value added, return on Investment employment, R&D and patents in ICT industries, trade in ICT goods, cross-border mergers, acquisitions and alliances, job creation, productivity, and social impacts

OECD/WPIIS

e-Measurement Dimension

- Demand-Side and Supply-Side Indicators
  - Demand-Side: ICT Usage
  - Supply-Side: Infrastructure, ISPs, ICT Industry etc.
- ICT Usage
  - Household surveys
  - Business surveys
  - Government surveys
- ICT Impact in Business, Government & Society
  - e.g. impacts to productivity,
    how ICT could reduce poverty and in what ways.

ASEAN e-Measurement Activities in 2003

- Establish an ASEAN e-Measurement WG
- 2nd ASEAN e-Measurement Workshop, 28 Sept 2003, Yangon, Myanmar
  - Stocktaking ICT/e-commerce surveys in each member country
  - Discussing on common definitions for a preliminary list of key ICT Indicators
  - Discussing some model surveys and the data collection methodology

Integrating the ICT strategy with measurement activities

Measurement and Statistics should be done to help the Social & Economic Development, not for its own sake.

Some Approaches in Thailand

#2
Gaining the political view, establishing an institution and securing the funding

National Policy Framework

- National IT Policy 2001-2010: IT 2010
- National ICT Master Plan 2002-2006
  - Each flagship is defined with measurable goals and timing
  - A recommended list of ICT indicators
  - An institution and mechanisms to monitor ICT development are needed.
- Ministry of ICT (formed in Oct 2002), tasks National Statistical Office to lead e-measurement activities.

Close Collaboration
Establishing an e-measurement working group

- Ministry of ICT
  (e-Strategy)

- National Statistical Office
  (e-Measurement)

- Ministry of Commerce
  (e-Commerce Strategy)

- NECTEC, Ministry of Science & Technology
  (R&D)

#3

Starting small,
then scaling up later
and continuously improving.

Iterative & Incremental Approach is a good strategy to explore an unknown and ill-defined territory.

Adding few questions to existing surveys

Because of budget constraints, early stages of ICT development, and the learning curves of both users/businesses & statisticians.

- Household Survey 2001, 2002
  - Phones/Fax, PC & Internet Usage by Households
- Public Survey on e-government 2003
- Parent Survey on Children Internet Usage 2003
- Business Survey 2002, 2003, 2004
  - PC, Internet, EC Web + (online volume, 2004)
- Manufacture Survey 2003
- Agriculture Survey 2004*
  + linking with the ICT strategy for rural development

e-Commerce Web Survey 2000, 2001, 2002

A Semi-Automatic & Low-Cost Project

- Thai e-Commerce Websites, starting with the list of .co.th & .com domains

- Different Levels of E-Commerce Development and key characteristics
  - Information (brochure ware)
  - Interaction (simple forms for download)
  - Transaction (online ordering, online or offline payment)
  - Collaboration (XML-based information interchange)

Automatic e-Gov Services Survey

Make it automatic, to lower the cost of the survey (SEE Project, see.thaigov.net)

- A software search engine is developed to monitor the development levels of e-Government Websites (quarterly survey)
  - Information (brochure ware)
  - Interaction (simple forms, e.g. business registration forms)
  - Transaction (online transaction, e.g. e-Filing)
  - Collaboration (XML-based information interchange, e.g. e-Government One-Stop Services)

e-Commerce Key Players Surveys

Starting ICT Surveys on a small group of key players (applying the golden rule: 80/20)

- B2B/e-Marketplace and B2C Survey for ICT business usages, 2002
  - Using OECD E-Commerce Definition
  - Modifying OECD Model Questionnaire
- e-Payment Survey in Commercial Banks, 2002

ICT/EC Usages by Enterprises, 2003

- The business list is compiled.

- Early forms of questionnaire have been trialed and improved.

- Larger scale and separated surveys with more questions will be conducted in 2004.
  - +Online sales, and purchases volumes

Conclusion & Recommendation

Conclusion

- Integration between ICT strategy/policy and measurement/assessment activities
    - Develop measurable goals/indicators within the e-strategies
    - Secure the political will and funding
    - Create institutional capability
    - Develop data collection methodologies
    - Incrementally improve both e-strategy & e-measurement
    - Collaborate regionally and internationally

Possible Roles of UNCTAD

- Help creating the political will (national EC strategies + e-Measurement + continuous improvement mechanisms)
  - Recommend the concept to the WSIS process
  - Develop PDCA guidelines for e-Commerce Policy Framework
- Collaborate and assist developing countries to develop national e-measurement strategy
  - Creating a forum, information & tools exchange between statistical offices from developed countries and developing countries
  - Sharing models of some specific national surveys on ICT and e-Commerce
- UNCTAD EC & Development Report 2004?

"In God we trust,
all others bring data."

W. Edwards Deming

Thank You

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