
ICTs for development: from e-Readiness to e-Awareness

Ismael Peña-López

ictlogy.net

School of Law and Political Science
Universitat Oberta de Catalunya

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Executive Master in e-Governance

e-Gov 2007/2008

New Institutional Designs for a Changing World.

Module 3. Barcelona Week.

Index

- Information and Communication Technologies for Development: ICT4D
- The concept of access and the measurement of the Knowledge Society
- Digital Divide: a holistic approach
- e-Readiness and Web 2.0 for e-Governance in Developing Countries

ICTs for Development

NEW Information and Communication Technologies

- Old ones:
 - radio
 - phone
 - TV
 - printed press
- New ones:
 - digital content
 - Internet (e-mail, WWW...)
 - mobile phone

INFORMATION and COMMUNICATION Technologies

- Information:
 - databases
 - information
 - knowledge management
- Communication:
 - broadcasting
 - p2p
 - networking
- Technologies
 - multiplatform
 - multichannel
 - empowering

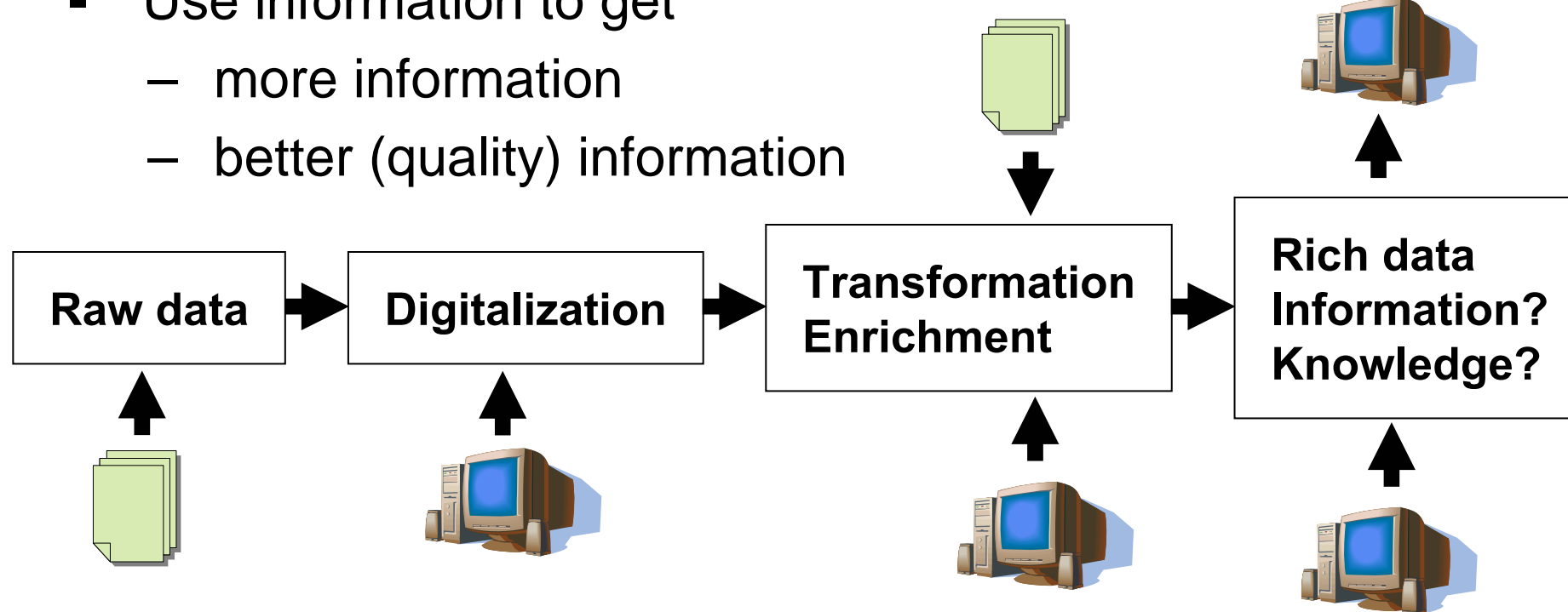
Information Society? (1/3)

(back to the) Production function

- Land and Labour
- Industrial Revolution: Land, Labour and Capital
- ... Revolution? Land, Labour, Capital and Information/Knowledge/Technology/...

Information Society? (2/3)

- Information as input, tool and output
- Use information to get
 - more information
 - better (quality) information



Information Society? (3/3)

- Information Society
- Informational Society
- Knowledge Based Society
- Networked Society

THIRD Industrial Revolution

- Industrial revolution:
 - iron
 - steam engine
- Second industrial revolution:
 - steel
 - internal-combustion engine
- Digital revolution
 - information
 - computers

ICTs and Development (1/6)

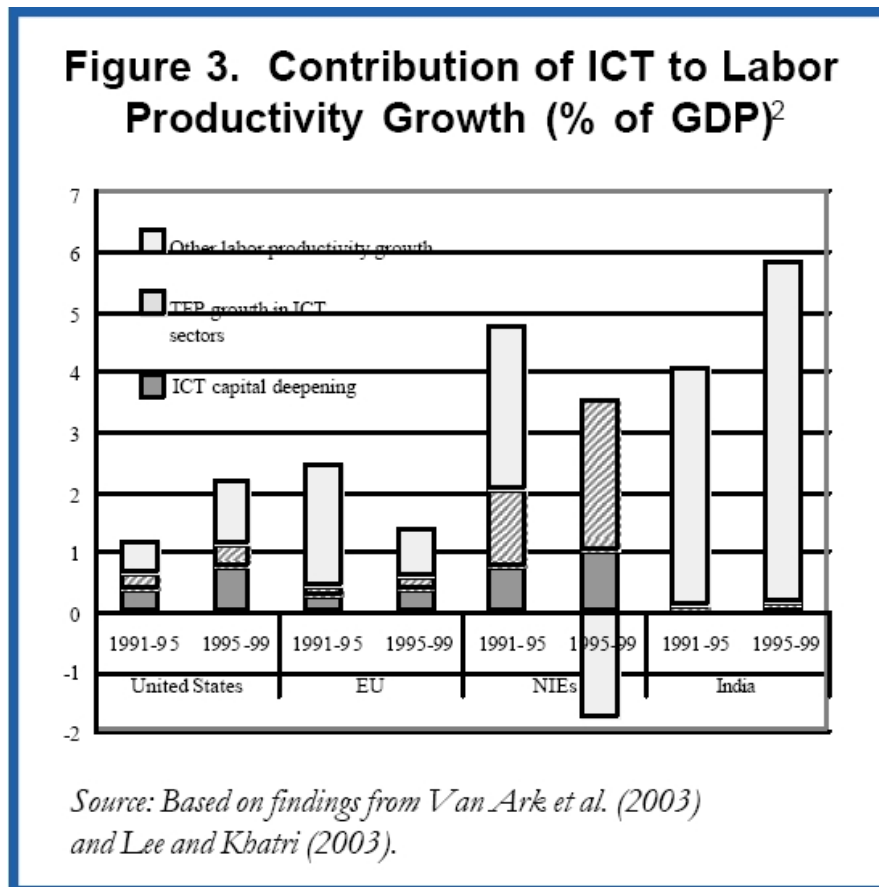
Changes in Economy

- Efficiency
- Efficacy
- PRODUCTIVITY

Changes in Society

- Identity
- Interaction / Communication
- Culture / Creation

ICTs and Development (2/6)

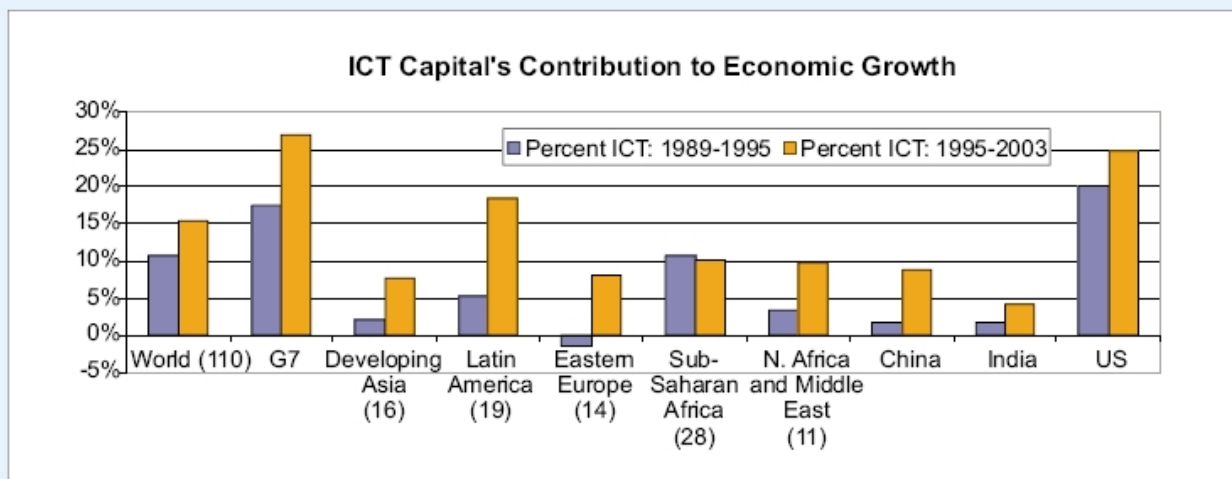


Christine Zhen-Wei Qiang, Alexander Pitt and Seth Ayers.
World Bank (2003) ICT & Development

ICTs and Development (3/6)

Figure 4.1: ICT's contribution to economic growth

ICT capital contribution to economic growth, in percent, by region, 1989-1995 and 1995-2003

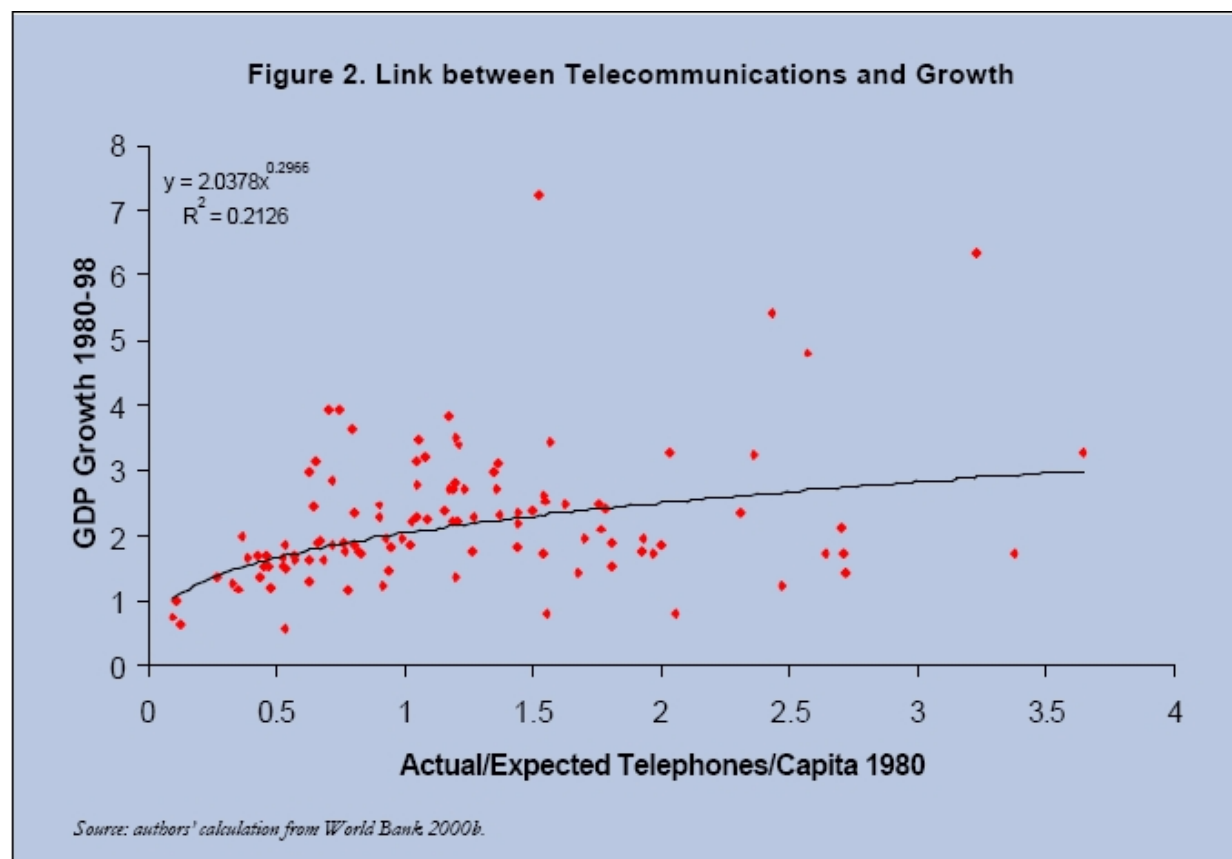


Source: ITU adapted from Jorgenson and Vu. 2005.

Note: The Group of 7 (G7) refers to the following countries: Canada, France, Germany, Italy, Japan, UK, and US.

**Christine Zhen-Wei Qiang,
Alexander Pitt and Seth
Ayers.
World Bank (2003) ICT &
Development**

ICT and Development (4/6)



Christine Zhen-Wei Qiang,
Alexander Pitt and Seth Ayers.
World Bank (2003) ICT &
Development

ICTs and Development: the MDG (5/6)

ICTs necessary for

- Investment
- Livelihood support
- Entrepreneurship

ICTs facilitate

- Cost-effective public services
- Cost-effective private services

Nishimoto, S. & Lal, R. (2005). "Development divides and digital bridges: why ICT is key for achieving the MDGs". In Commonwealth Secretariat (Ed.)

ICTs and Development: key issues (6/6)

Health

- e-Health
- Genomics

Education

- e-Learning
- Blended Learning
- m-Learning

Governance

- e-Governance
- e-Government
- e-Administration
- e-Democracy
- e-Participation

Access and measurement of the Information Society

What is Access

The Broadcasting model

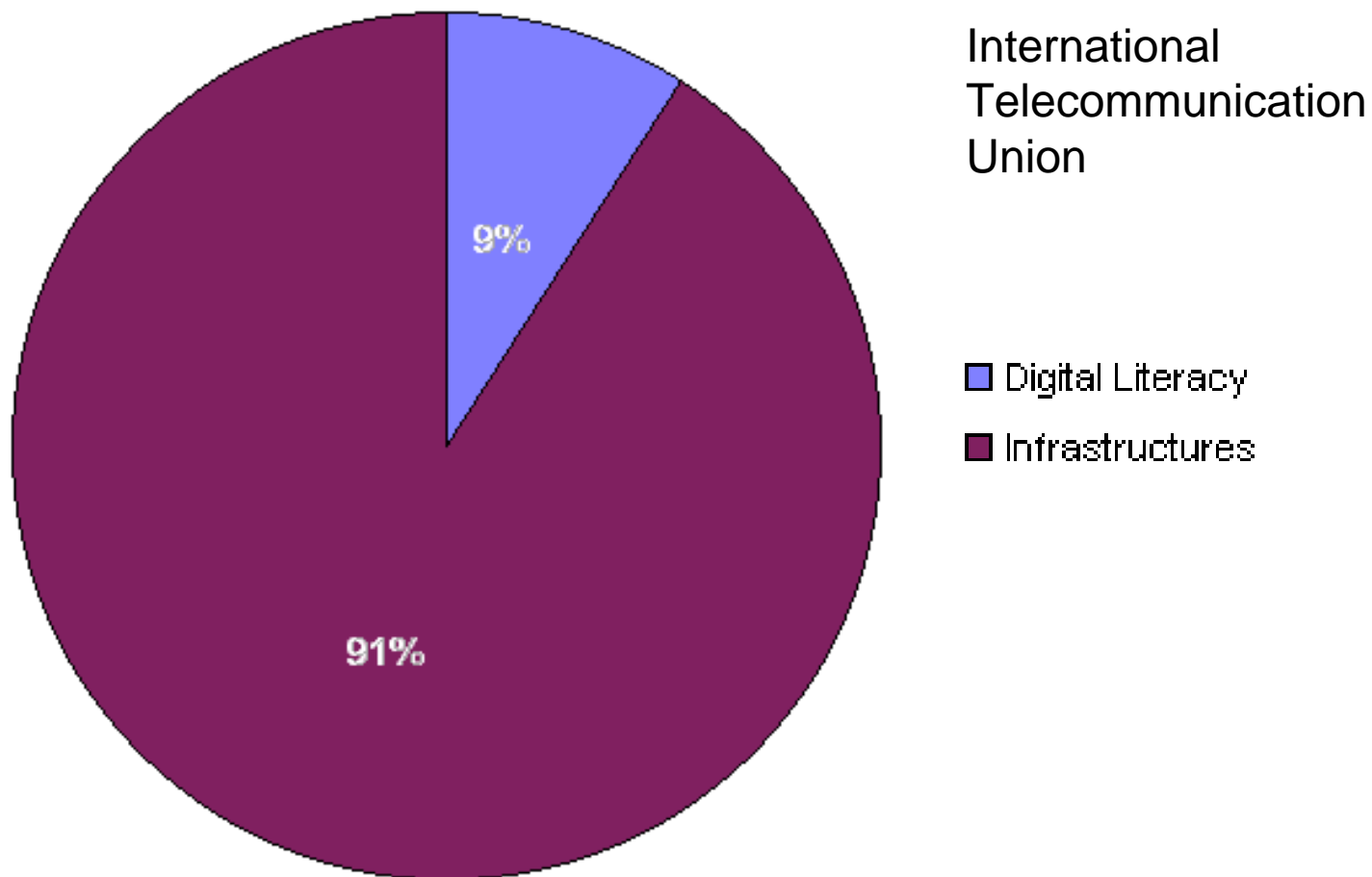
- Emphasis on the active receiver
- Freedom of choice
- Access = Range of products on offer

Telecommunications model

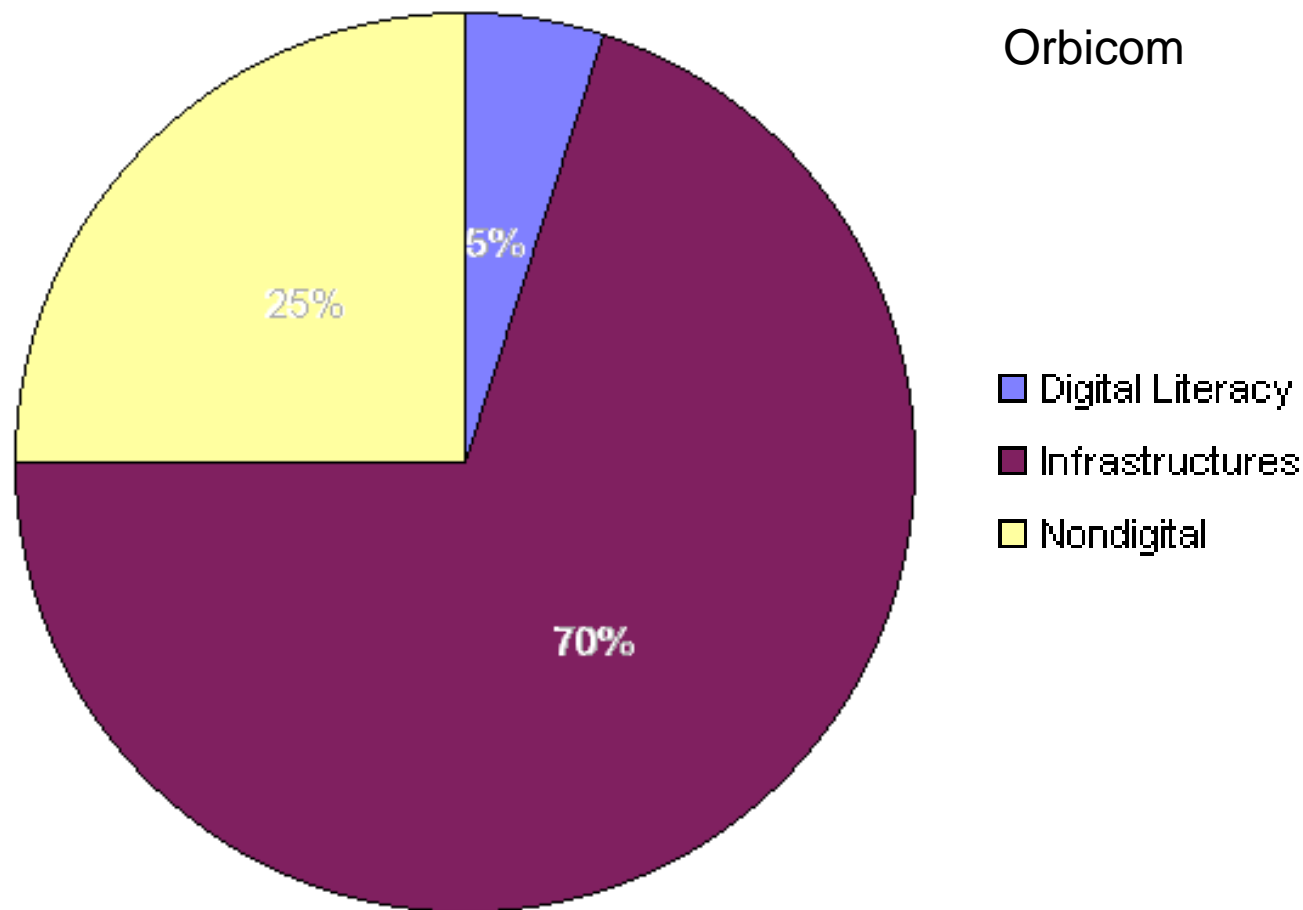
- Emphasis on the sender
- Capacity to get one's message out
- Access = Means of communication

Raboy, M. (1998). "Global Communication policy and human rights". In Noll, R. G. & Price, M. E. (Eds.), *A communications cornucopia: Markle Foundation essays on information policy*

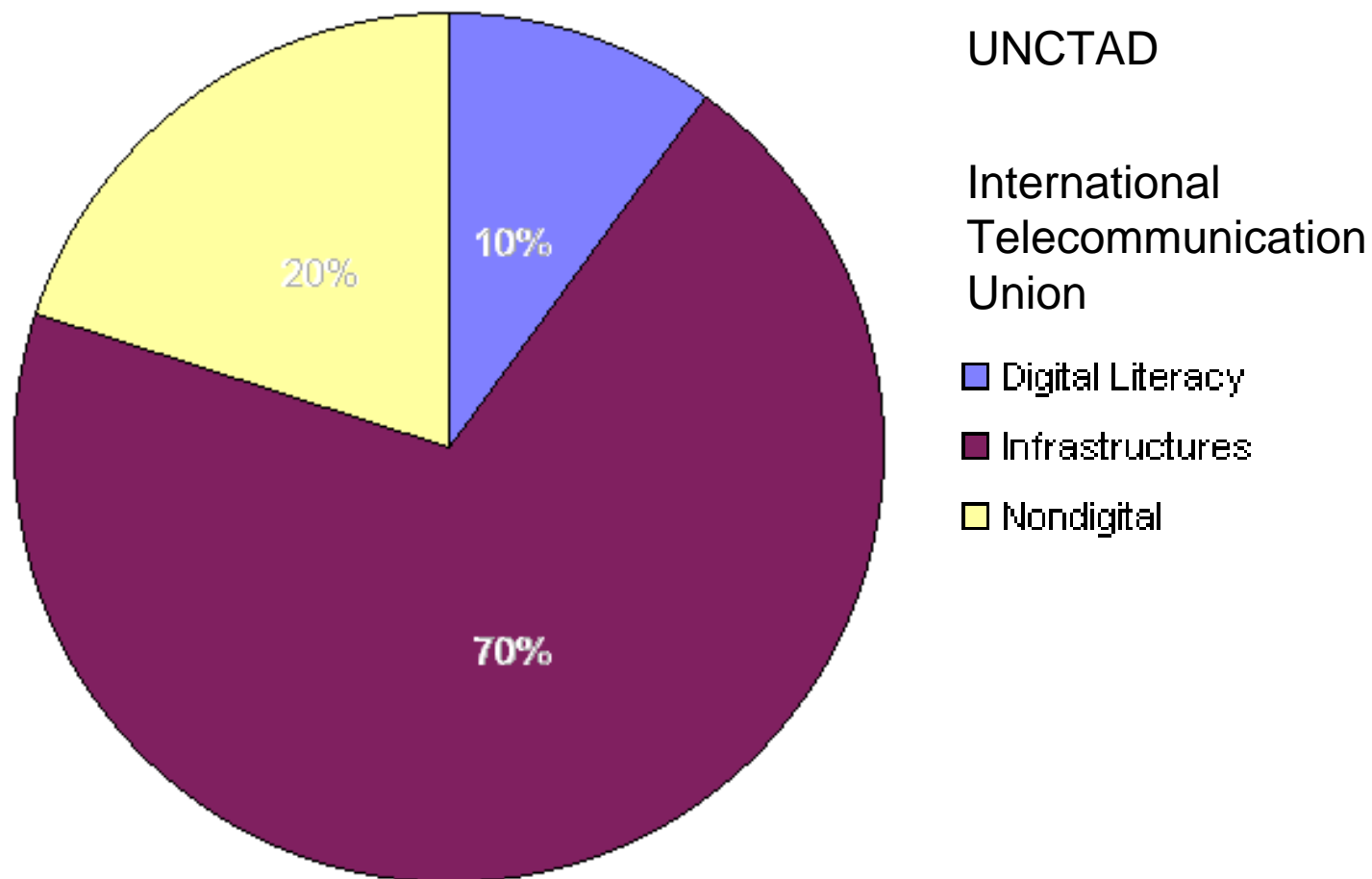
Digital Opportunity Index



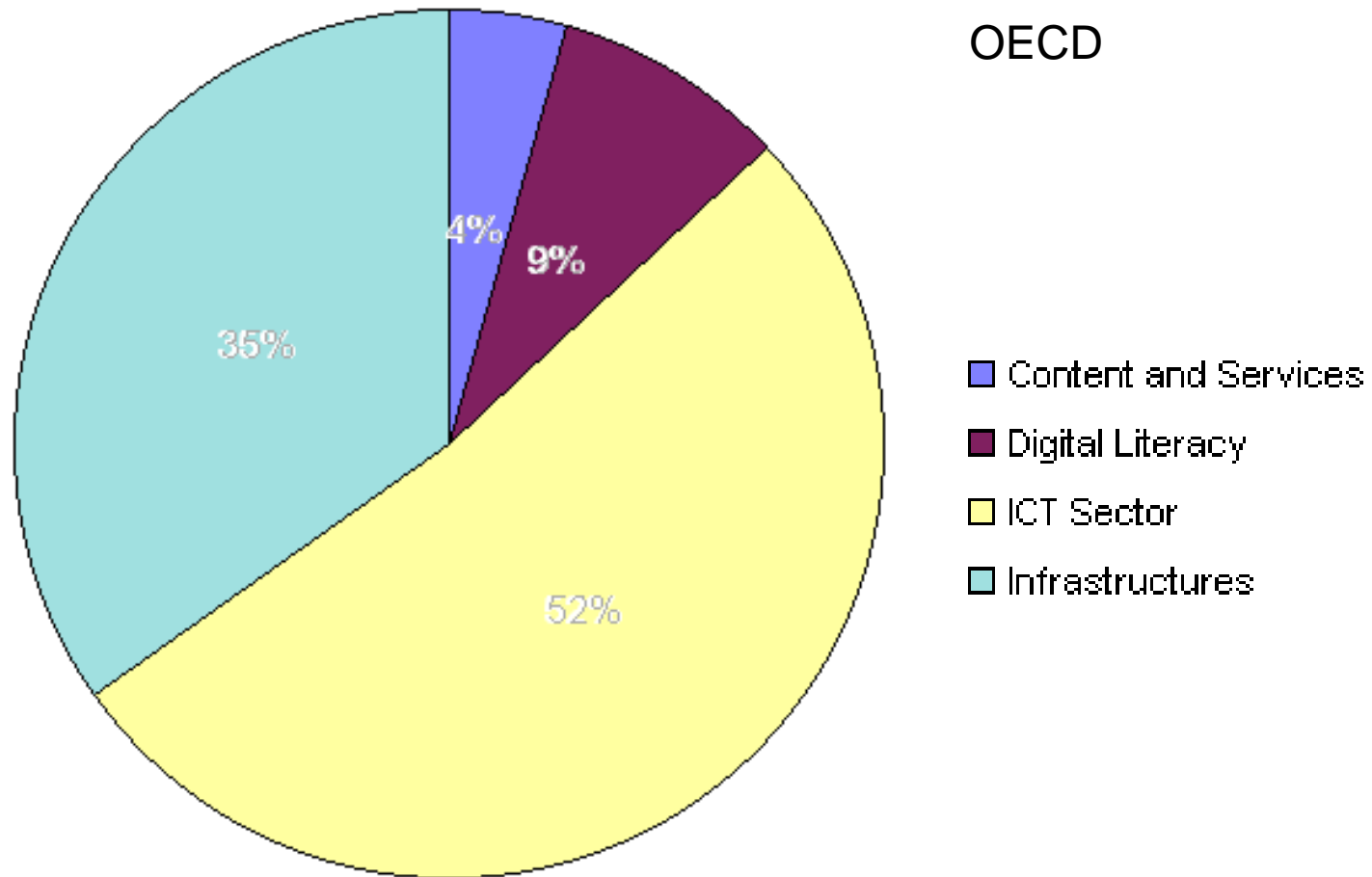
Digital Divide Index / Infostate



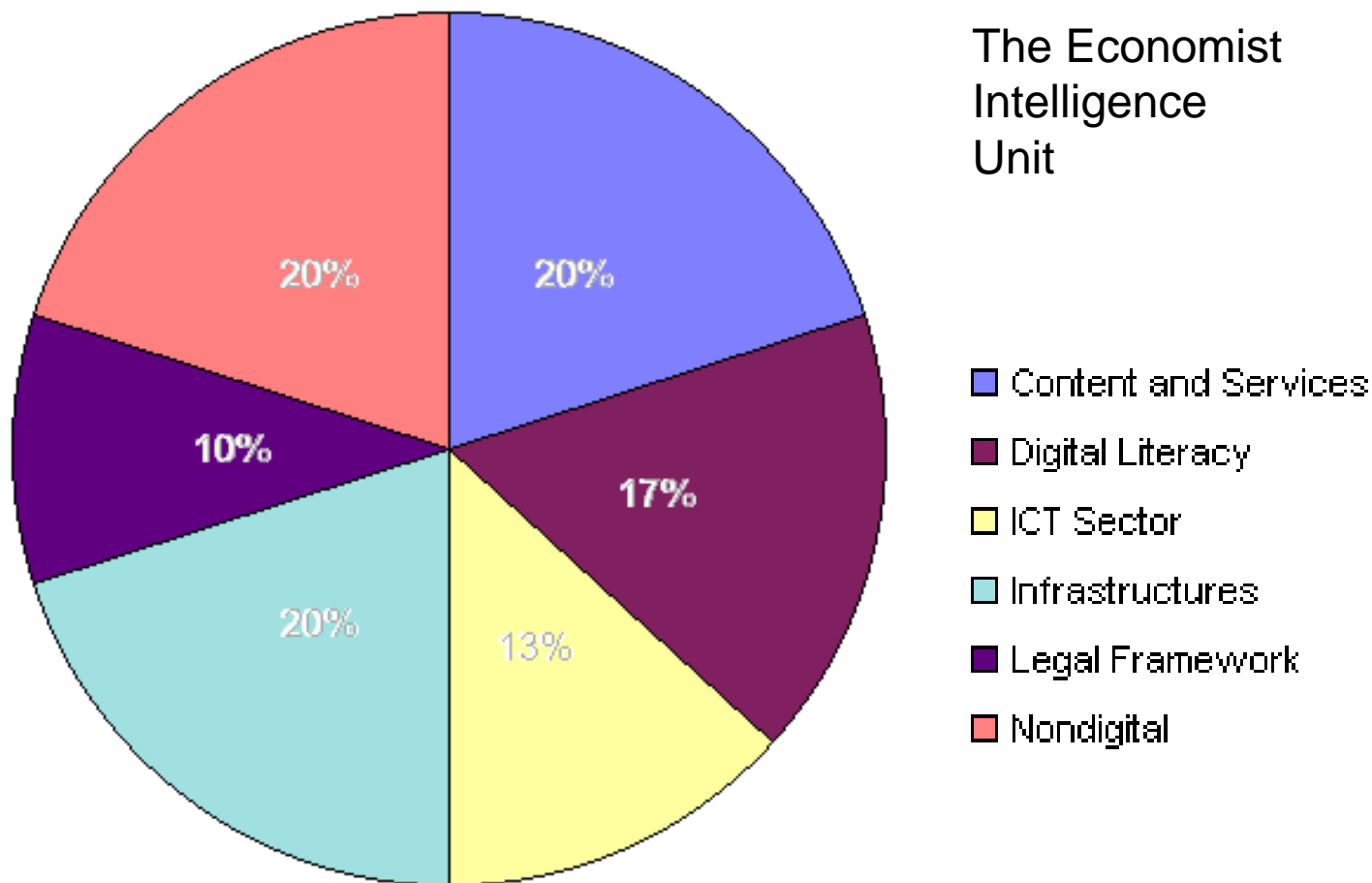
ICT Opportunity Index



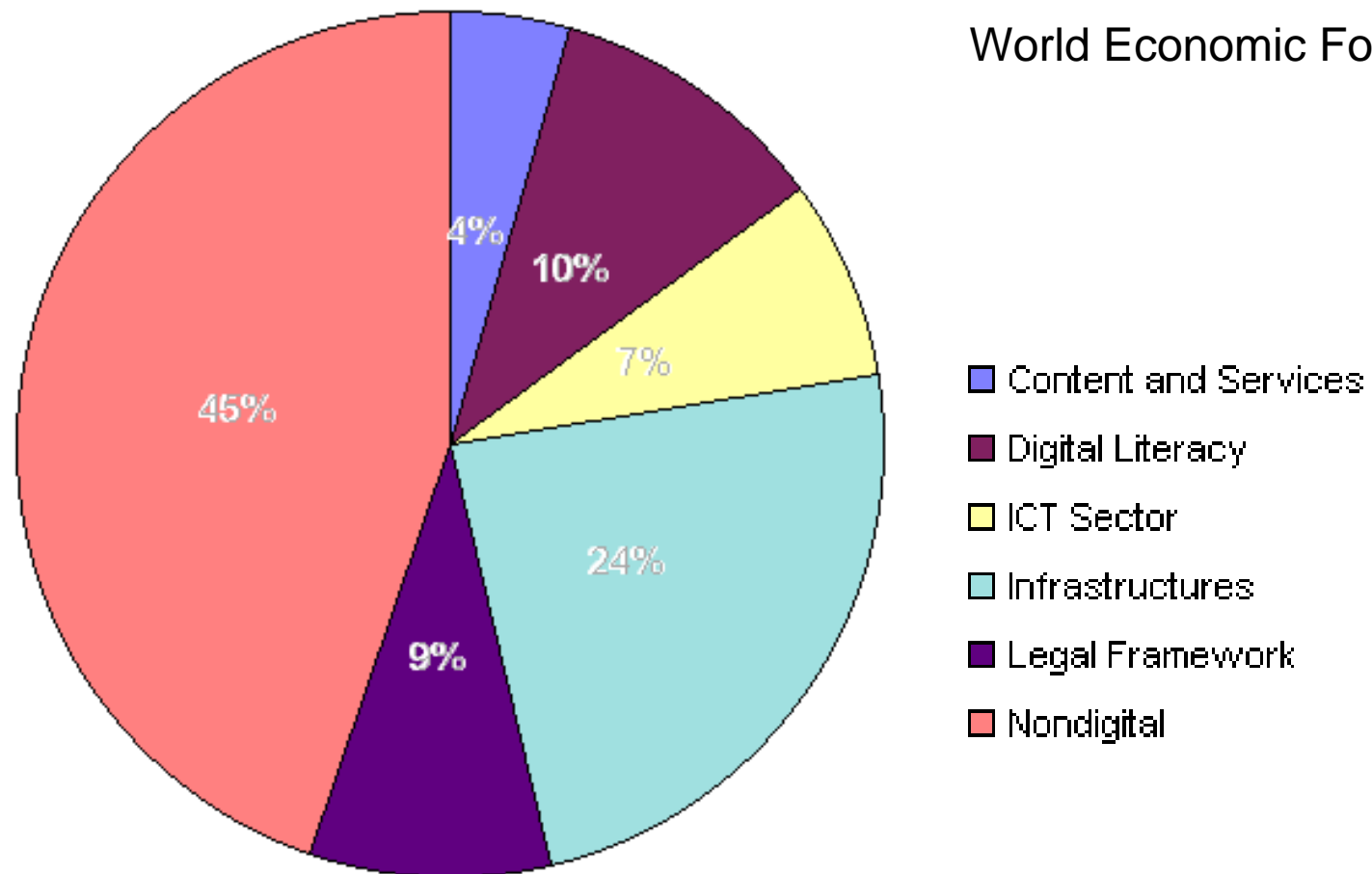
OECD Key ICT Indicators



e-Readiness Rankings



Networked Readiness Index

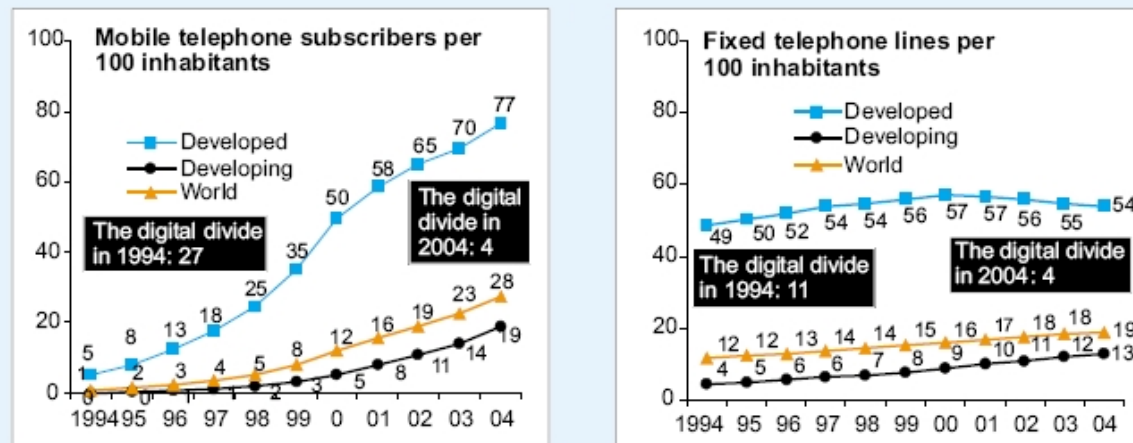


Digital Divide: a holistic approach

What is the Digital Divide? (1/3)

Figure: 1.1: Overall, the digital divide is shrinking...

Mobile telephone subscribers per 100 inhabitants, 1994-2004 (left) and fixed telephone lines per 100 inhabitants, 1994-2004 (right)



Source: ITU World Telecommunication Indicators Database.

Note: In these charts, the digital divide is calculated by dividing the penetration rates in the developed world by the penetration rate in the developing world. Penetration rates are rounded, whereas the digital divide is calculated based on actual numbers. For this reason, the digital divide results do not always correspond to the figures indicated in the graph.

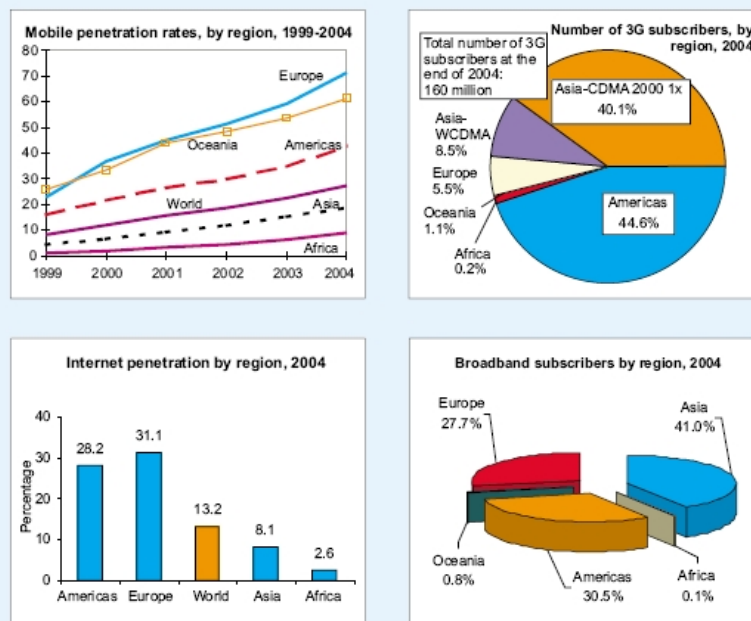
BUT: In 1994, developed countries were almost 5 points ahead than developing in mobile penetration. Ten years later, they are 58 points ahead.

ITU (2006). World Telecommunication/ICT Development Report 2006: Measuring ICT for social and economic development.

What is the Digital Divide? (2/3)

Figure 1.2: ...but major disparities remain

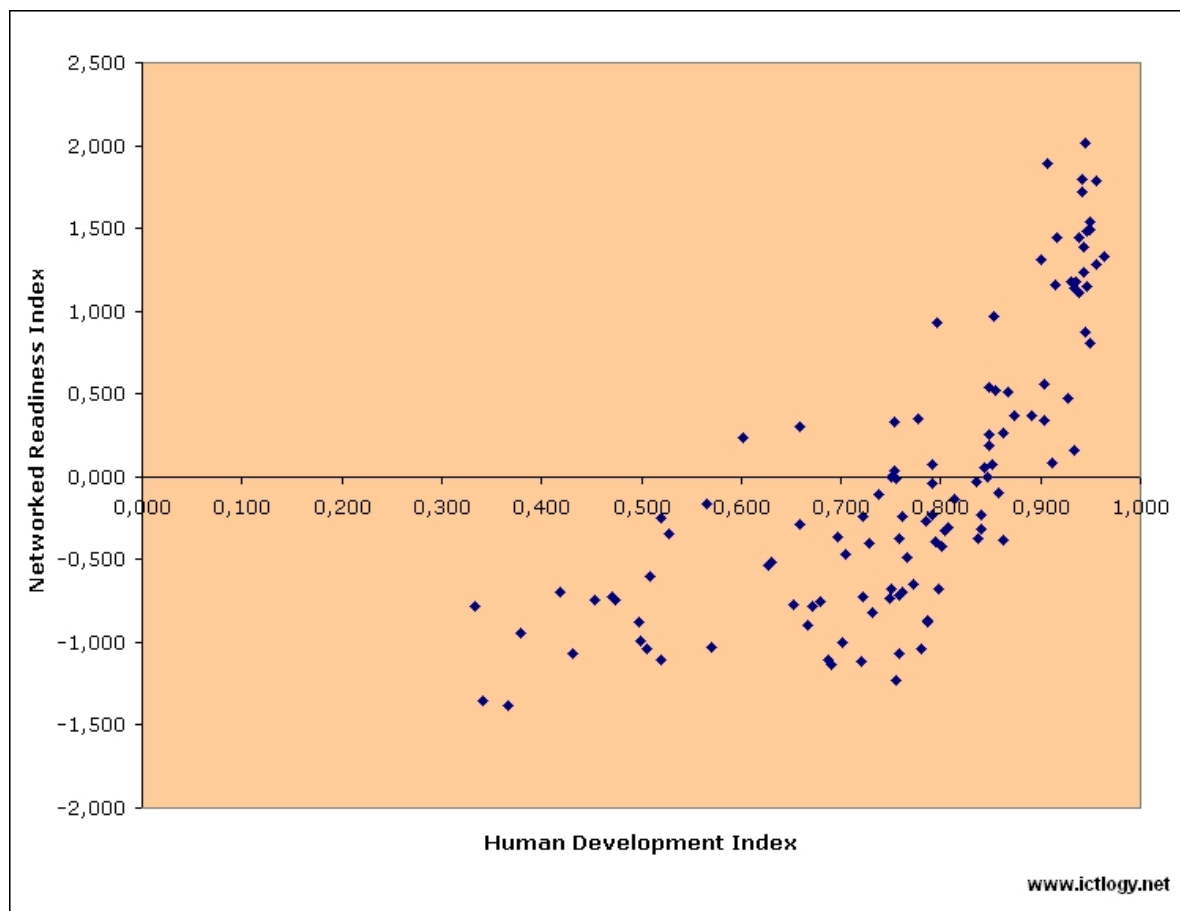
Mobile cellular penetration, by region, 1994-2004 (top left) and distribution of the 160 million 3G subscribers at the end of 2004, by region (top right); Internet penetration by region, 2004 (bottom left) and distribution of broadband subscribers by region, 2004 (bottom right)



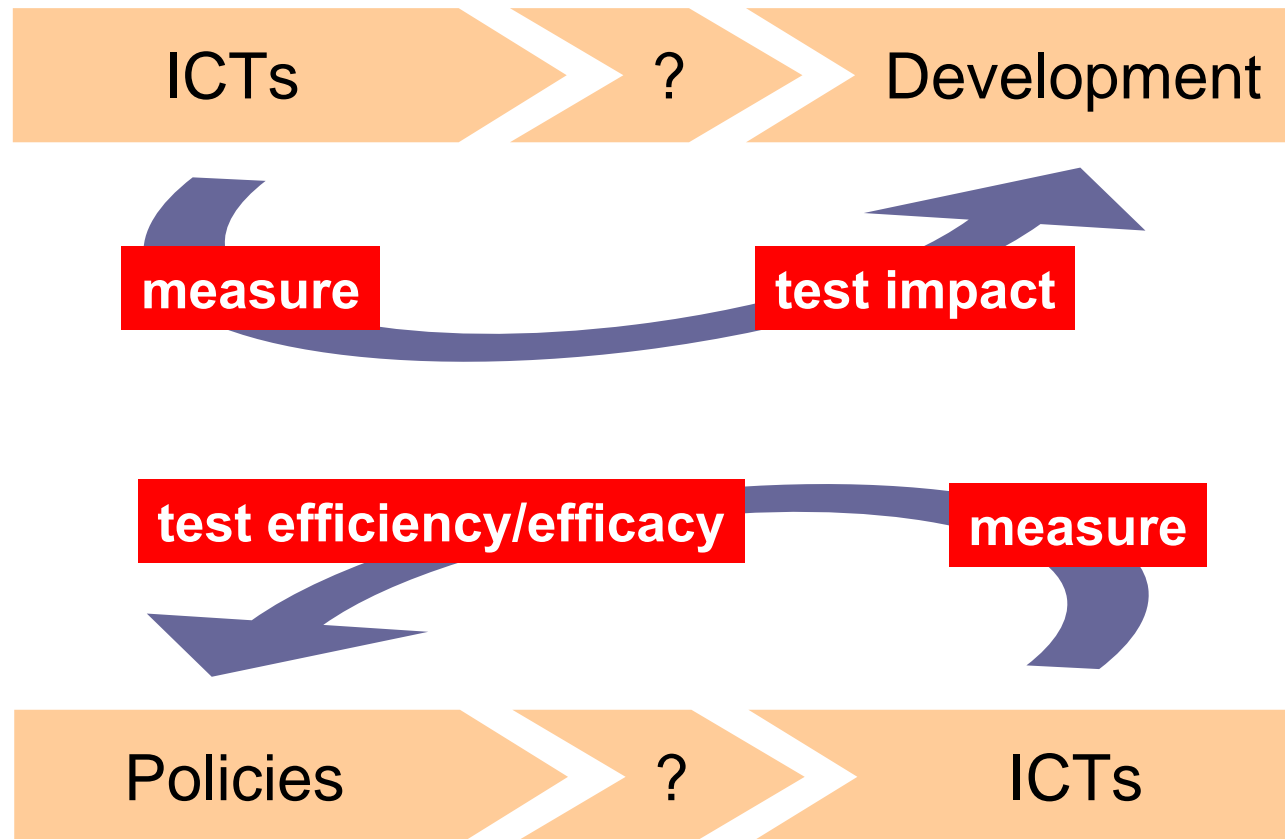
Source: ITU World Telecommunication Indicators Database (top left and bottom charts) and ITU adapted from 3GToday.com (top right).

ITU (2006). World Telecommunication/ICT Development Report 2006: Measuring ICT for social and economic development.

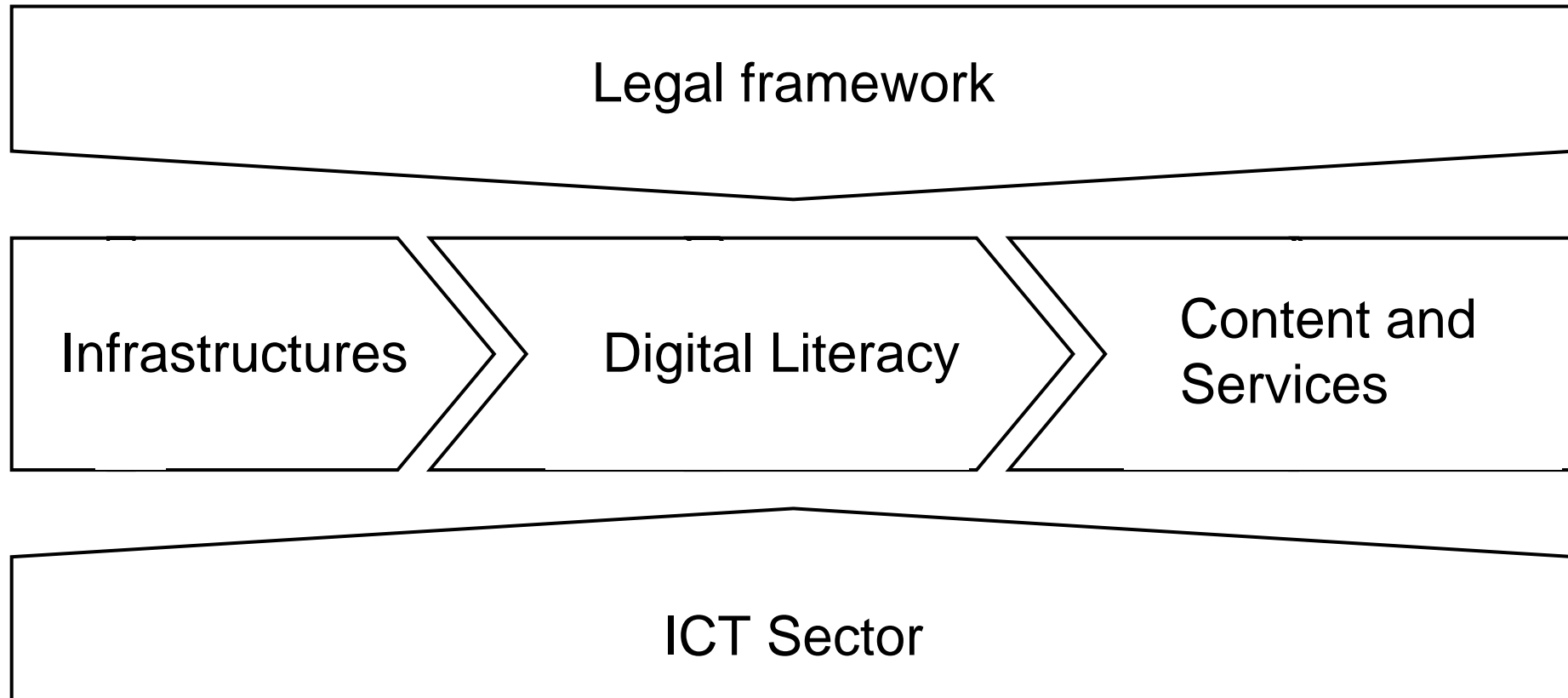
What is the Digital Divide? (3/3)



Fostering the Information Society

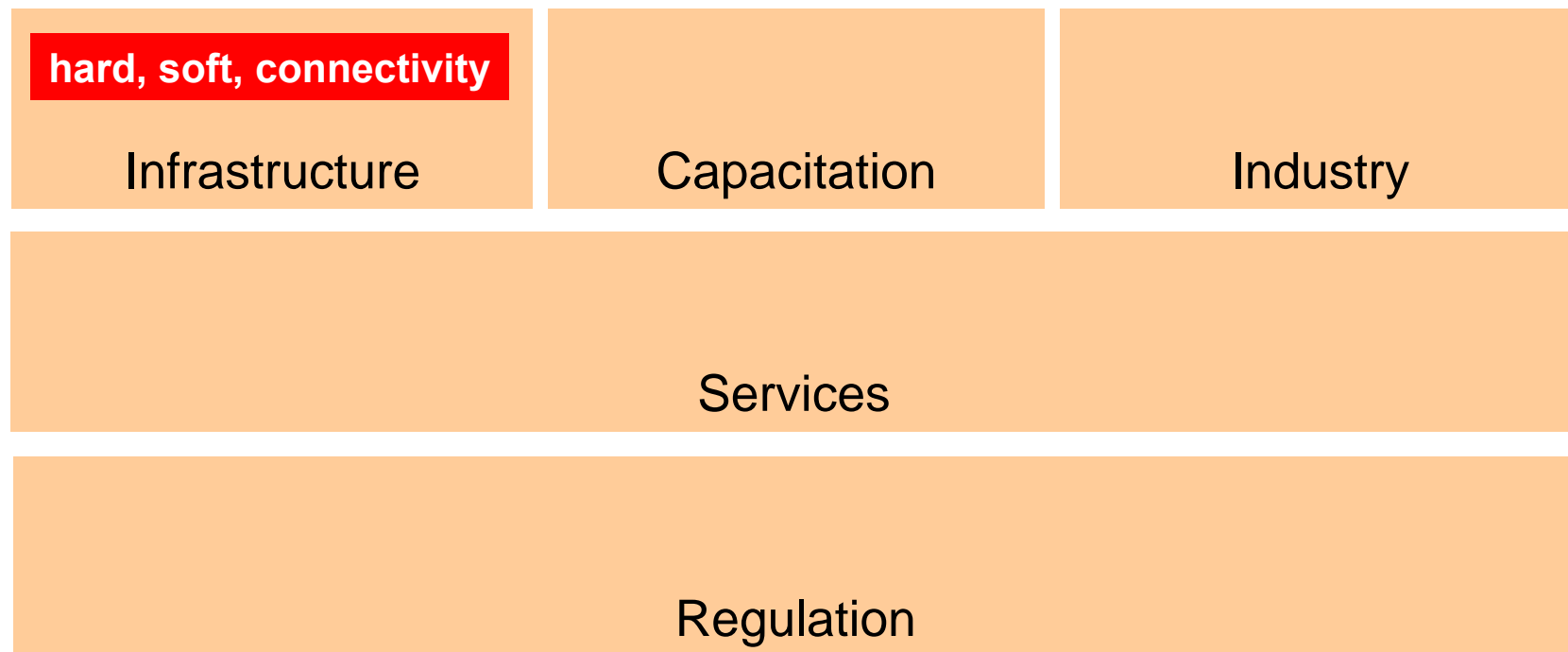


5 tier approach to e-Readiness

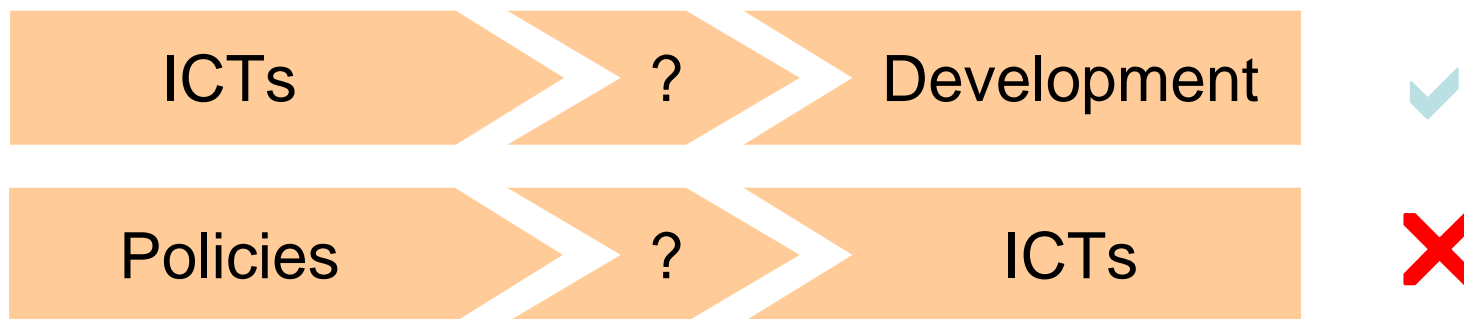
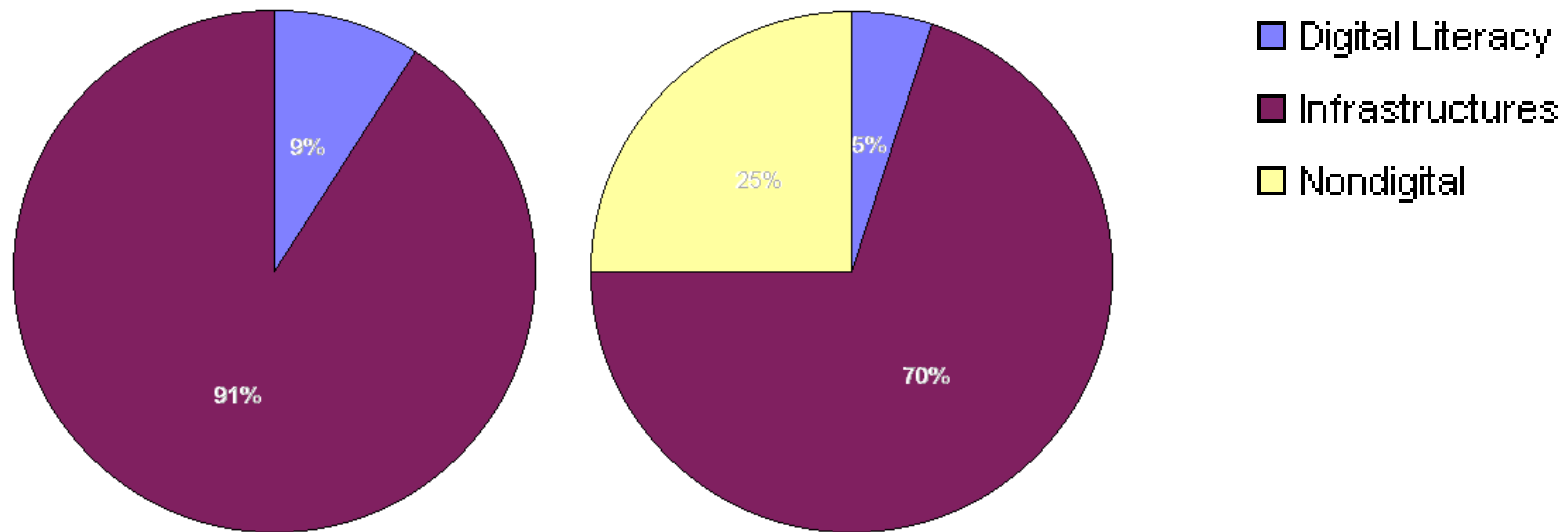


Problems with the Telecomm approach (1/2)

ICTs \approx Infrastructure



Problems with the Telecomm approach (2/2)



Problems with the e-Readiness approach (1/2)

ICTs ≈ Economy

“analogue economy” indicators

hard, soft, connectivity

Infrastructure

digital literacy

Capacitation

ICT Sector

Industry

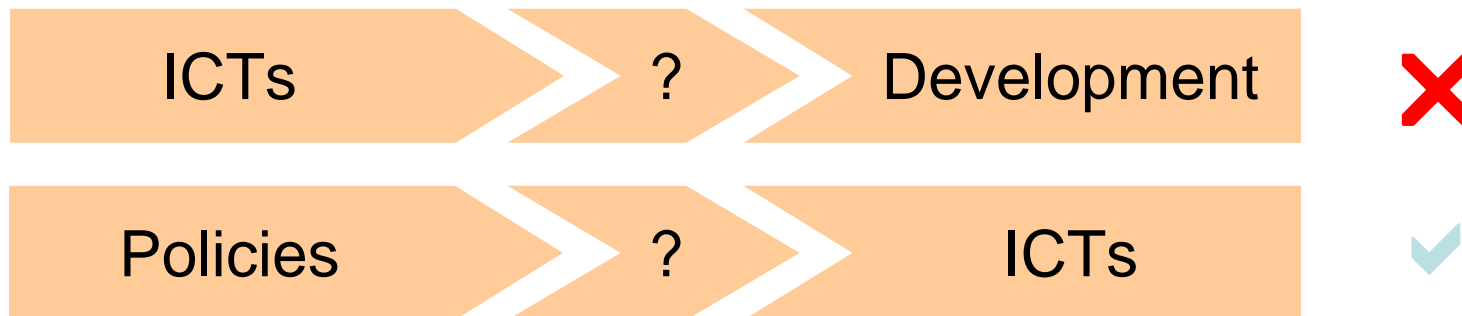
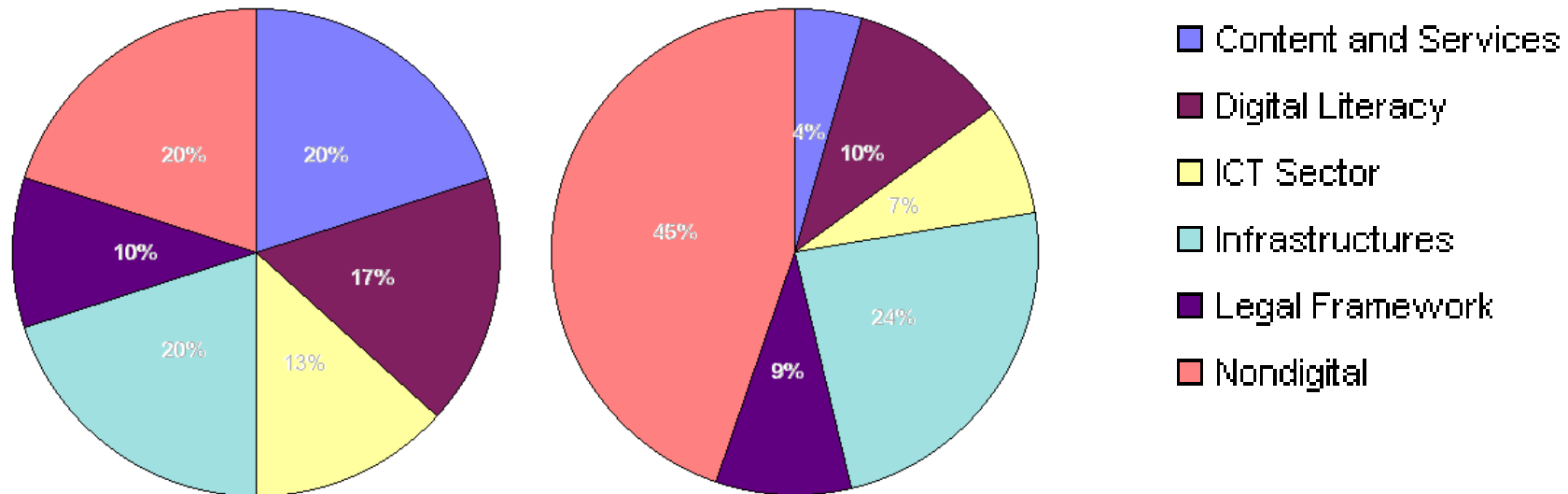
digital content, OA, virtual communities, B2B, P2P, B2C, G2G, G2B

Services

cyberlaw, infrastructure regulation, internet governance, privacy, censorship

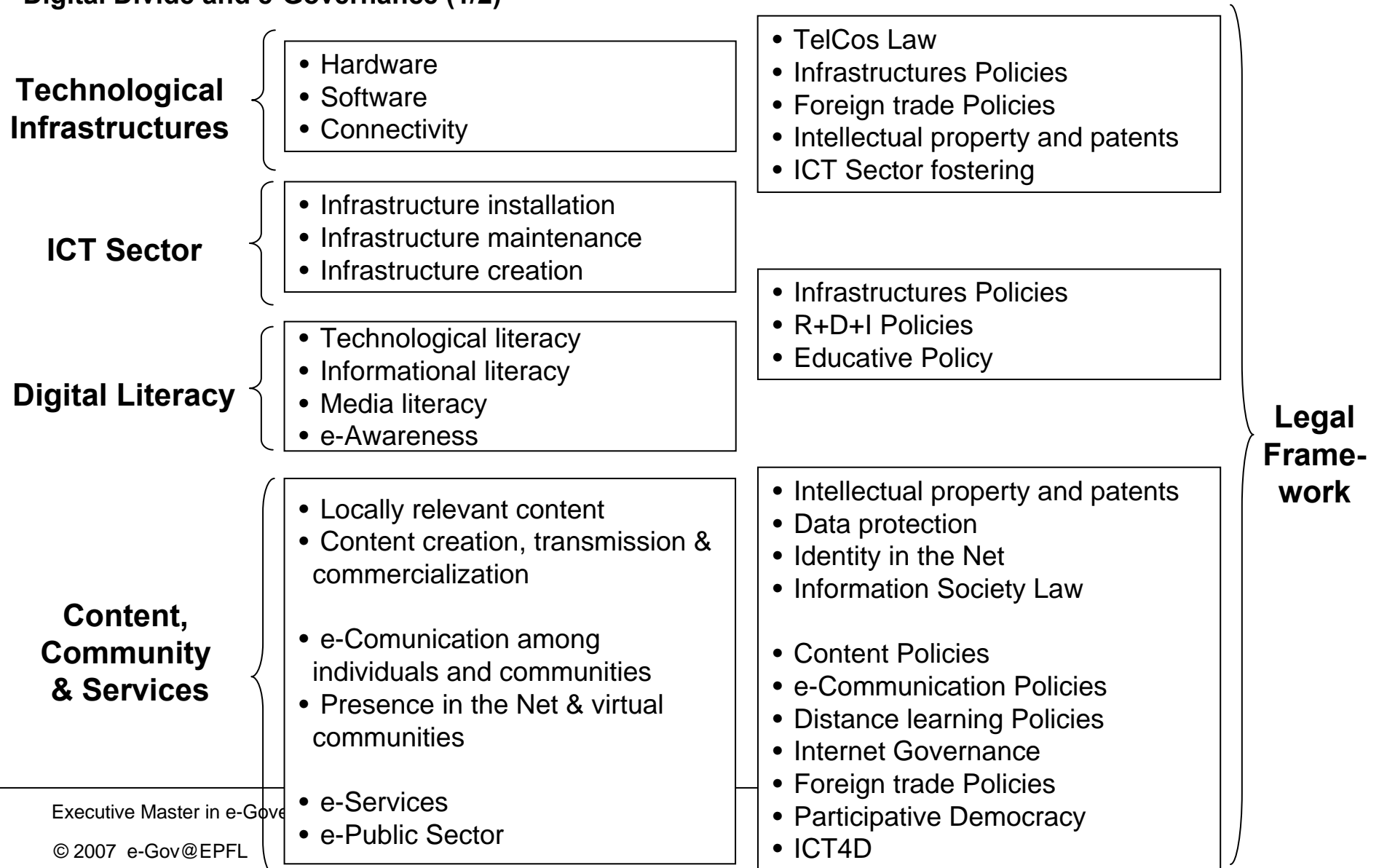
Regulation

Problems with the e-Readiness approach (2/2)



e-Readiness for e-Governance

Digital Divide and e-Governance (1/2)



e-Readiness

ICT Sector & Content and Services

Leadership

Technological infrastructures

- PC in institutions and agents
- Affordable generic and specific software
- Affordable quality connectivity

- Infrastructures in institutions
- Infrastructures for agents working with the institutions
- Connection among institutions and with agents

- Realistic and progressive goals setting in the field of digital divide and e-sectors development

Digital Literacy

- Infrastructure creation/maintenance capacitation
- Functional literacy

- Infrastructures maintenance
- Creation of specific databases, applications for public/private sectors
- Human resources capacitation
- Awareness en corresponding e-sector

- Identification of promoters (agents, institutions)
- Sponsors participation and involvement

Content, Community & Services

- Information about institutions and agents
- Specific/sectorial information, content, procedures
- Use of the Net among agents and institutions
- e-Services
- e-Public Sector

- **Information** and user/customer feedbacking
- Transparency & monitoring
- Processes shared **management**
- Data sharing and agents **relationship/networking**
- Participation in decision **stages**

- Prescriptors system
- Internal organization and coordination. Legal and political accompanying measures

Barcelona, November 20th, 2007. Universitat Oberta de Catalunya

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To contact the author:

<http://ismael.ictlogy.net>



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