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<http://www.citidep.pt/>



As TIC e Uma Nova Dimensão do Território



ISCSP-UTL - Instituto Superior de Ciências Sociais e Políticas

As TIC e Uma Nova Dimensão do Território

A) O Salto Qualitativo das novas TIC

B) As TIC e o Desenvolvimento

C) As TIC e o Planeamento

D) A Agenda e-Planning

A) O salto qualitativo das novas TIC

Que tem de especial a nova
geração das TIC?

Table 7.3.1.-1 - Period before broadcasting

>600 BC	The abacus (=arithmetic unit of CPU) is invented in China
387 BC	Foundation of Plato's Academy
1450	Printing press invented (Johannes Gutenberg)
1876	First telephone patent (Alexander Bell)

Table 7.3.1.-2 - Period between broadcasting and microcomputer + world wide network

1906	First broadcast of human voice, AM radio (Reginald Fessenden)
1930	18 million radios owned by 60% USA households
1936	Regular TV broadcast begins in UK
1956	72 % USA households own a TV
1968	First ARPANET (IMP), installed at UCLA (precursor to INTERNET)

Table 7.3.1.-3 - Period after microcomputer + world wide communications network

1971	First microcomputer in USA
1972	Created the InterNetwork Working Group, creating the INTERNET
1975	First Personal Computer (PC) introduced
1991	First Internet Web Server and Web Browser (CERN)
2001	529 million people on-line (Internet)

O “enabling factor” (factor de potenciação)

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

Tecnologias de Informação	Atributos	Modelos de Decisão
voz manuscrito	<ul style="list-style-type: none"> • de "poucos" a "poucos" • alcance limitado • sem processamento auxiliar • acesso barato, universal • custos de controle baixos 	<u>democracia directa</u> imperios heterogenios
imprensa radio TV	<ul style="list-style-type: none"> • de "poucos" a "muitos" • alcance ilimitado • com processamento na fonte • acesso muito caro, restrito • custos de controle medios 	<u>democracia representativa</u> ditaduras homogenias
rede satelite rede fibra optica μ computador	<ul style="list-style-type: none"> • de "muitos" a "muitos" • alcance ilimitado • com processamento na fonte e no destino • acesso custo moderado, potencialmente universal • custos de controle altos 	<u>democracia participativa</u> ditaduras tecnocratas

A) O Salto Qualitativo das novas TIC

As novas TIC desafiam
o quadro institucional e
regulatório

A) O Salto Qualitativo das novas TIC

TIC desafiam o quadro institucional e regulador

Pressão da “rede” sobre o “hierarquico” (e.g. administração pública) ;

Pressão da Democracia Participativa sobre a Representativa;

Deslocação dos centros de poder em função do domínio da nova tecnologia e novo conhecimento;

A) O Salto Qualitativo das novas TIC

TIC desafiam o quadro institucional e regulador

Erosão da soberania do Estado (dificuldade de controlar novas fronteiras / nova dimensão do território);

Novas regras do jogo / dinâmicas na economia da informação.

B) As TIC e o Desenvolvimento

Uma nova divisão do território
("digital divide")

Uma nova dimensão do ordenamento
(factor estruturante)

B) As TIC e o Desenvolvimento

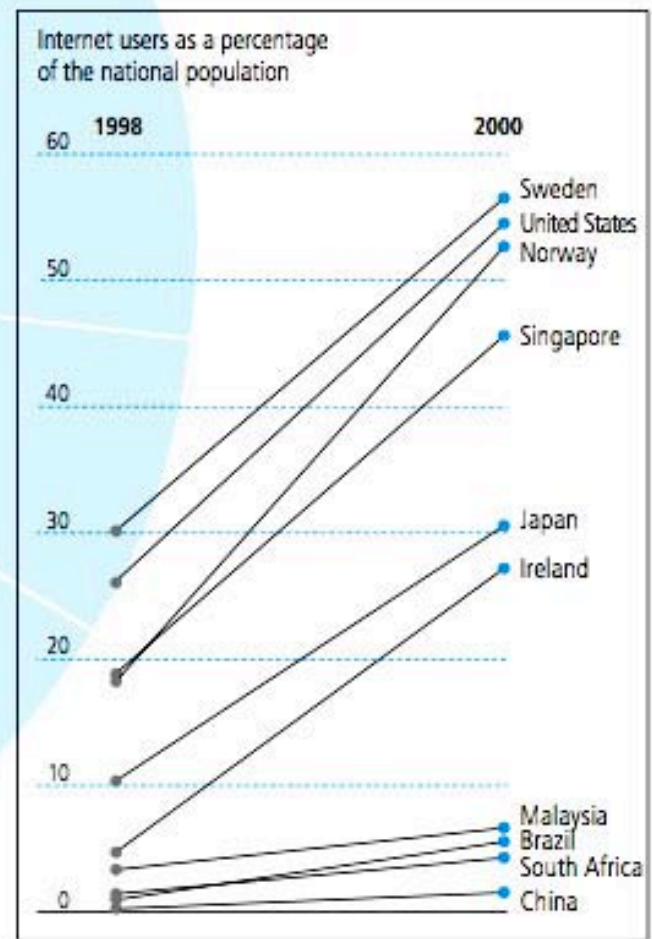
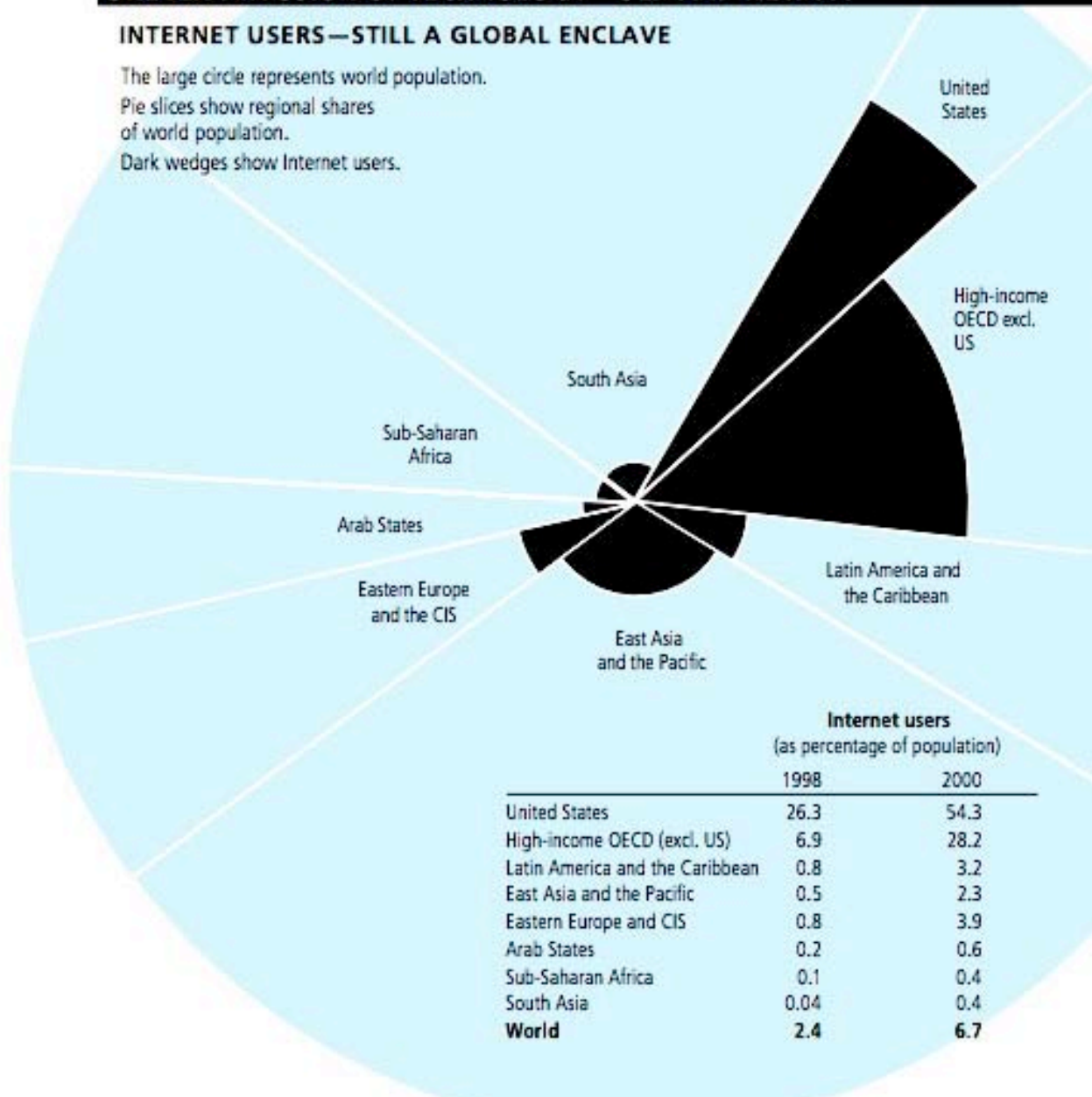
Uma nova divisão do território
("digital divide")

O “tornar possível”, (enabling factor),
não determina só por si, nem garante,
que o potencial se realize...

UNEVEN DIFFUSION OF TECHNOLOGY—OLD AND NEW . . .

INTERNET USERS—STILL A GLOBAL ENCLAVE

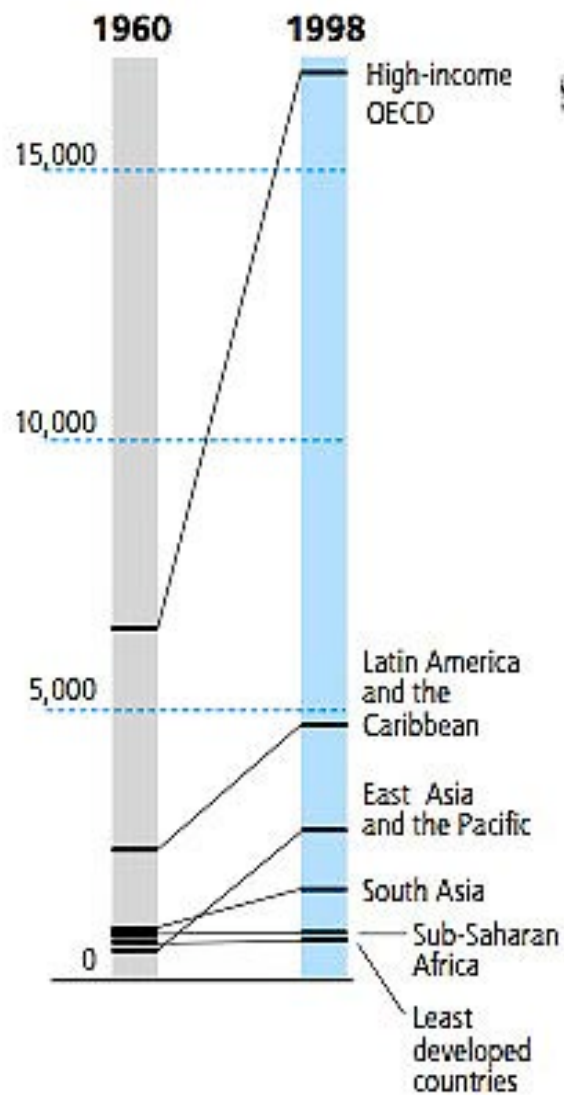
The large circle represents world population.
Pie slices show regional shares of world population.
Dark wedges show Internet users.



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

Widening income gap between regions

GDP per capita (1985 PPP US\$)

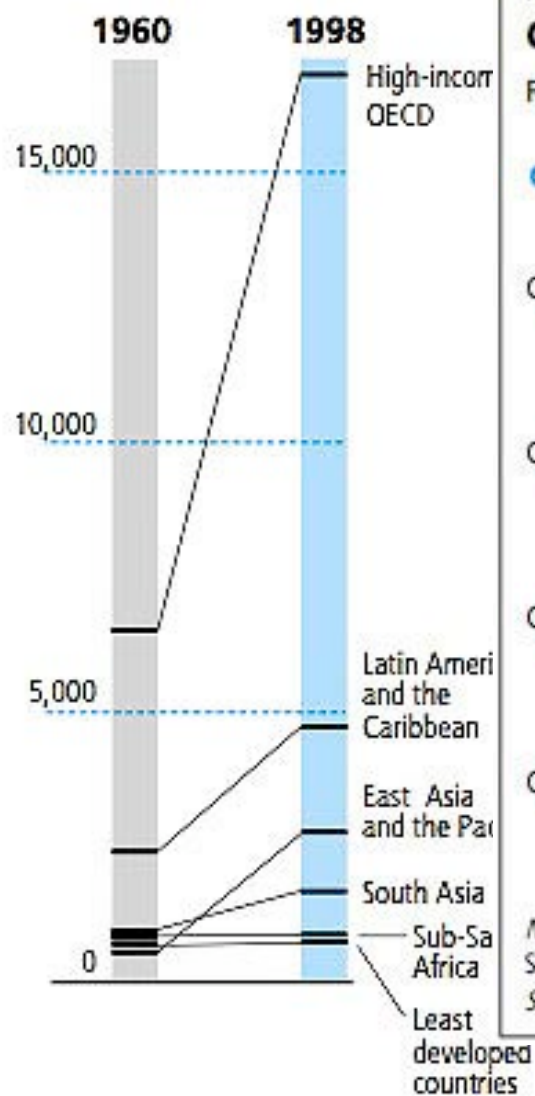


Source: Human Development Report Office calculations based on World Bank 2001g.

Uma nova divisão do território

Widening income gap between regions

GDP per capita (1985 PPP US\$)



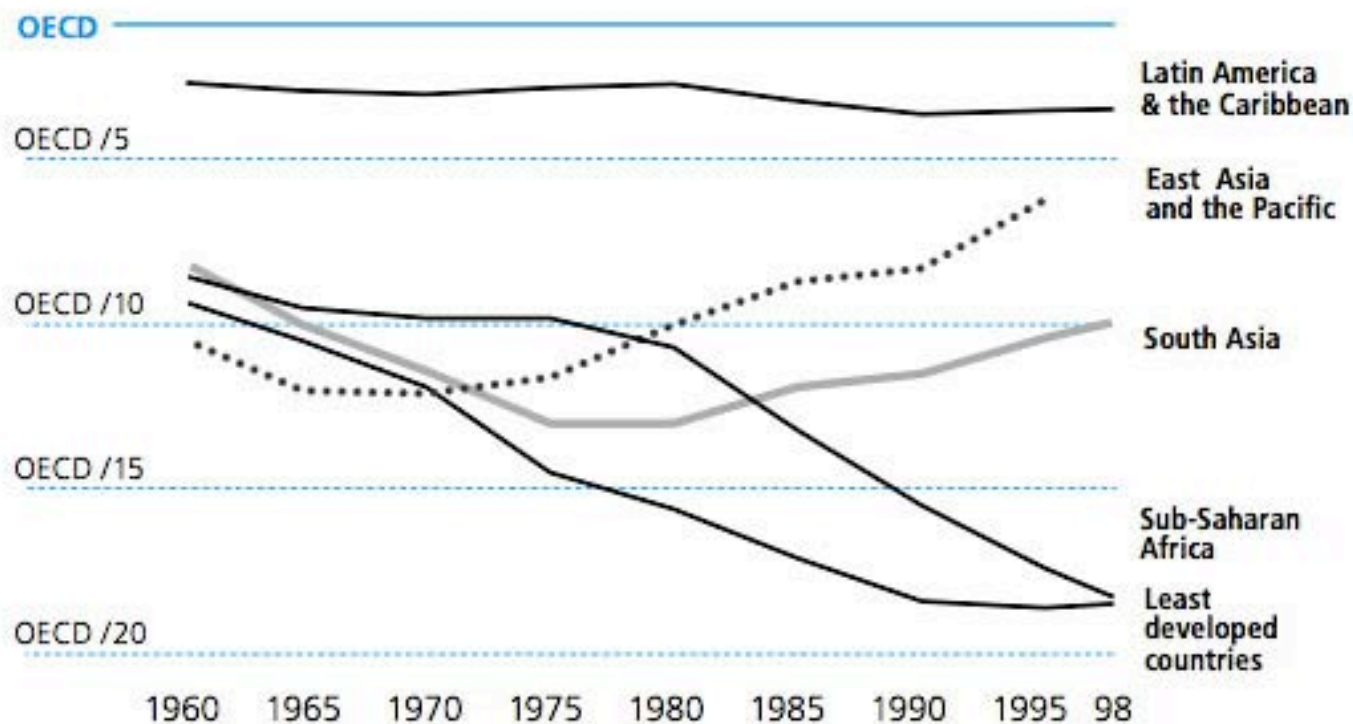
Source: Human Development Report Office calculations based on World Bank 2001g.

Uma nova divisão do território

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

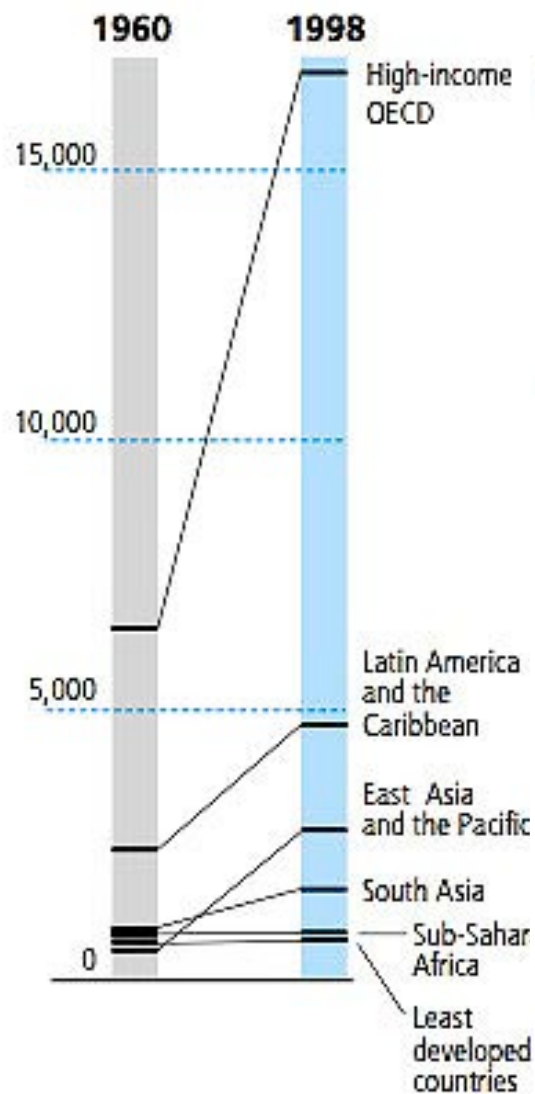


Note: High-income OECD excludes OECD members classified as developing countries and those in Eastern Europe and the CIS. See the classification of countries.

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

Widening income gap between regions

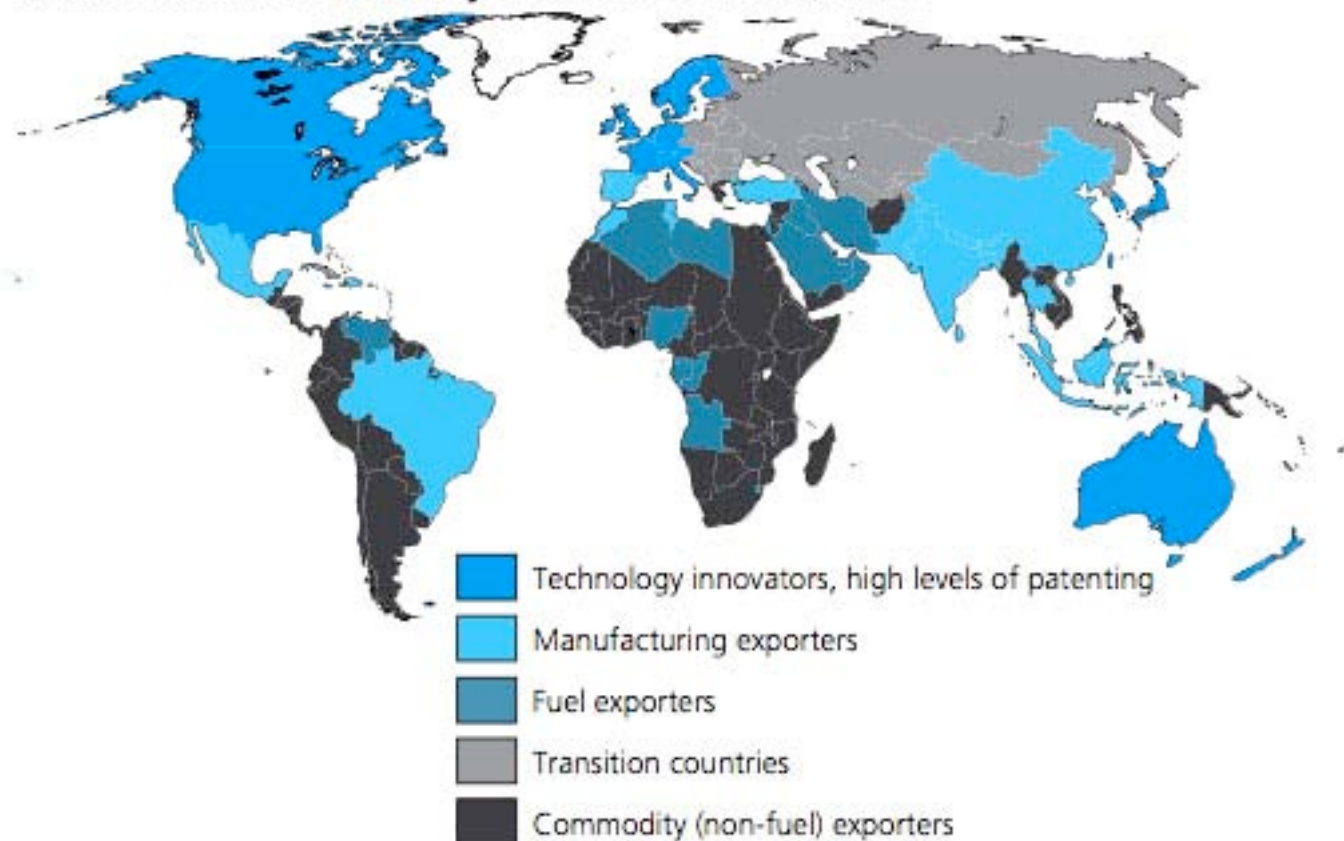
GDP per capita (1985 PPP US\$)



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

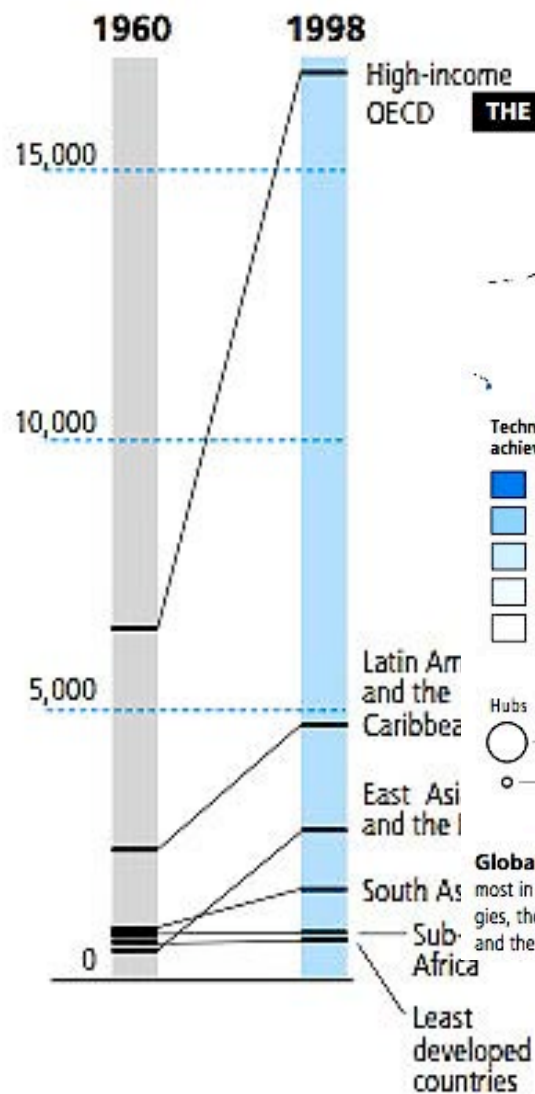
Uma nova divisão do território

Classification of countries by economic structure, 1995



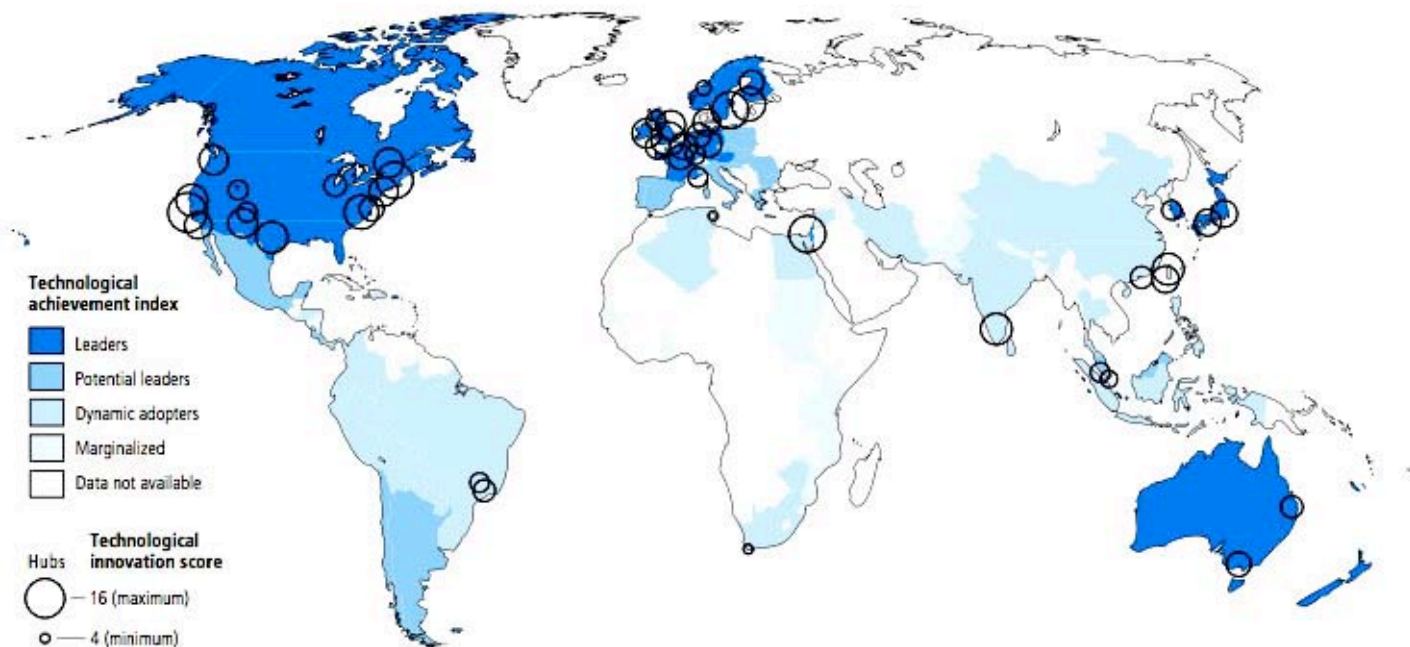
Widening income gap between regions

GDP per capita (1985 PPP US\$)



Uma nova divisão do território

THE GEOGRAPHY OF TECHNOLOGICAL INNOVATION AND ACHIEVEMENT



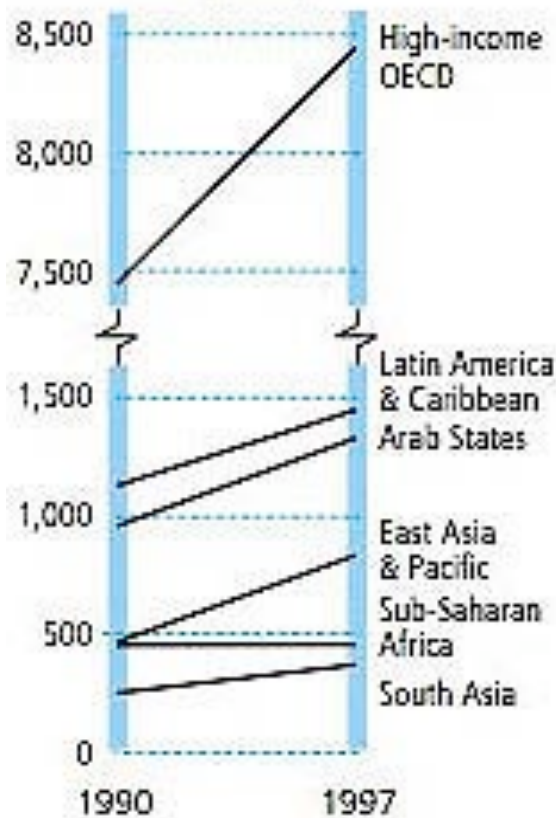
Global hubs of technological innovation In 2000 *Wired* magazine consulted local sources in government, industry and the media to find the locations that matter most in the new digital geography. Each was rated from 1 to 4 in four areas: the ability of area universities and research facilities to train 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

Uma nova divisão do território

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

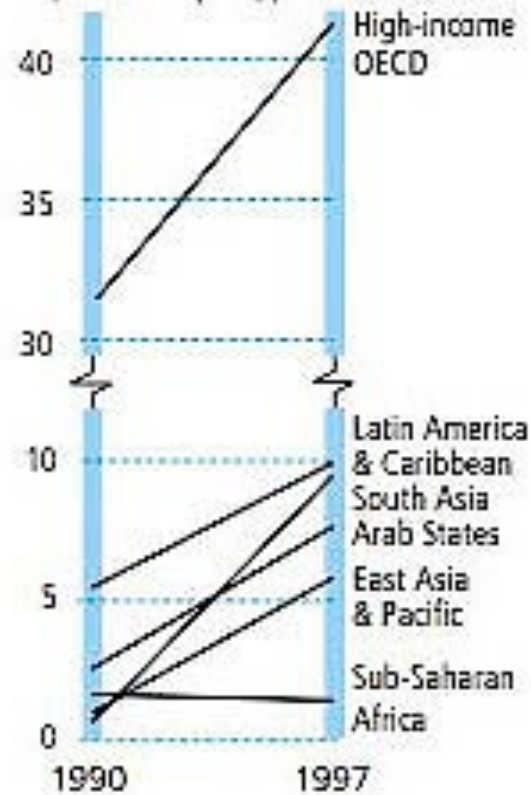
ELECTRICITY

Kilowatt-hours per capita



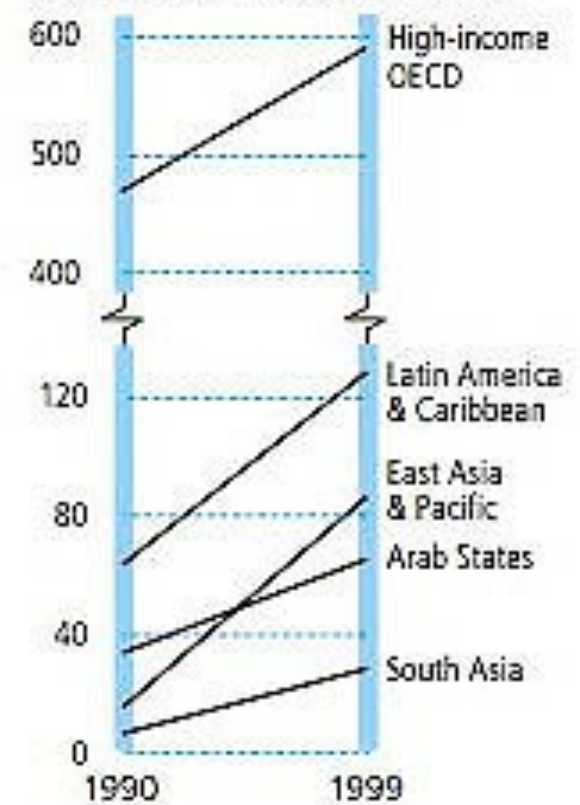
TRACTORS

Per 1,000 hectares of permanently cropped land



TELEPHONES

Telephone mainlines per 1,000 people



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

B) As TIC e o Desenvolvimento

Uma nova dimensão do ordenamento

- Banda “larga” assimétrica (consumidor vs cidadão)
- Controle da infraestrutura (ISP) e dos conteúdos (serviços): “Net Neutrality”
- O elo mais fraco domina (vs. teoria da excelência)

B) As TIC e o Desenvolvimento

Uma nova dimensão do ordenamento

- Banda Larga:

– “It’s the Upload, Stupid”

B) As TIC e o Desenvolvimento

Uma nova dimensão do ordenamento

A Margem Esquerda (da Banda Larga)

é um Deserto...

C) As TIC e o Planeamento

Uma nova escala do território
("neighborhood planning")

Uma nova dimensão do planeamento
("local indicators")

C) As TIC e o Planeamento

Uma nova dimensão do planeamento

As novas TIC trazem a ***ciência participativa***.

Novo Paradigma:

A colecta participativa de indicadores

C) As TIC e o Planeamento

Uma nova dimensão do planeamento

Os 3 modelos de ciencia participativa:

- *GLOBE (NASA)*
- *SETI ; BOINC (Berkeley)*
- *PEOPLE (JRC-UE) ; EuroLifeNet (CITIDEP)*



C) As TIC e o Planeamento

Projectos CITIDEP

(Exemplos)

- IMS - Sistema Multimedia Inteligente para apoio à consulta pública www.citidep.pt/ims/
- PEOPLE-Cidadania www.citidep.pt/act/peoplecitidep.html
- EuroLifeNet www.eurolifenet.eu
- *Kit Cidadania* www.citidep.pt/act/citikit.html

www.citidep.pt





CITIDEP - Research Center on Information Technology and Participatory Democracy

ENVIRONMENT - HEALTH - CITIZENSHIP EDUCATION FOR SUSTAINABLE DEVELOPMENT



PEOPLE - Population Exposure to
Air Pollutants in Europe

EURO-LIFE-NET

***NEW PROGRAM and
PILOT PROJECT***



2003 Highschool students work with Elementary school students



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

Students in Lisbon say goodbye to students in Viana do Castelo



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

23 Junho 2003



CITIDEP - Research Center on Information Technology and Participatory Democracy

ENVIRONMENT - HEALTH - CITIZENSHIP EDUCATION FOR SUSTAINABLE DEVELOPMENT

Needs:

Personal Exposure Data

Raising Awareness

Promoting Citizenship

Teaching Experimental Sciences

Problems:

Expensive, Resource-hungry

Often Superficial, Non-sustained

Political correct does not work

Requires resources & motivation



EURO-LIFE-NET:

CITIDEP PROGRAM

In each School in the EuroLifeNet, groups of students lead by a teacher will “adopt” each an “**EuroLifeNet Node**”, and keep a regular record of indicators measured on this Node.

Node ID: School, GPS Long/Lat/Z, type

Nodes may be indoor or outdoor

Bio-Physics measures at the Node

Socio-economic measures in a circle (or grid) centered at the Node

Composite data (tracing data around the node, eg. students carrying sensor 24h measuring personal exposure, with diary)



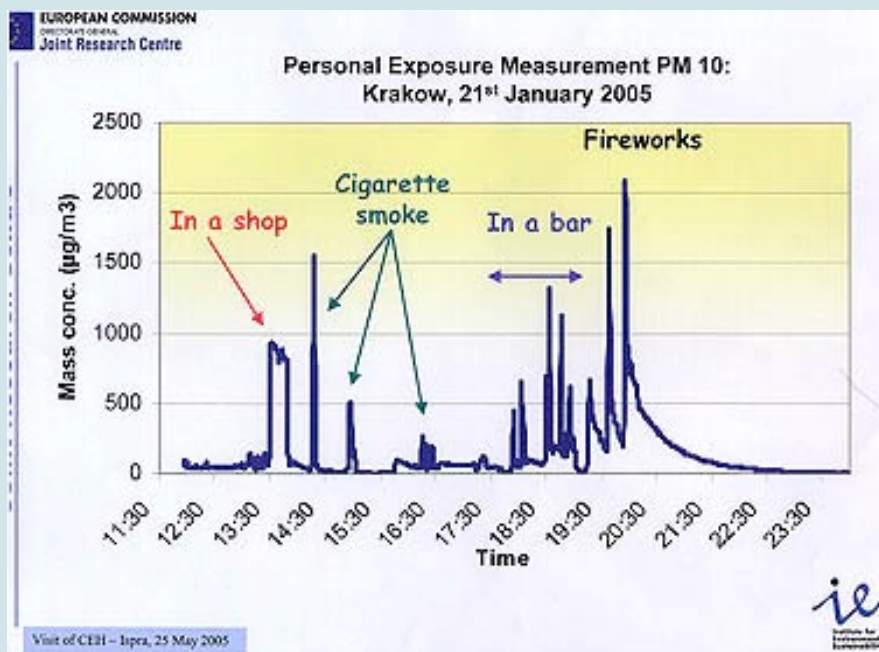
Program timetable: Set-up (2005-06) ; Pilot Project (2006-07) ; Expansion (2007-2010)



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.



23 Junho 2008

Download movie file
© Pedro Ferraz de Abreu
(<http://www.citidep.net/mov/PMportsampler.mov>)



EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



LISBOA CLUSTER :



23 Junho 2008

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EURO-LIFE-NET:

CITIDEP PROGRAM (with IES-JRC kind support)



VIANA do CASTELO CLUSTER:



D) Agenda e-Planning

- Tecnologia com Ciências Sociais
- Consortium e-Planning

MIT-Portugal

*There is a glaring contrast
between the world's
research agenda and the
world's research needs*

HDR 2001

D) Agenda e-Planning

MIT e-Planning Research Agenda

- Analytical Methods and Urban Models
- Knowledge Representation and Information Management
- Institutional and Regulatory Implications of Information and Communication Technologies
- Development Policies for and with Information and Communication Technologies

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)	Territorial planning for 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

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 during the coming year after the launching of the initial program”

August 29, 2006

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)

D) Agenda e-Planning

www.e-planning.org

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