# e-Planning Agenda


by

*Pedro Ferraz de Abreu*

Colloquium ISCSP-UTL * 27 March 2008

# MIT-Portugal / e-Planning Agenda

| | |
|---|---|
| **e-planning knowledge infrastructure** | mapping the Portuguese knowledge society / mapping the planning knowledge. |
| **e-planning for the government of the future (e-government)** | more efficient and responsive, closer to citizens, better enabling role, better e-government |
| **e-planning for a new governance (e-governance)** | better services towards the common good, better institutions, better regulations for a truer market and handling market failures, better balance security vs. freedoms and liberty, more equity and less exclusion |
| **e-planning for the city of the future (e-city)** | better quality of life, new functionality, breed innovation, more attractive and competitive |
| **e-planning for a new citizenship (e-citizenship)** | enabling a better informed and educated citizen, more participative, more critical, more responsible |

**www.e-planning.org**

# MIT-Portugal / e-Planning Consortium

**With MIT-DUSP**

**Universidade de Lisboa** (UL):

- ICS-UL,
- FC-UL (DI, EG, ICAT)

**Universidade Técnica de Lisboa** (UTL):

- ISCSP-UTL

**Universidade Nova de Lisboa** (UNL):

- FCT-UNL (DCEA)
- FCSH-UNL

**Universidade de Aveiro**: (UA):

- CSJP
- DeCA

**www.e-planning.org**

**Universidade de Coimbra**: (UC):

- FE-UC (CES)

**Instituto Politécnico de Viana do Castelo**: (IPVC):

- ESE-IPVC

# Why e-Planning

**New ICT - New Challenges and Opportunities**

- **New ICT represent a qualitative jump**
- **New ICT and Development Framework**

**ICT - Information and Communication Technologies**

# New ICT represent a qualitative jump

## Decision models and the enabling factor of ICT developments

| Information Technology | Features / Attributes | Decision Models |
|---|---|---|
| Voice<br>Manuscript | • from "few" to "few"<br>• limited reach<br>• without auxiliary processing<br>• cheap, potentially universal access (low cost to enter the market)<br>• low control / regulatory costs | Direct Democracy<br>Heterogeneous Empires |
| Press<br>Radio<br>TV | • from "few" to "many"<br>• non-limited reach<br>• with processing in source<br>• expensive, restricted access (high cost to enter the market)<br>• average control / regulatory costs | Representative Democracy<br>Homogeneous Dictatorships |
| Satellite network<br>Fiber optics net<br>µcomputer<br>Internet | • from "many" to "many"<br>• non-limited reach<br>• with processing in source and destination<br>• moderate access cost, potentially universal (low cost to enter the market)<br>• high control / regulatory costs | Participatory Democracy<br>Technocrat Dictatorships |

In (Ferraz de Abreu) , 2002"New Information Technologies in Public Participation: A Challenge to Old Decision-making Institutional Frameworks"

**New ICT represent a qualitative jump**

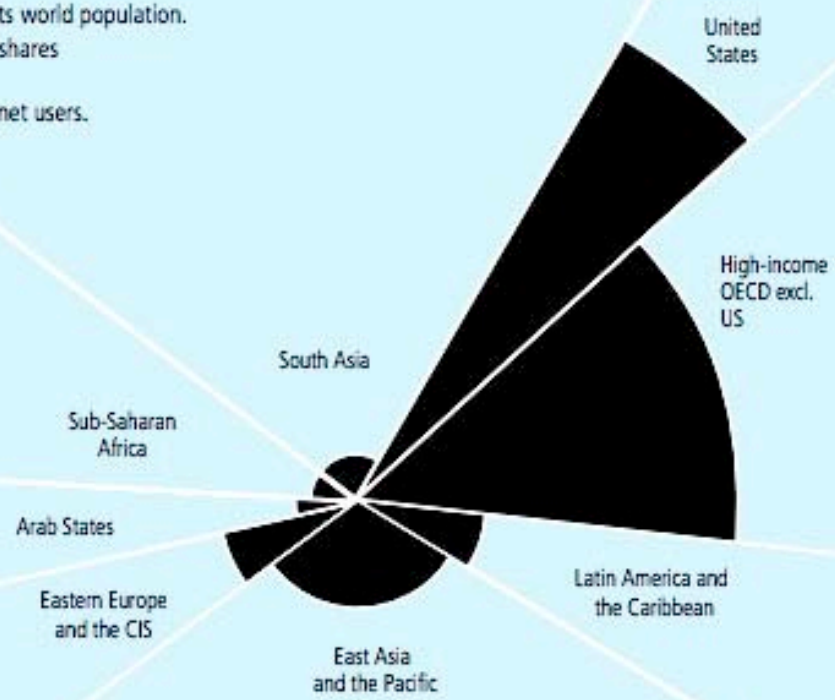
New ICT enable equitable development and citizen empowerment;

But ICT driven by market forces are increasing the "great divide" …

## UNEVEN DIFFUSION OF TECHNOLOGY—OLD AND NEW . . .

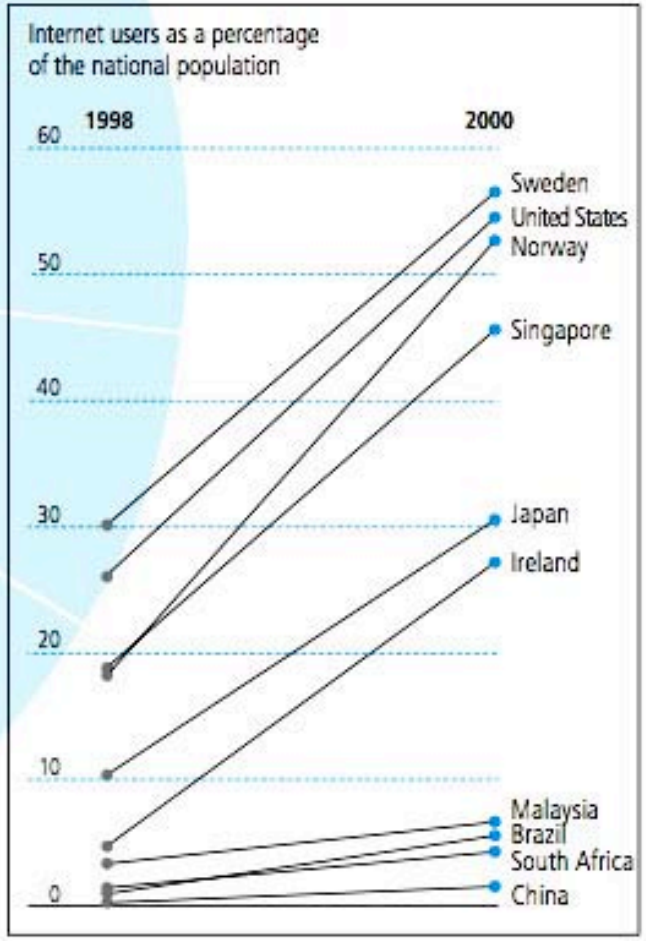
### INTERNET USERS—STILL A GLOBAL ENCLAVE

The large circle represents world population.
Pie slices show regional shares of world population.
Dark wedges show Internet users.




**Internet users**
(as percentage of population)

| | 1998 | 2000 |
|---|---|---|
| United States | 26.3 | 54.3 |
| High-income OECD (excl. US) | 6.9 | 28.2 |
| Latin America and the Caribbean | 0.8 | 3.2 |
| East Asia and the Pacific | 0.5 | 2.3 |
| Eastern Europe and CIS | 0.8 | 3.9 |
| Arab States | 0.2 | 0.6 |
| Sub-Saharan Africa | 0.1 | 0.4 |
| South Asia | 0.04 | 0.4 |
| **World** | **2.4** | **6.7** |

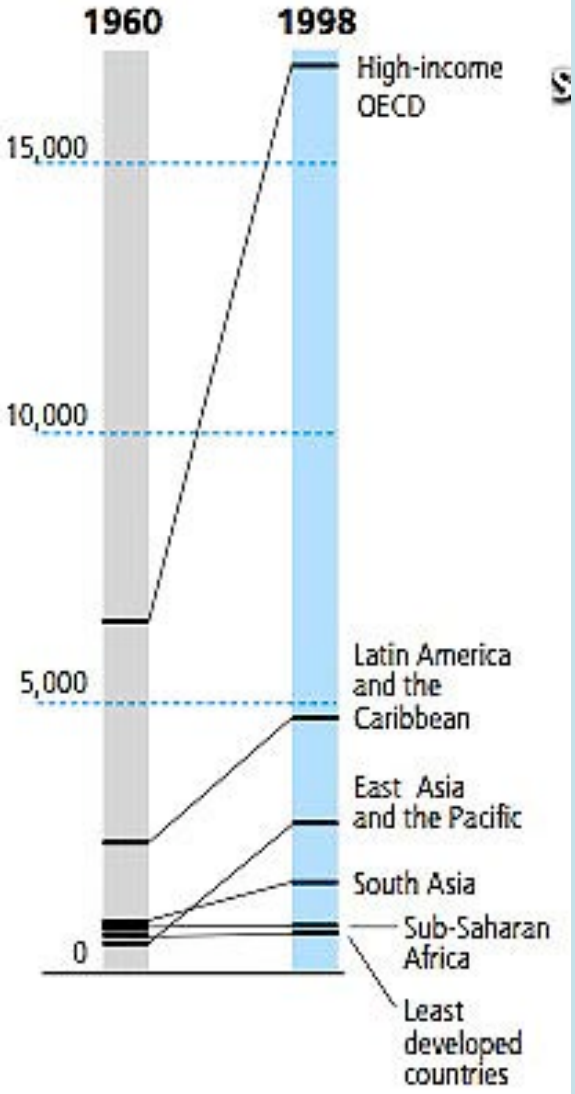



*Source:* Human Development Report Office calculations based on data supplied by Nua Publish 2001 and UN 2001c.

# New ICT and Development Framework

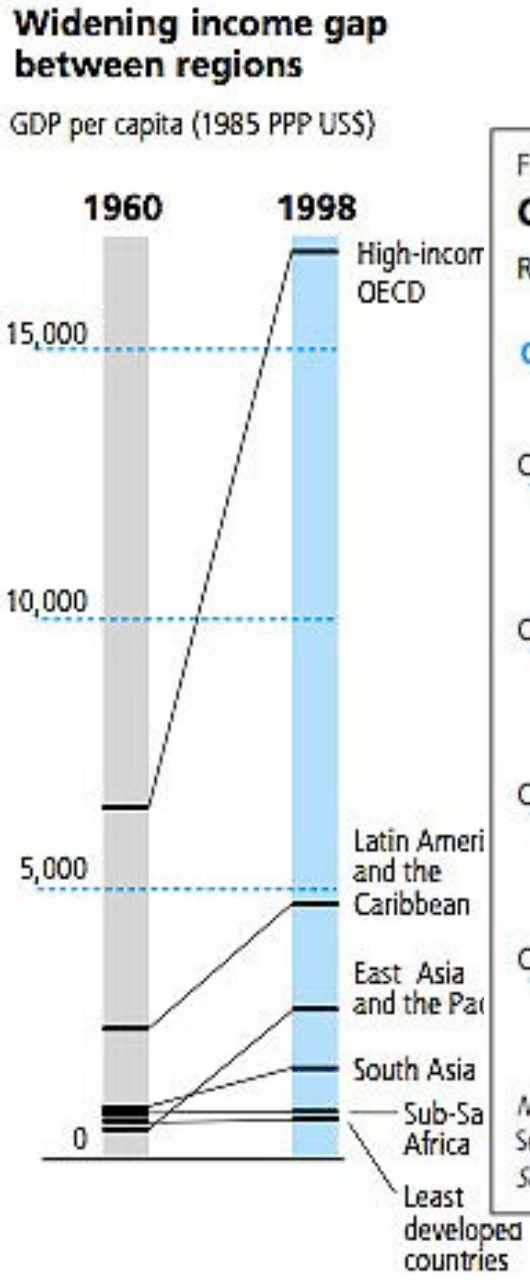
**Widening income gap between regions**

GDP per capita (1985 PPP US$)




*Source:* Human Development Report Office calculations based on World Bank 2001g.

# New ICT and Development Framework

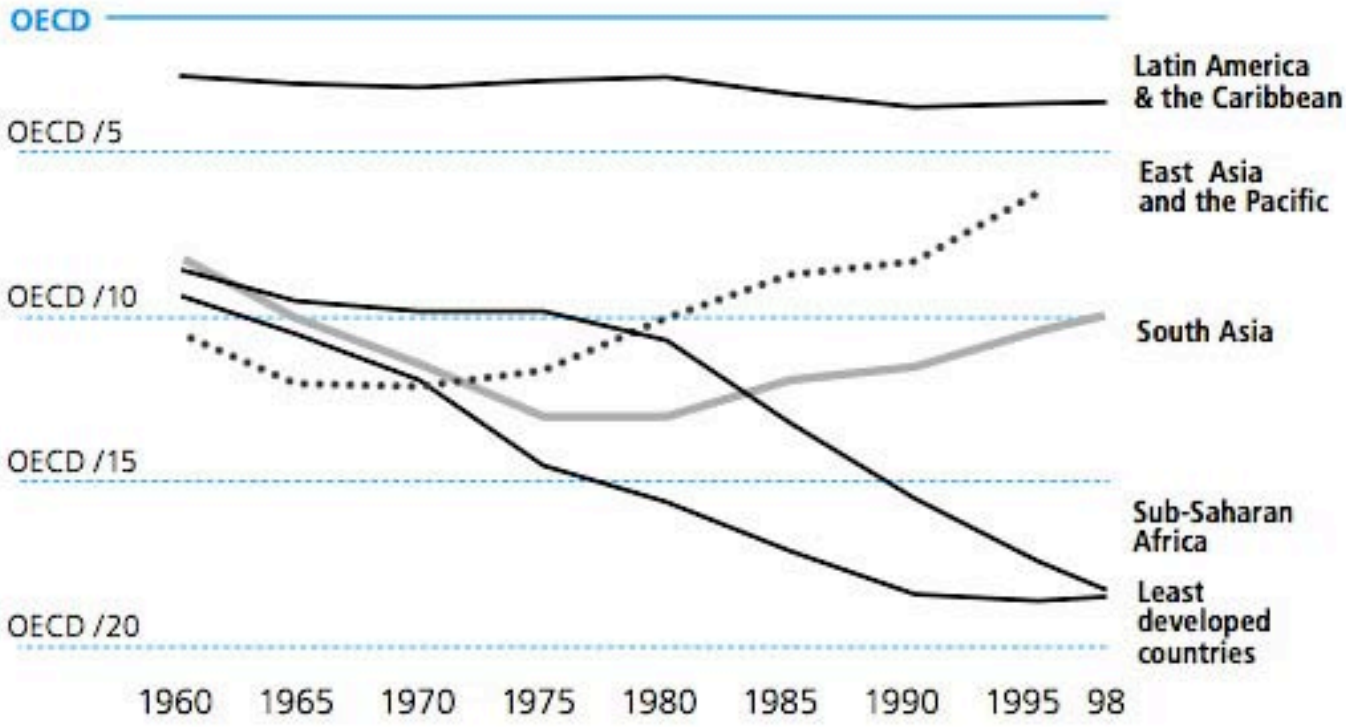



*Source:* Human Development Report Office calculations based on World Bank 2001g.

FIGURE 1.5

**Comparing incomes—developing regions and high-income OECD**

Regional average GDP per capita (1985 US$ PPP) as a ratio of that of high-income OECD countries



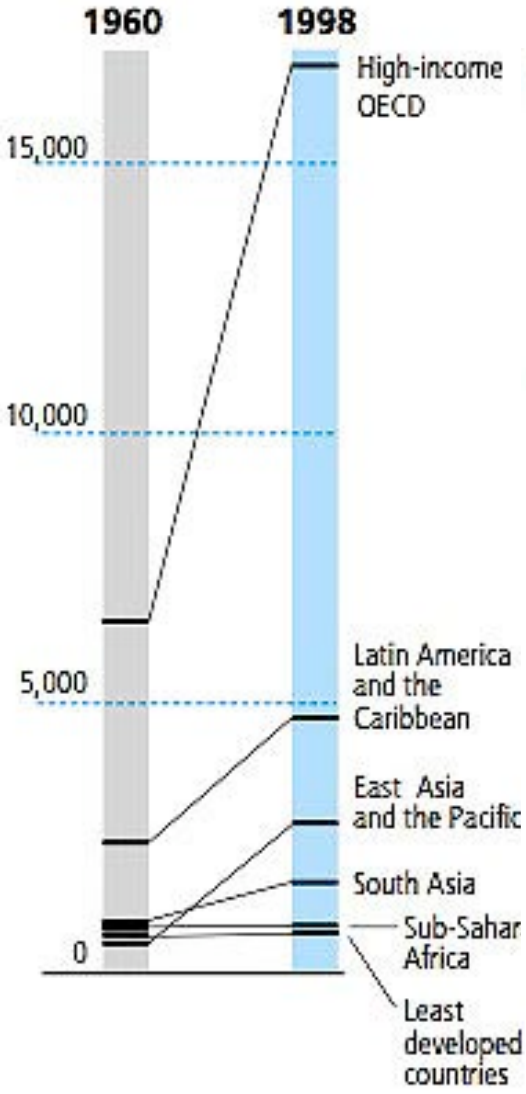

*Note:* High-income OECD excludes OECD members classified as developing countries and those in Eastern Europe and the CIS. See the classification of countries.

*Source:* Human Development Report Office calculations based on World Bank 2001g.

# New ICT and Development Framework

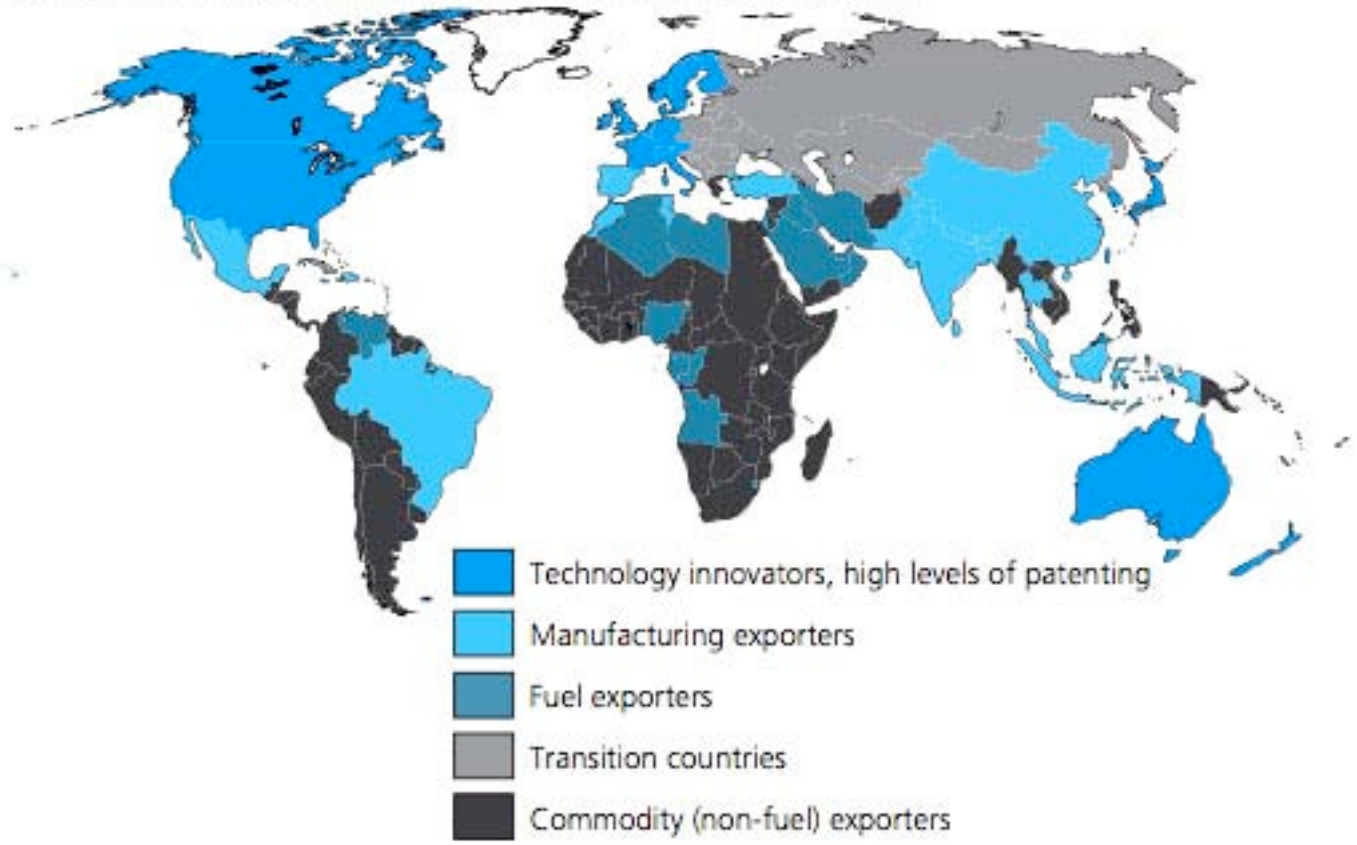
**Widening income gap between regions**

GDP per capita (1985 PPP US$)

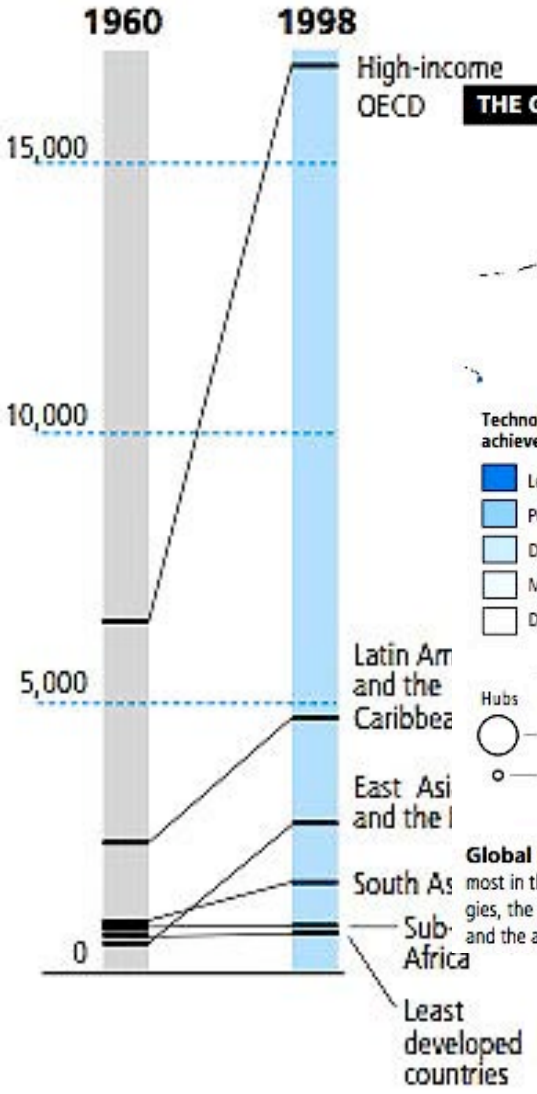



*Source:* Human Development Report Office calculations based on World Bank 2001g.

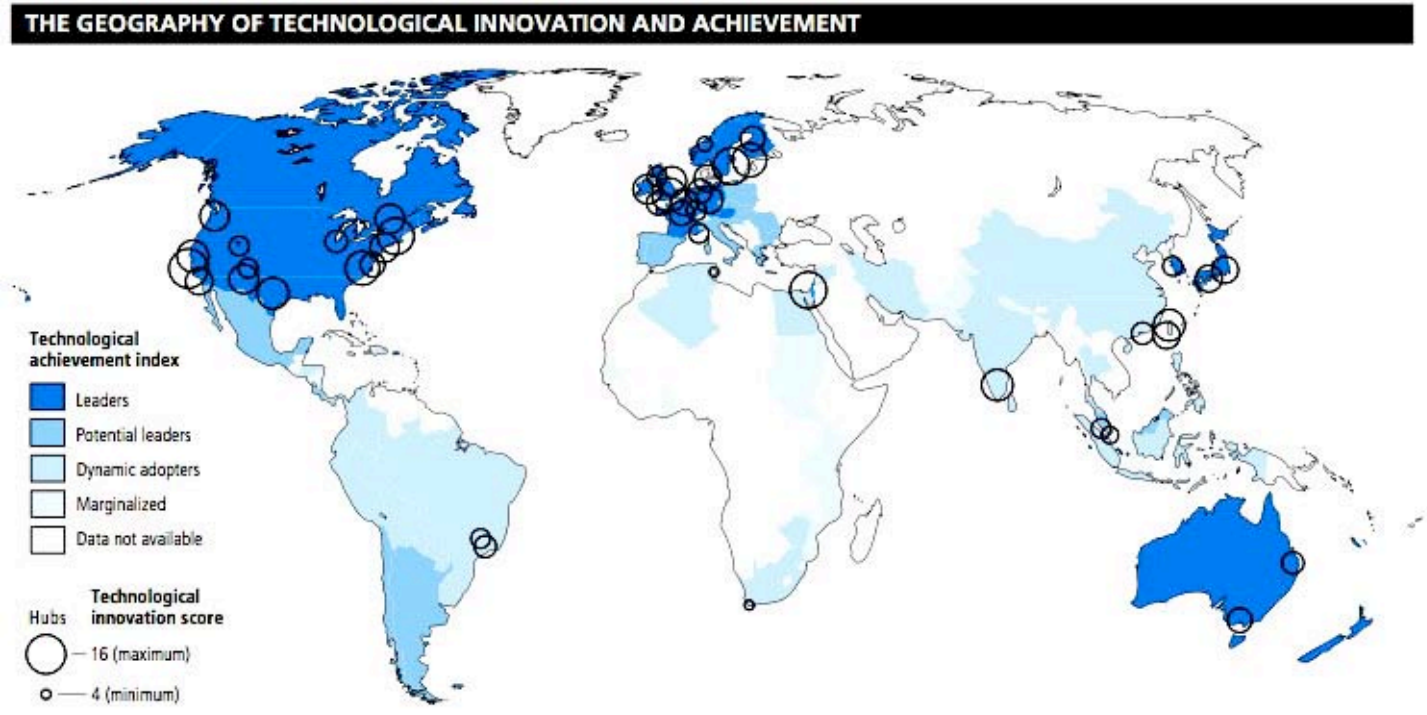
**Classification of countries by economic structure, 1995**



# New ICT and Development Framework

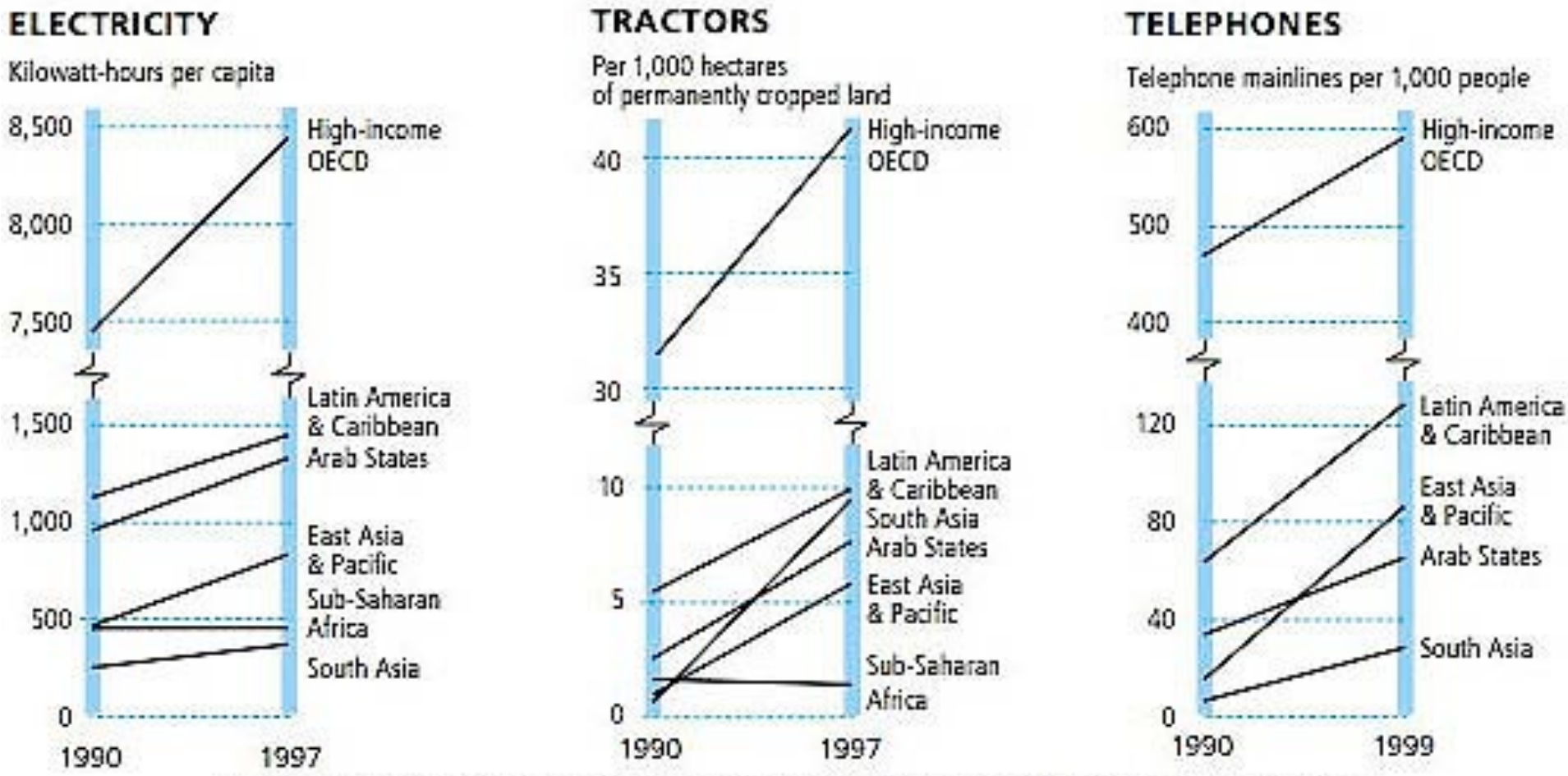



Source: Human Development Report Office calculations based on World Bank 2001g.




**Global hubs of technological innovation** In 2000 *Wired* magazine consulted local sources in government, industry and the media to find the locations that matter most in the new digital geography. Each was rated from 1 to 4 in four areas: the ability of area universities and research facilities to train skilled workers or develop new technologies, the presence of established companies and multinational corporations to provide expertise and economic stability, the population's entrepreneurial drive to start new ventures and the availability of venture capital to ensure that the ideas make it to market. Forty-six locations were identified as technology hubs, shown on the map as black circles

**The digital divide is nothing new. Diffusion of decades-old inventions has slowed**




*Source:* Human Development Report Office calculations based on World Bank 2001h, FAO 2000a and ITU 2001b.

We are obviously doing something wrong…

… and yet we are persisting in the very same policies in the past 15 years

# New ICT and Development Framework

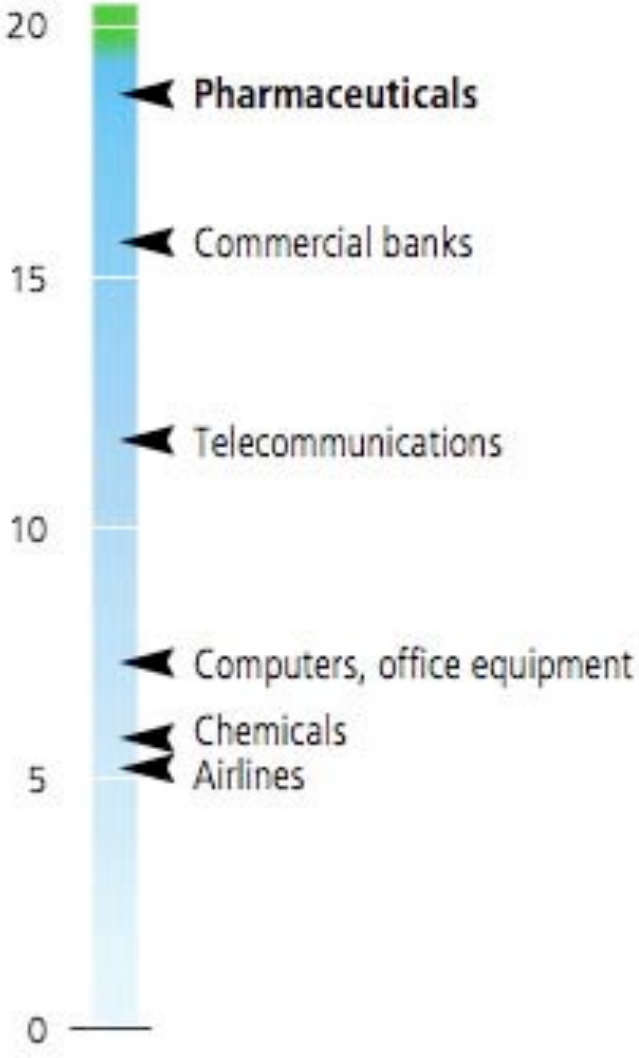
- Why is the gap between the rich and the poor widening, at global and local levels, despite of, or in consequence of, ICT developments with current policies ( "Washington consensus”)?
- What have been the consequences of the market-driven ICT development models and strategies?
- How is ICT challenging the current institutional and regulatory framework?
- Why simply "throwing in" technology to poor regions or neighborhoods is likely to fail reversing bad trends?
- Which are the most promising areas where ICT may improve the planning process, and how to get there?

*Policy, not charity, will determine whether new technologies become a tool for human development everywhere*

HDR 2001

## Profitable industry—pharmaceuticals top the list

Median return on revenue for Fortune 500 companies, 1999 (percent)




*Source: Fortune* 2000.

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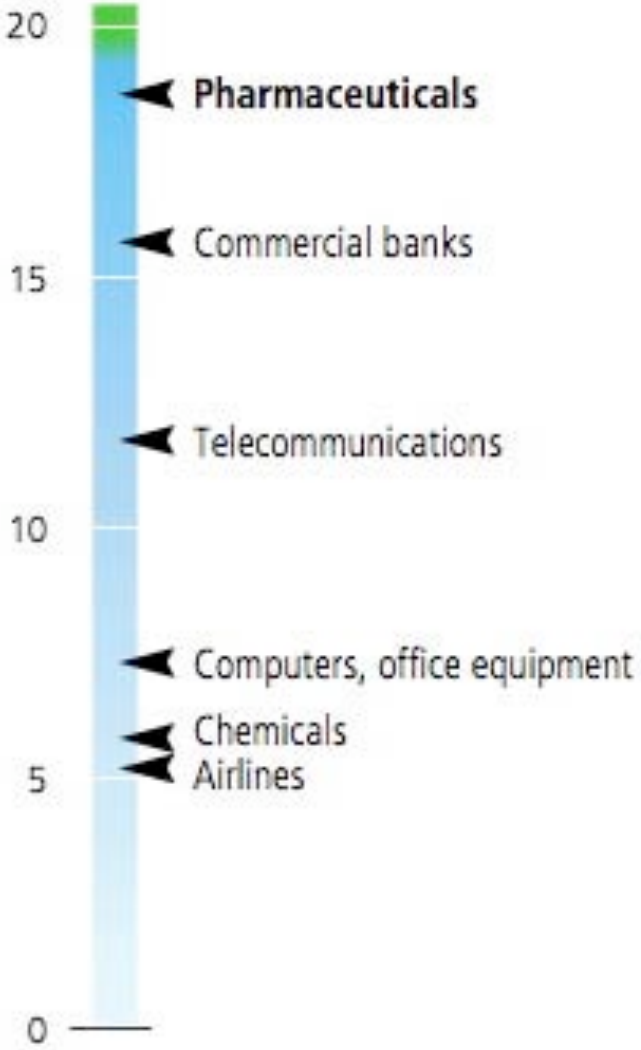
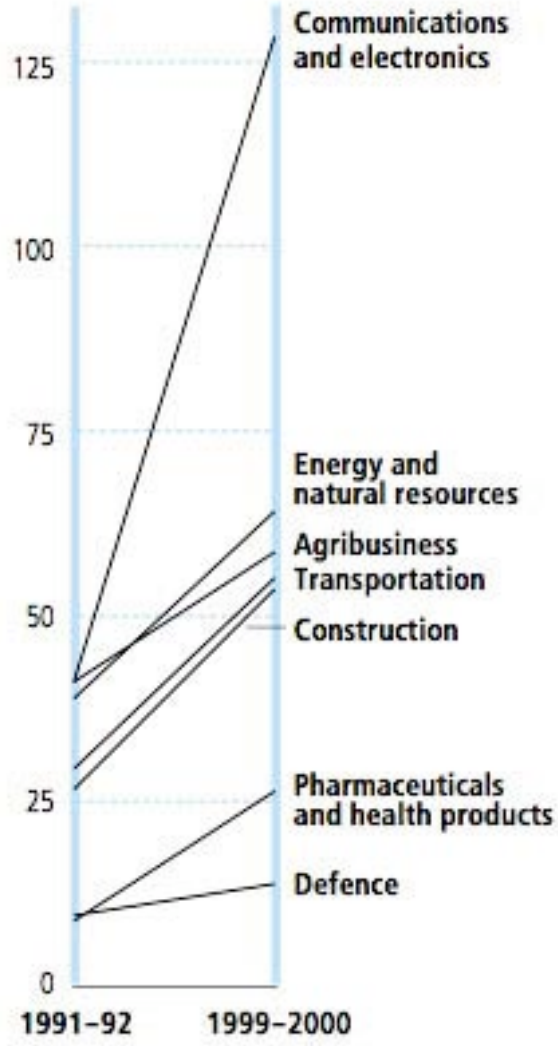



*Source: Fortune* 2000.

## Industry's influence over public policy

Contributions to federal candidates and political parties in the United States (millions of 2000 US$)




*Source:* Centre for Responsive Politics 2001.

# e-Planning and new thinking

- **On new policies "New-ICT-aware"**
- **On institutional and regulatory reform**
- **On ICT development strategies**
- **On ICT as tool to build "knowledge capacity"**
- **On the use of ICT to empower citizens**

We need Policy / Decision Makers with good understanding of new ICT and all their implications

# e-Planning and new thinking

- **On new policies "New-ICT-aware"**
- **On ICT development strategies**

Examples:

- Broadband: "It's the Upload, Stupid"

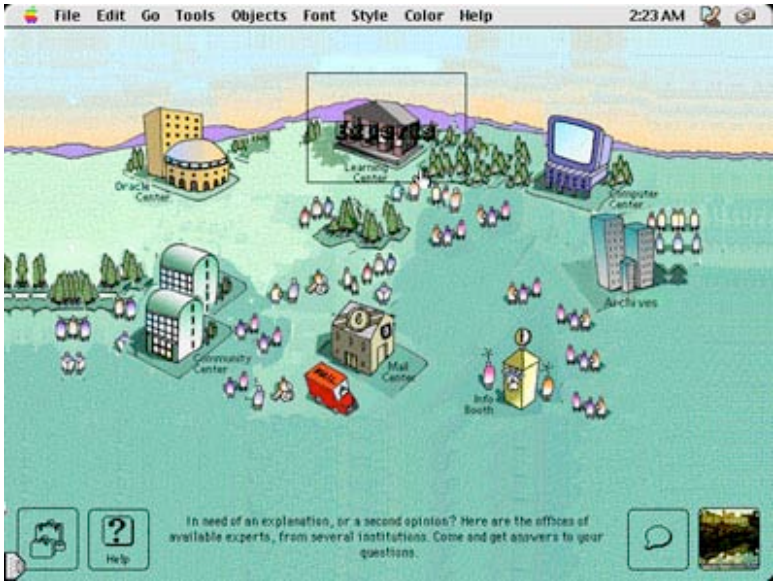
# e-Planning and new thinking

- **On ICT as tool to build “knowledge capacity”**
- **On the use of ICT to empower citizens**

IMS Project

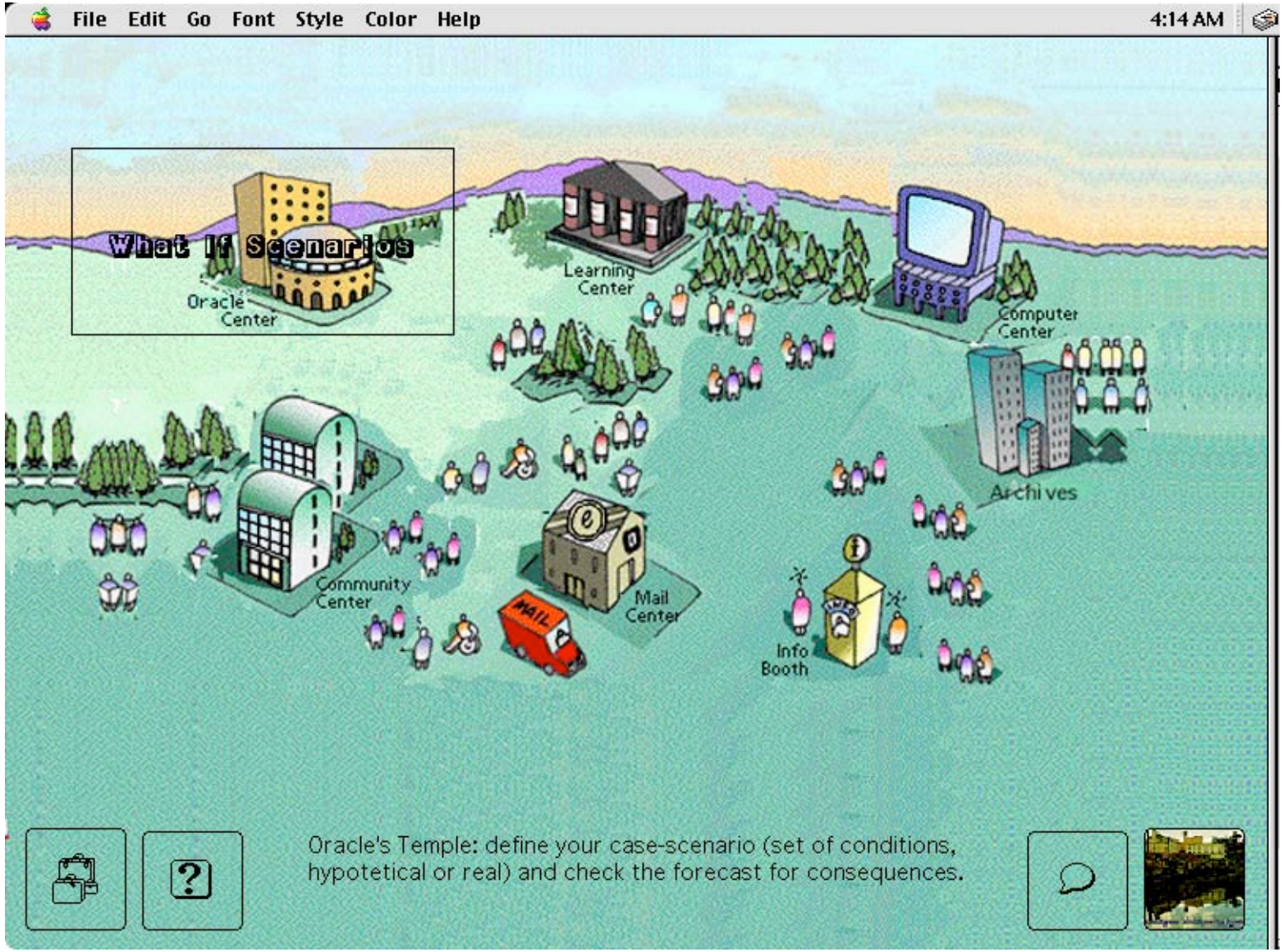
- **IMS (Intelligent Multimedia System)**
- *Support Public Participation in Environmental Impact Assessment*
- *CITIDEP + MIT*

***www.citidep.net/ims/***




# IMS Project

*www.citidep.net/ims/*



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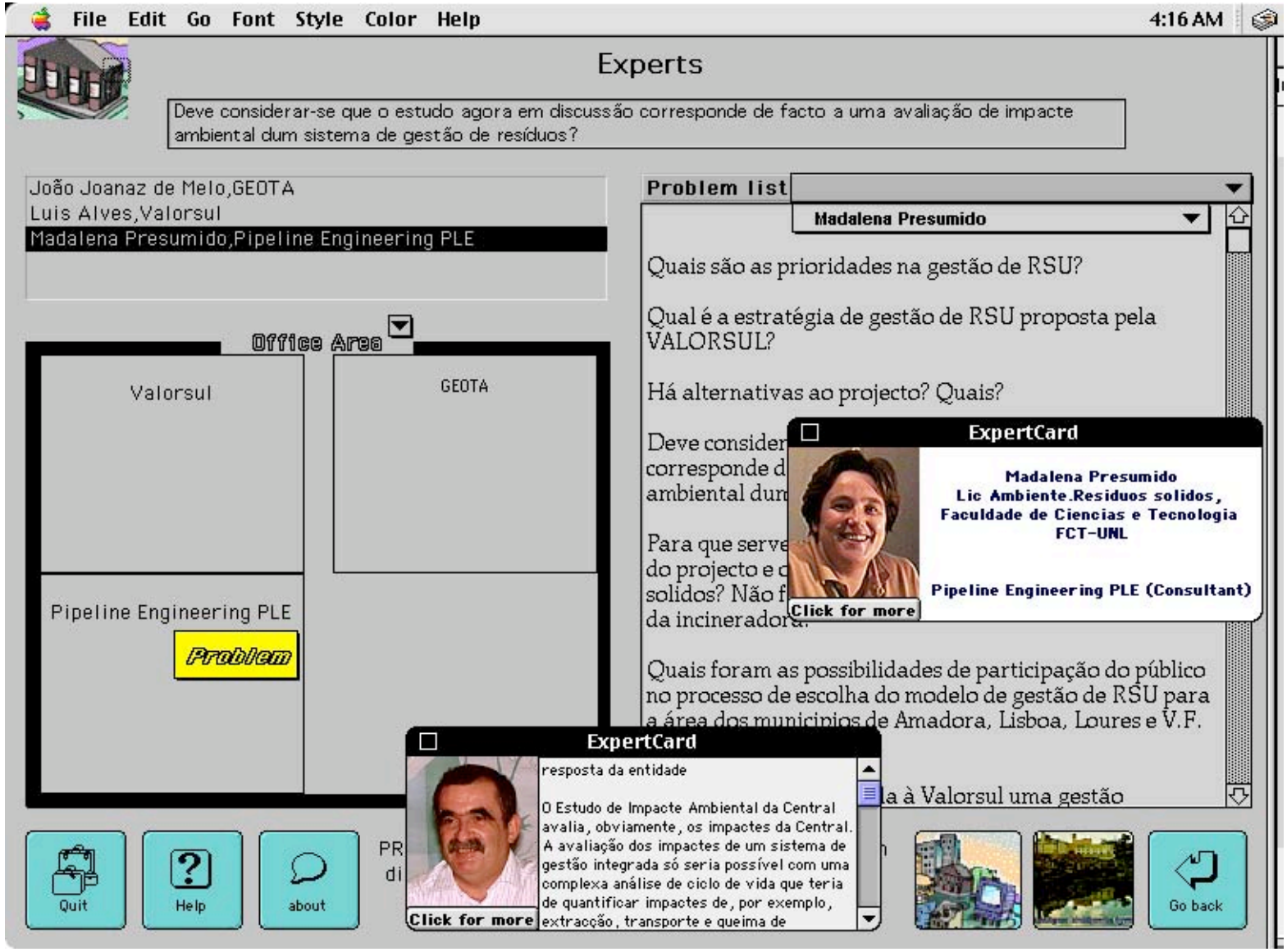
*www.citidep.net/ims/*



## Table 5.13.4.-1 - Knowledge Test grade results

| | Environmental students Average grade | Psychology students Average grade | GRADE GAP Environmental - Psychology |
|---|---|---|---|
| Before using IMS | 39.2 | 28.2 | 11 |
| After using IMS | 43.7 | 35.7 | 8 |
| GRADE JUMP | 4.5 | 7.5 | |

In (Ferraz de Abreu) , 2002"New Information Technologies in Public Participation: A Challenge to Old Decision-making Institutional Frameworks"

# e-Planning and new thinking

- **On institutional and regulatory reform**
- **On the use of ICT to empower citizens**

Examples:

**Participatory Science**

PEOPLE Project - EuroLifeNet Program

# CITIDEP - Research Center on Information Technology and Participatory Democracy

**ENVIRONMENT - HEALTH - CITIZENSHIP**
**EDUCATION FOR SUSTAINABLE DEVELOPMENT**

# EuroLifeNet

## CITIDEP & Partners

Including e-Planning partners:
ESE-IPVC, ICS-UL, FCT-UNL

IES - Institute for Environment and Sustainability / JRC - Joint Research Centre - UE

**www.citidep.pt • www.eurolifenet.eu • www.citidep.net**

# EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

Pilot Project with focus on Particulate Matter (PM 2.5)
Contribute to EU (APHEIS, JRC/IES) Environment-Health Strategy
In sync with UN ***"Education for Sustainable Development" Decade***

IES-JRC equips* EuroLifeNet schools and coordinate scientific procedures

Students carry portable PM sampler (right), a portable GPS and make a 12 h diary

One student at a time, with different habits and trajectories, will provide a rich map

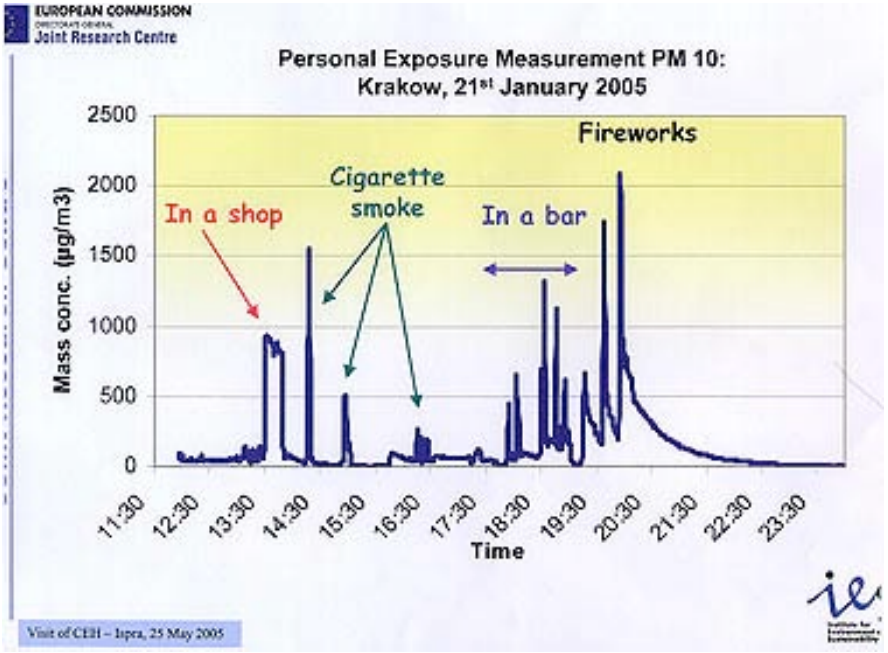
Other associated projects may benefit from this pilot EuroLifeNet project, and amplify it

* IES-JRC will lend the PM samplers to designated schools, for the project duration

# EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)

**The electronic nature of the portable samplers allows for easy data extraction, network sharing and analysis**. Together with a diary and GPS data, this will be a powerful tool both for scientists and teachers.

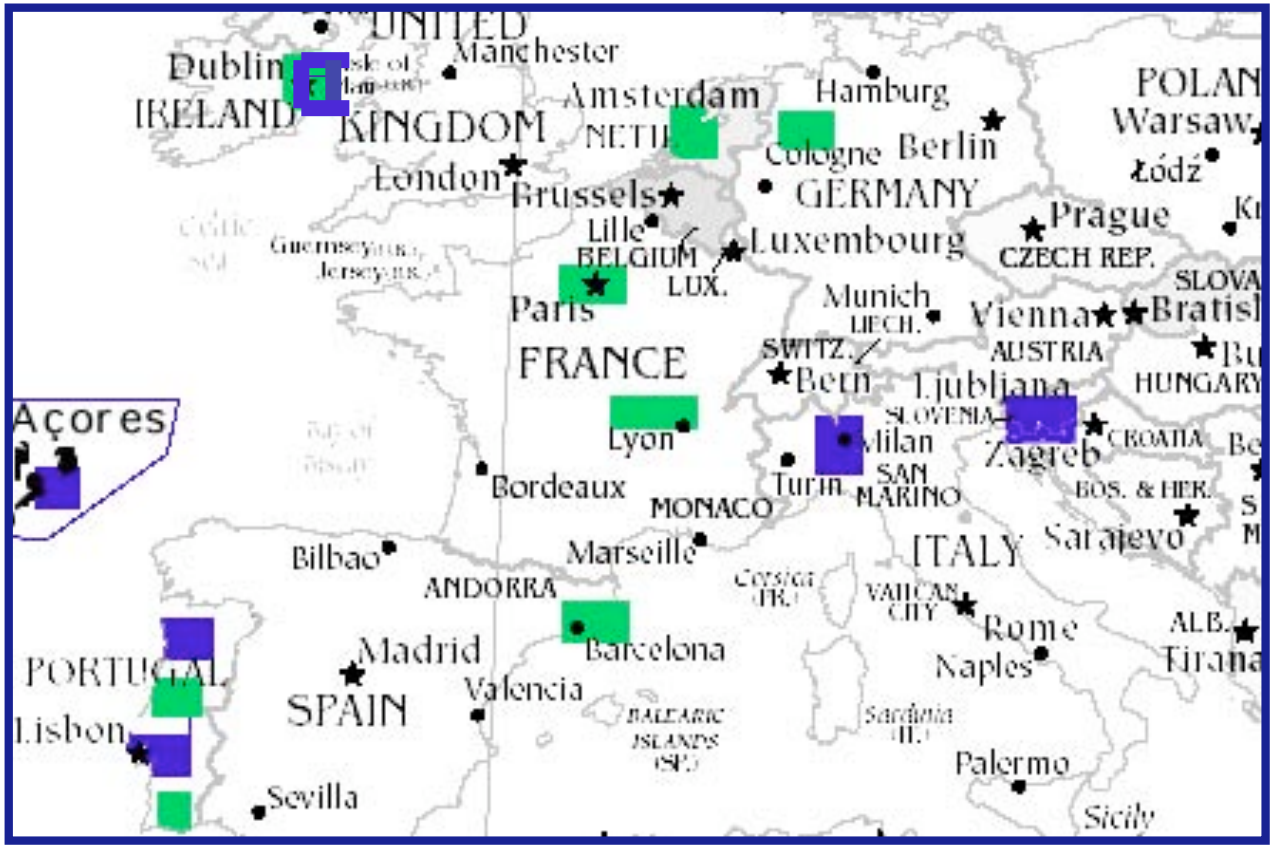



Download movie file
(http://www.citidep.net/mov/PMportsampler.mov)

# EURO-LIFE-NET:

**www.eurolifenet.eu**

| | |
|---|---|
| Students: | 665 |
| (measuring: | 235) |
| Teachers: | 51 |
| Researchers: | 11 |
| Experts: | 5 |
| HighSchools: | 10 |
| Universities: | 4 |
| Research C.: | 5 |
| NGOs: | 3 |




***PROGRAM [2005 - 2014]***

***PILOT PROJECT [2006 - 2007]*** ***EXPANSION [2008->]***

# EURO-LIFE-NET:

www.eurolifenet.eu

All **"EuroLifeNet Nodes"** share their data and integrate it at multiple scales, "feeding" different uses and agregate records. Procedures can be incorporated in curricula.

- Adoption of common data protocols
- Data validation procedures with institutions
- Sets of tool kits for schools and teachers
- Use of integrating tools and architectures*
- Events inter-schools and public awareness
- Scalable + modular, easy procedure to join

* BOINC - Berkeley Open Infrastructure for Network Computing (boinc.berkeley.edu) / GLOBE (www.globe.gov)

# EURO-LIFE-NET:

**www.eurolifenet.eu**

**Experts & scientists  Teachers  Civic action**

# EURO-LIFE-NET:

www.eurolifenet.eu

**Experts & scientists** **Teachers** **Civic action**

**What to measure**

**When to measure**

**How long to measure**

**How to measure**

**Network Synchronism**

**Use of data**

# EURO-LIFE-NET:

www.eurolifenet.eu

**Experts & scientists** **Teachers** **Civic action**

**What to measure**

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**Use of data**

# EURO-LIFE-NET:

**www.eurolifenet.eu**

**TRAINING**

**Experts**

**Teachers**

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www.eurolifenet.eu

**TRAINING**

**Experts**

**Teachers**

**PEOPLE** - Population Exposure to Air Pollutants in Europe

**www.citidep.pt/act/peoplecitidep.html**

**2003 Highschool students work with Elementary school students**

Students in Lisbon say goodbye
to students in Viana do Castelo

PEOPLE Videoconference
and Internet broadcasting II
with chat for students
from the 2nd and 3rd grade

Activity: " The air exists,
although we can't see it"

# Participatory Science

CITIDEP PROGRAMS Citizenship & ICT


Contact us: **citidep@netcabo.pt** , pfa@mit.edu

| | |
|---|---|
| Tânia Fonseca | Açores |
| Timothy Sieber | USA |
| Luis Rionda | Mexico |
| Jorge Edison | Brasil |
| Clelia Guinazu | Argentina |
| Valérie Aillaud | France |
| Laura Colini | Italy |
| Vesna Dolnicar | Slovenia |
| Pedro Ferraz de Abreu | Portugal |



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*Technology is created in response to market pressures—not the needs of poor people, who have little purchasing power*

HDR 2001

# MIT-Portugal / e-Planning Goals

- 1. A *Portuguese e-Planning Center*, based on a multidisciplinary "consortium" within Portuguese Academia, with strong participation of related entities from public and private sectors and civil society;
- 2. A strategic institutional relationship with USA Centers of Excellence on e-Planning, such as DUSP;
- 3. A *European Research Network for e-Planning*, as a Network of Excellence (NOE), evolving to an *Institute for e-Planning*, within the framework of the EU Joint Research Centre, with possible headquarters in Portugal.

*e-Planning Consortium Joint Document*
*June 2006*

**www.e-planning.org**

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**www.e-planning.org**

# MIT-Portugal / e-Planning Agenda

Core disciplines/fields:

*A.* *Urban Information Systems*
*B.* *Urban and Territory Planning*
*C.* *Environmental Sciences and Engineering*
*D.* *Environmental Sociology*
*E.* *Political Sciences and Policy Making*
*F.* *Public Administration Studies*
*G.* *International Development and Cooperation*
*H.* *Communication and Media Studies*
*I.* *Information Management*
*J.* *Information and Communication Technologies*

# MIT-Portugal / e-Planning Agenda

Transversal Topics:

Curricula Modernization on e-Planning

**network / joint PhD;  new masters ; new modules**

Laboratory of Technology for Social and Political Sciences

**network of e-Planning Labs**

International Cooperation on e-Planning, with e-Planning

**network of e-Planning projects + e-Planning with LDC**

LDC - Less Developed Countries

**www.e-planning.org**

# MIT-Portugal / e-Planning

FROM MIT FINAL REPORT (Prof. Dan Roos):

"Although we have received suggestions about many potential projects and focus areas, we mention "**e-Planning**" initiatives in particular because we have received many expressions of interest from faculty in Portugal and MIT.

We suggest that the "**e-Planning**" initiatives should be the subject of further analysis dusring the coming year after the launching of the initial program"

August 29, 2006

# MIT-Portugal / e-Planning Agenda

Tools:

Mobility (Fellow Programs, Exchange Programs)
SPURS ; CAES-ASP ; FULBRIGHT ; ERASMUS

Joint funding applications (FP7, NSF); project cooperation

Collaborative ICT tools (e-Planning Labs network infrastructure)

Application to MIT-Portugal funding (current and negotiable)
current areas: Transportation + Energy ; proposal: e-Planning

Strategic e-Planning partnerships (Gov. P.Adm. NGOs Market)

# Pedro Ferraz de Abreu, PhD

pfa@mit.edu

ISCSP-UTL - Instituto Superior de Ciências Sociais e Politicas

MIT - Massachusetts Institute of Technology
DUSP

CITIDEP - Centro de Investigação de Tecnologias De Informação para uma Democracia Participativa
http://www.citidep.pt/