

# The Portuguese E-inclusion strategy and the emphasis on education

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# Strategic dimensions

- Transforme education, develop skills
- Stimulate cooperation networks
- Empower communities
- Provide and promote services
- Stimulate new knowledge
- Foster international partnerships
- Reinforce and enlarge infrastructures

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# Digital Inclusion in Portugal in One Slide

% Internet users by educational attainment  
population 16-74 years old, 2008 (1<sup>st</sup> Quarter)

→ 91% in people with higher education

*average UE27 = 89%*

→ 87% in people with secondary education but no higher education

*average UE27 = 67%*

*digital divide*

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→ 26% in people without secondary education

*average UE27 = 40%*

age 55-74 (2.0 million):	6%	(5%)	In 2005 was	2%
age 25-54 (3.2 million):	27%	(24%)		15%
age 16-24 (0.7 million):	80%	(78%)		59%

# Digital Literacy & Competences eschool programme

All public schools connected to the Internet in broadband since January 2006

The eSchool Programme (launched June/2007) aims at making available portable notebook PCs with wireless broadband connectivity to students in the 7th-12th grades, as well as to basic and secondary school teachers (i.e., a total target population of nearly 700.000).

- Three different pricing schemes are available, according to the beneficiaries' economic status, being particularly attractive for disabled students – maximum initial outlay is 150€, plus a monthly broadband communications fee set at 15€.
- Financed by 3G Mobile Telecom Operators (Optimus, TMN, Vodafone), under the terms of their licensing contracts with the Portuguese State, having as additional Programme Partners several businesses active in the Portuguese ICT market .

Schools as drivers to connect the whole country

Inclusive Dimension

# Digital Literacy & Competences

## e-escolinha

The eSchool Programme was extended in Sept/2008 (e-Escolinha) to cater for students in 1st-4th grades, using the “Magalhães” laptop (based on Intel ClassMate II). This will cover 100.000 children.

School, Children, Families : a golden ring/link









# Internet Spaces Network – local based, local responsibility

- . Free access to multimedia computers and the Internet
- . Help of trained personnel
- . Equipped for accessibility

- .access to public e-Services
- .job search
- .basic ICT literacy competence training and certification
- .education & learning
- .access to health information
- leisure

Target groups:

- .Seniors
- .Immigrants
- .Remote communities

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# **SOLIDARITY Network**

**Over 260 NGOs of/for people with special needs, senior citizens and groups at risk of social exclusion.**

**Solidarity network integrates the Science, Technology and Society Network.**



# **ACCESS UNIT**

**Promotes the development, deployment and awareness of ICT tools to allow Citizens with Special Needs (namely disabled and elderly people) to overcome the barriers to their full integration in Society.**

**Promotes the adoption of good practices for e-accessibility.**

**October 2007 - Government approved a resolution requiring all central administration Internet sites to be compliant with W3C accessibility levels A, and AA if they are transactional, within 6 months.**

**. Needed : extension to local administrations sites**

**. Good practice example: banking**

**CDG – Caixa Geral de Depósitos, totally compliant with AAA**

**[www.cgd.pt](http://www.cgd.pt)**

**The 8 sites from UMIC all compliant with AAA**

**Umic has developed a free validator, with automatic  
certification**

**[www.acesso.umic.pt](http://www.acesso.umic.pt)**

# Sharing resources on a network basis

→ **WWW**: Sharing distributed capacity for provision of information with growing needs of bandwidth associated with video content and interactivity

→ **GRID Computing**: Sharing distributed capacity for computing

→ **P2P**: Sharing net resources between any two points

*web 2.0*

→ **Web of objects and sensors (*Internet of Things*)**: Sharing of instruments and sensors in ubiquitous communication and intelligent ambients

*web 3.0*

# New Generation Networks

- Optic fiber infrastructure (FTTX)
- Advanced broad band services
- Support to mobile broad band

2 examples with PT projects:

- **e-Science** – Science, Technology and Society Network
- **e-Inclusion** – Community Networks of New Generation

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# National Strategy e-Science

- RCTS: Science and Education Network  
as a New Generation Network with mobile access e-U
- b-on: Online Knowledge Library
- e-U: Electronic University/Virtual Campus
- INGRID: National Grid Initiative
- RCAAP: Portuguese Open Access Scientific Repository
- ZAPPIENS: Multimedia Repository with digital copyright management
- Support to distant collaborative work  
High definition video-conferences, VoIP, ...  
Health and Biomedical Research, ....

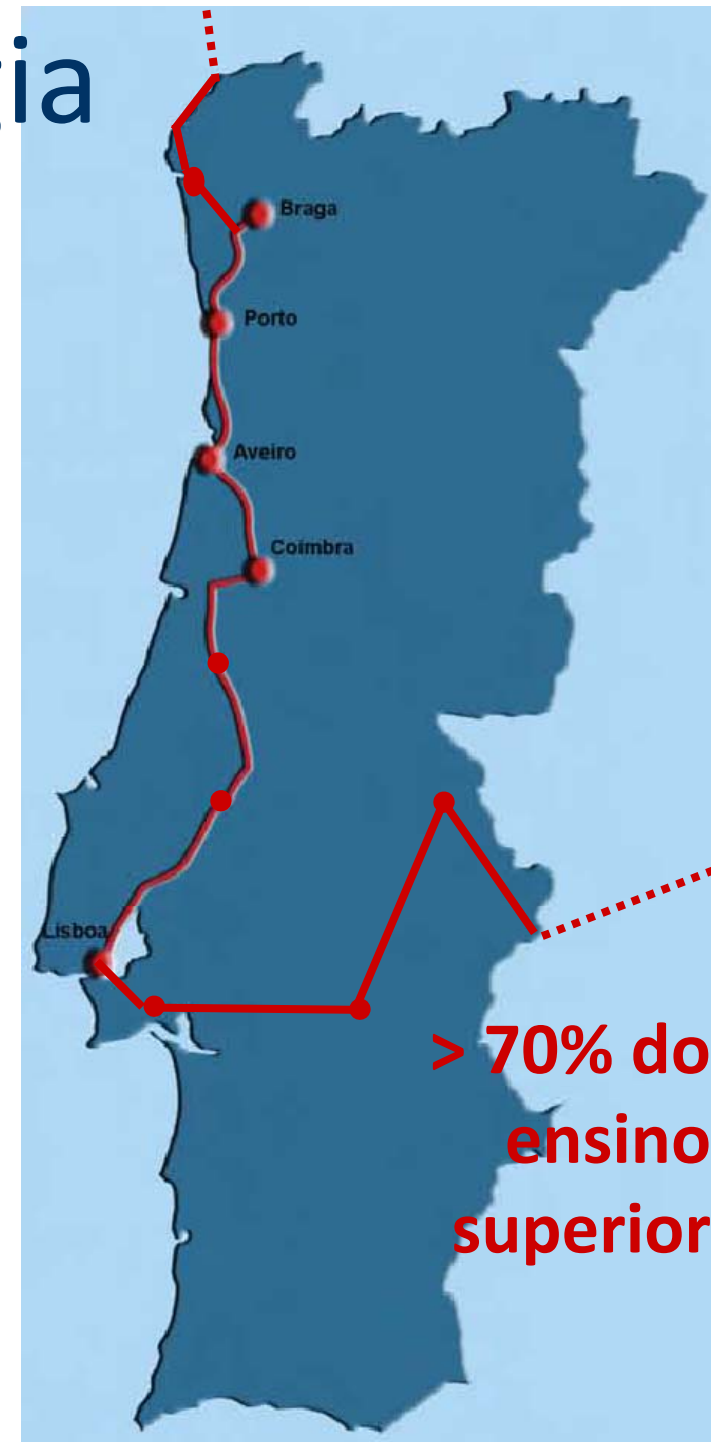
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# Rede Ciência Tecnologia e Sociedade (RCTS)

## Anel de Fibra

## Espanha-Portugal

Cimeira Espanha-Portugal, Nov 2005



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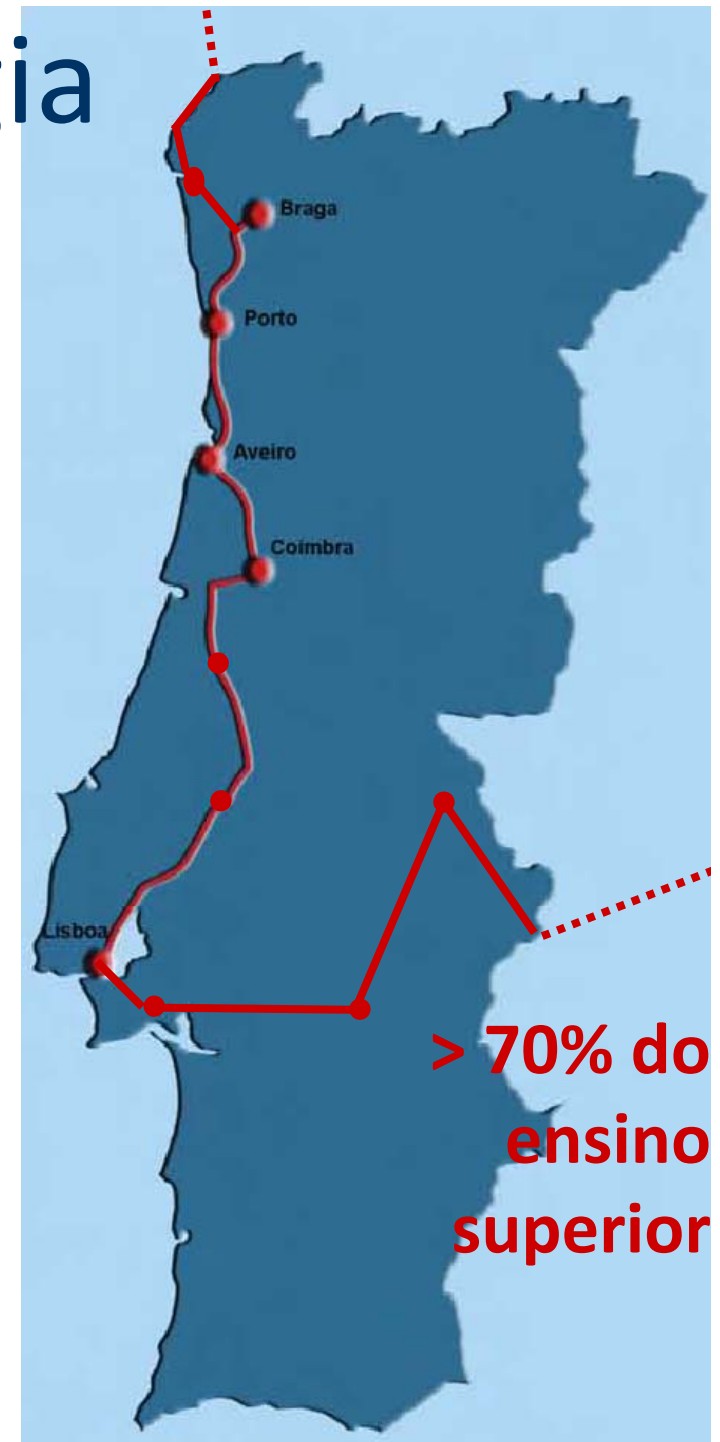
Cimeira Espanha-Portugal, Nov 2005

Cerca de 950 Km de cabo próprio de fibra (2005-2008).

Ligação da RCTS à rede

GEANT a 10 Gbps em Jul. 2008

> 8 x superior a Jul. 2005



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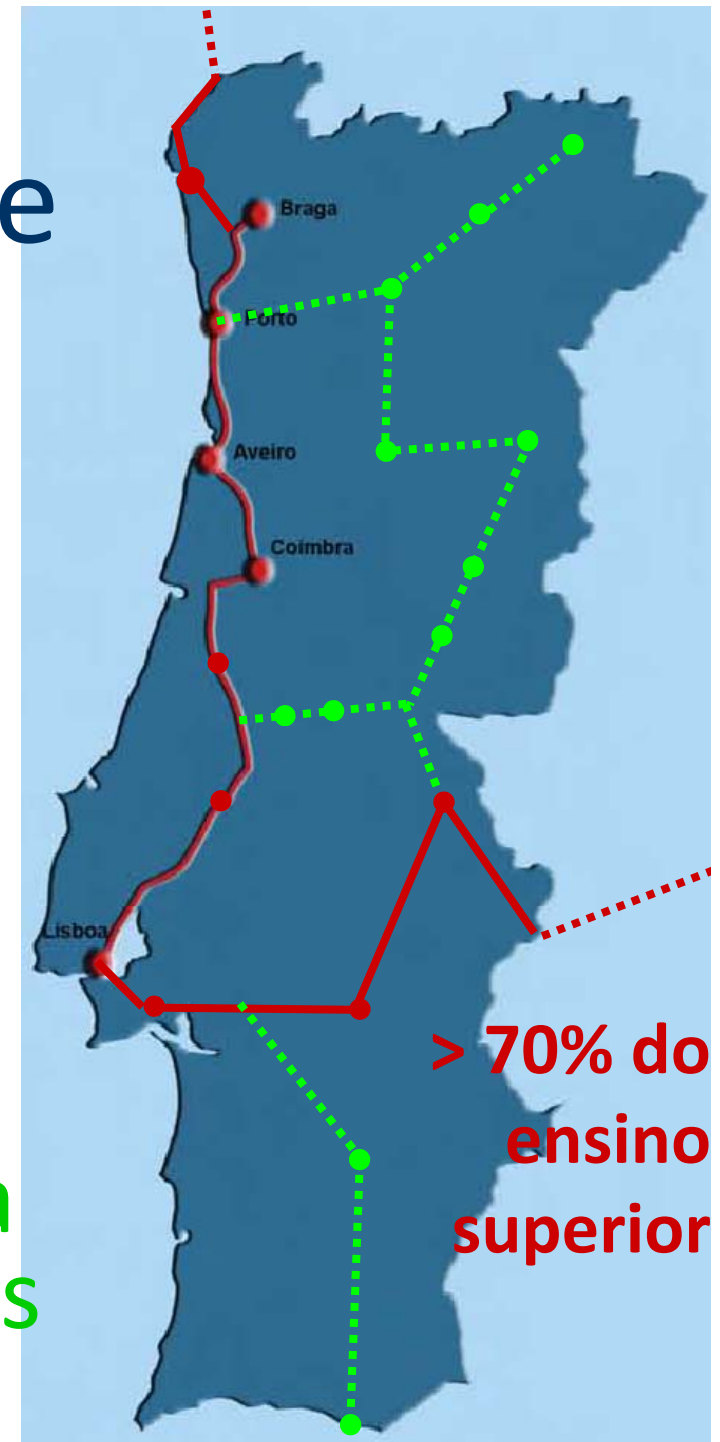
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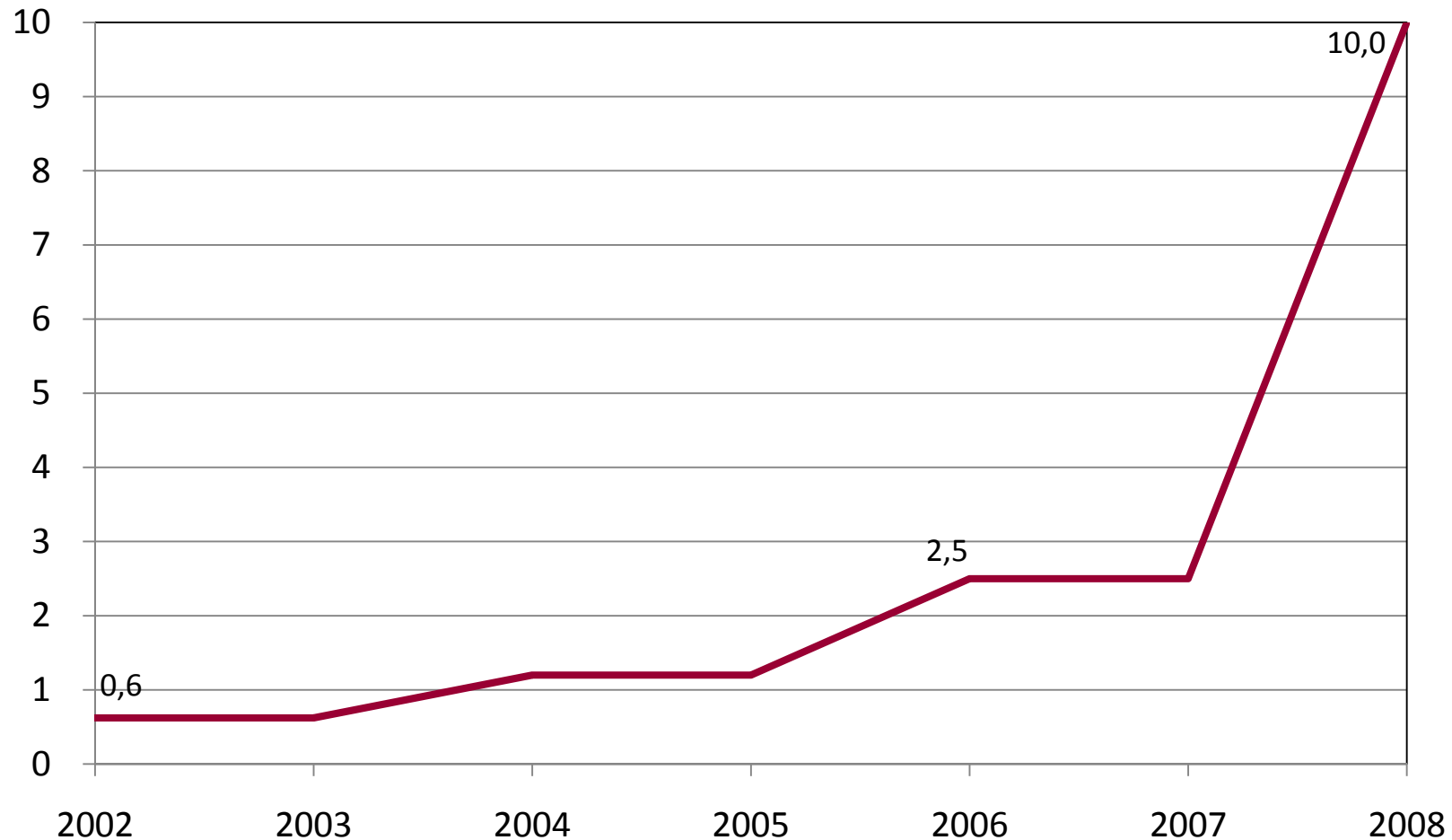
Ligação da RCTS à rede  
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Extensão da Rede de Fibra a  
todas as Capitais de Distritos





# International Connectivity of RCTS (Gbs)



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# E-Inclusion:

## Community Networks of New Generation

Public broad band networks in rural areas or in regions with lack of service provided by telecommunication market, exploitable on a multi-operation base and providing equal access to all operators in tenders for exploitation

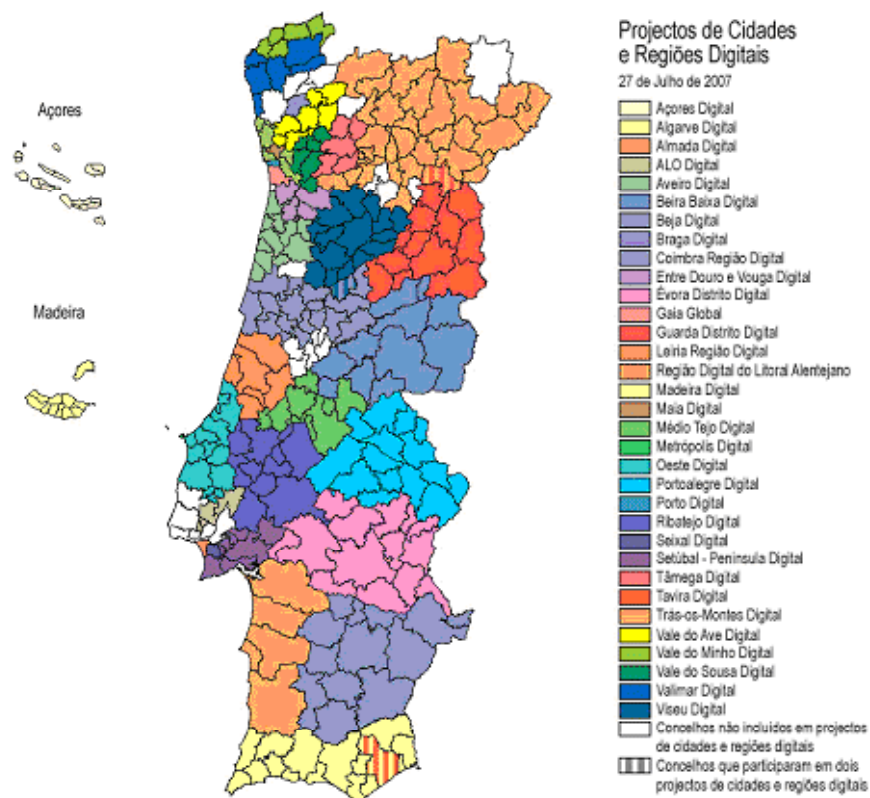
The projects were approved by evaluation after a public call open by POSC from Feb to Abr 2006.

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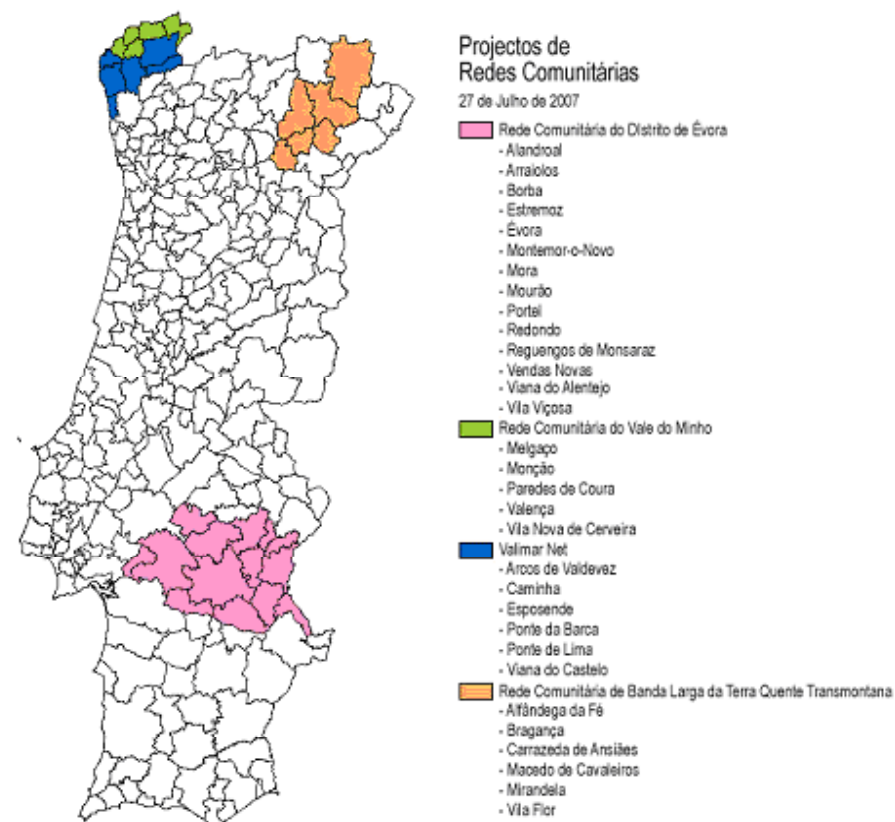
# 33 Projects Digital Cities and Digital Regions

## 4 Projects Community Networks

MAPA DE LOCALIZAÇÃO DOS PROJECTOS DE CIDADES E REGIÕES DIGITAIS



MAPA DE LOCALIZAÇÃO DOS PROJECTOS DE REDES COMUNITÁRIAS



ConnectingPortugal

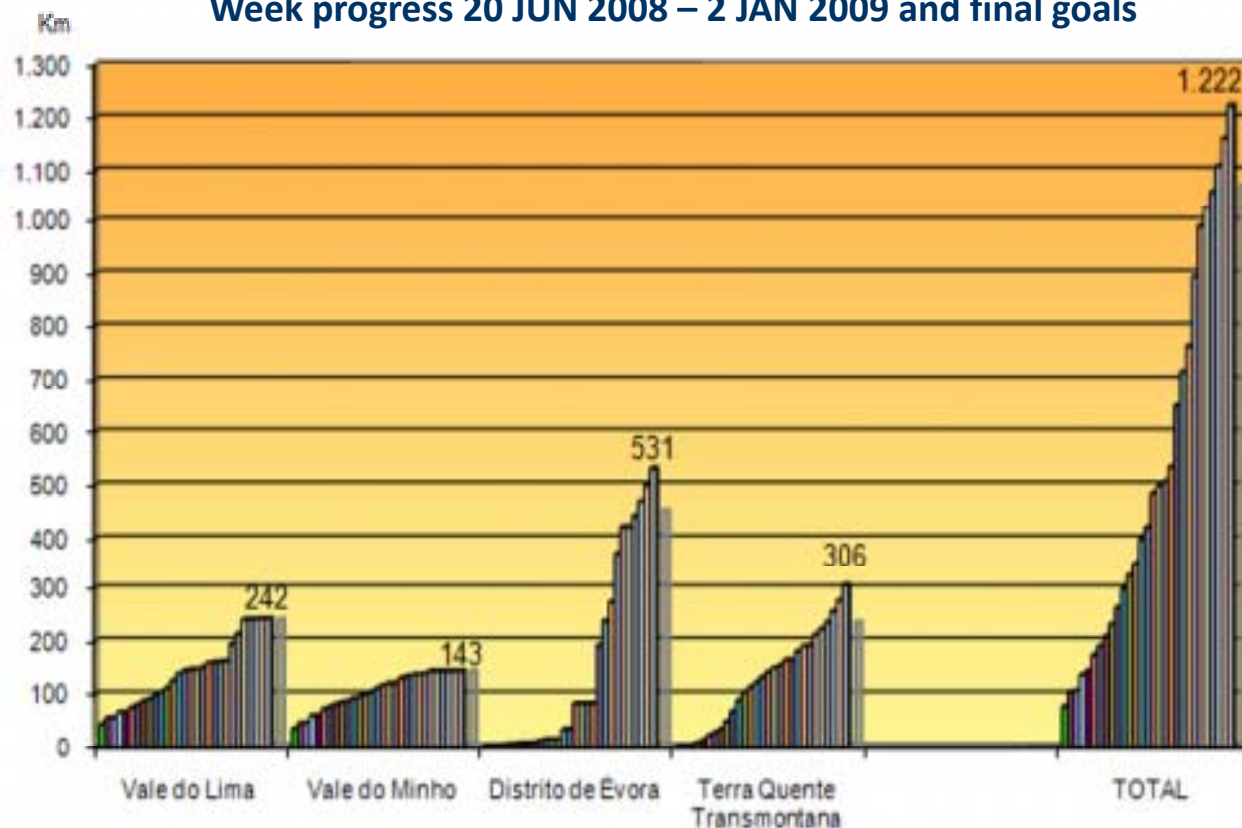


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# 4 Community Networks - NGN -2008



**Length of optic fiber cables**  
Week progress 20 JUN 2008 – 2 JAN 2009 and final goals



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# Technological Developments enabling Digital Citizenship

- Mass mobile phones
- Mass digital TV
- Human-Computer Interaction (through speech and image)
- ICT development for digital inclusion of specific groups: seniors, citizens with special needs,...
- New Generation Networks (*fiber to the home – FTTH*)

All big opportunities for business based on I&D

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# Strategic dimensions for e-Inclusion

- Assure education for all.
- Involvement of local social mediators.
- Empower communities
- Provide and promote inclusive services
- Foster partnerships and knowledge networks.
- Keep infrastructures up-to-date

[www.unic.pt](http://www.unic.pt)