Connecting Portugal
Mobilizing the Information and Knowledge Society

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Ministry of Science, Technology and Higher Education, **Portugal**

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Knowledge Society Agency Mission

➔ To coordinate information society policies and its mobilization through research, qualification and awareness activities

➔ To promote emerging technologies such as ICT and Nanotechnology

➔ To develop and fund e-Science

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Knowledge Society Agency at OECD

Represents Portugal as:

❖ Bureau of ICCP – Information Computers and Communication Policy Committee

❖ Chair of WPIIS – Working Party on Indicator for the Information Society

❖ Bureau of WPIE – Working Party on Information Economy

❖ Steering Committee of HL Meeting "The Internet Economy: Generating Innovation and Growth", 28-29 June 2011

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Knowledge Society Agency
on Internet Governance

Represents Portugal at UN:

❖ IGF – Internet Governance Forum

❖ CSTD – Commission on Science and Technology for Development

❖ CSTD WG on Improvements of the IGF

Represents Portugal at ICANN:

❖ GAC – Governmental Advisory Committee

Responsible for "Portugal IGF":

❖ Information Society Forum – Internet Governance

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Knowledge Society Agency in EU

Represents Portugal next to DG Information Society and Media:

- ❖ HLG on Digital Agenda for Europe (2010-2020)

- ❖ HLG on Internet Governance

- ❖ ICT National Research Directors Forum

- ❖ Future Internet Forum

- ❖ National ICT Directors WG on FET Flagships

- ❖ AAL Joint Program General Assembly

- ❖ ICT CIP – ICT component of the Competitiveness and Innovation Program

- ❖ . . .

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Knowledge Society Agency Main Operational Projects

Incubated eGovernment and developed transversal large scale projects

- ❖ Citizen's Portal (2004-2007)
- ❖ Enterprise Portal (2006-2007)
- ❖ Full Creation of Enterprises Online (2006)
- ❖ e-ID Citizen Card (2005-2007)
- ❖ Public Administration Interoperability Platform (2006-2007)

spinned off to AMA – Agency for Public Services Modernization, 1st May 2007

Incubated the National Public eProcurement Program

spinned off to National Agency of Public Procurement in Ministry of Finance, 9th May 2007

Now other major challenges – towards **knowledge and innovation**:
- ➔ **e-Science**
- ➔ **International partnerships in S&T** with worldwide leading institutions
- ➔ **Health and biomedical sciences information** for citizens on the Web
- ➔ **Emerging Technologies**, such as **Future Internet** and **Nanotechnolog**y

Context of High S&T Growth in Portugal
Investment in R&D
more than doubling in 2005-2009
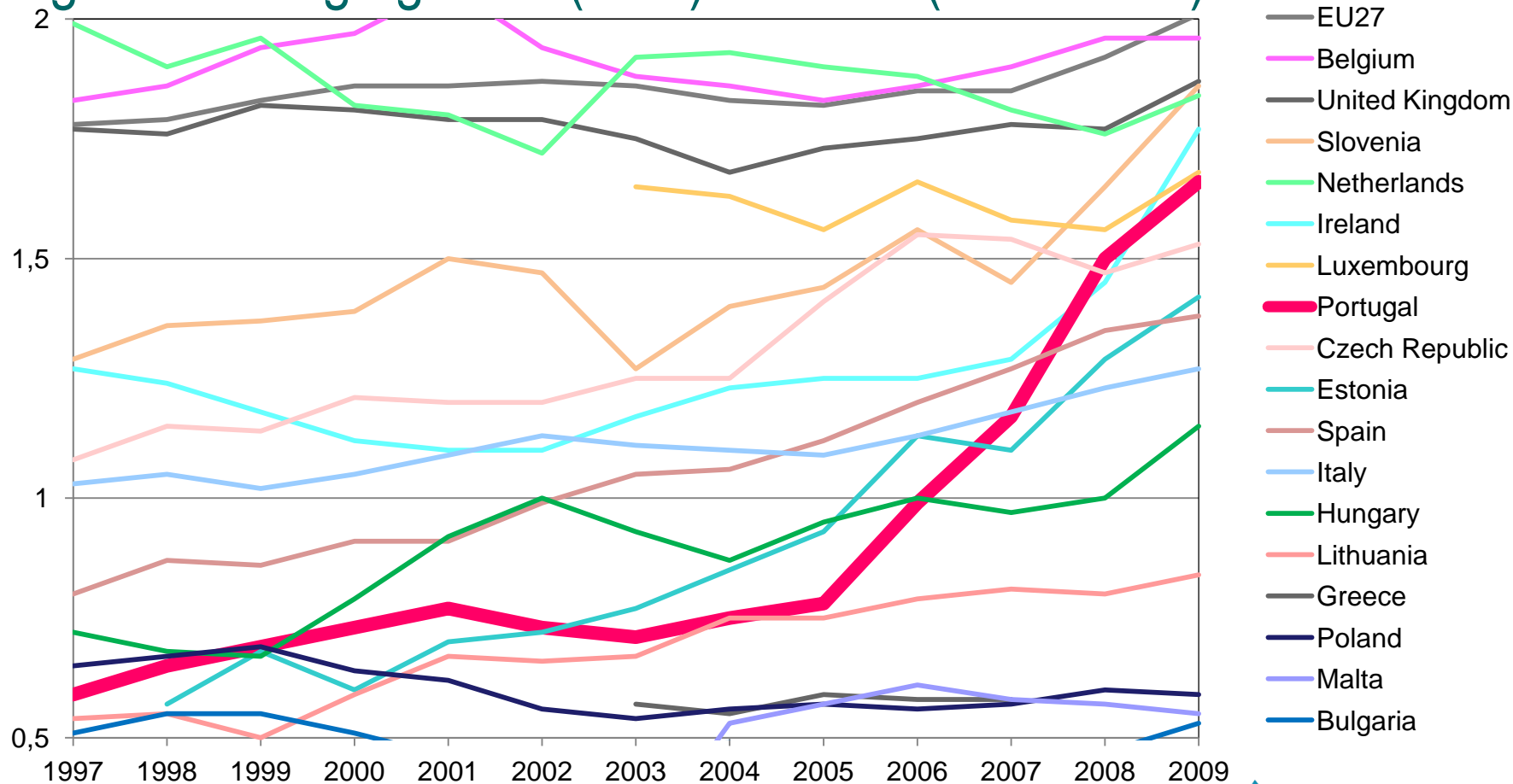
Evolution of R&D Intensity, in Portugal

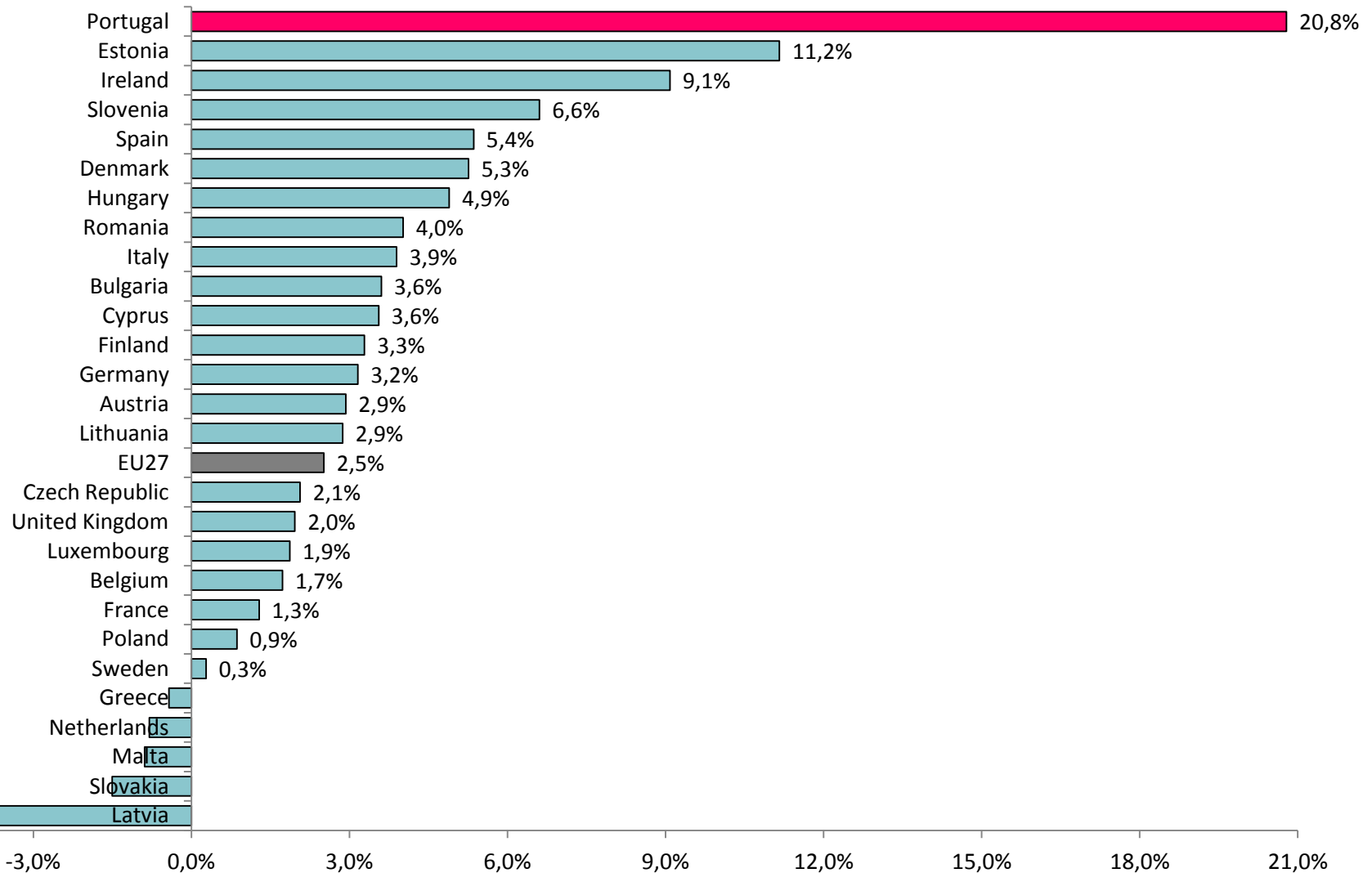Source: EUROSTAT

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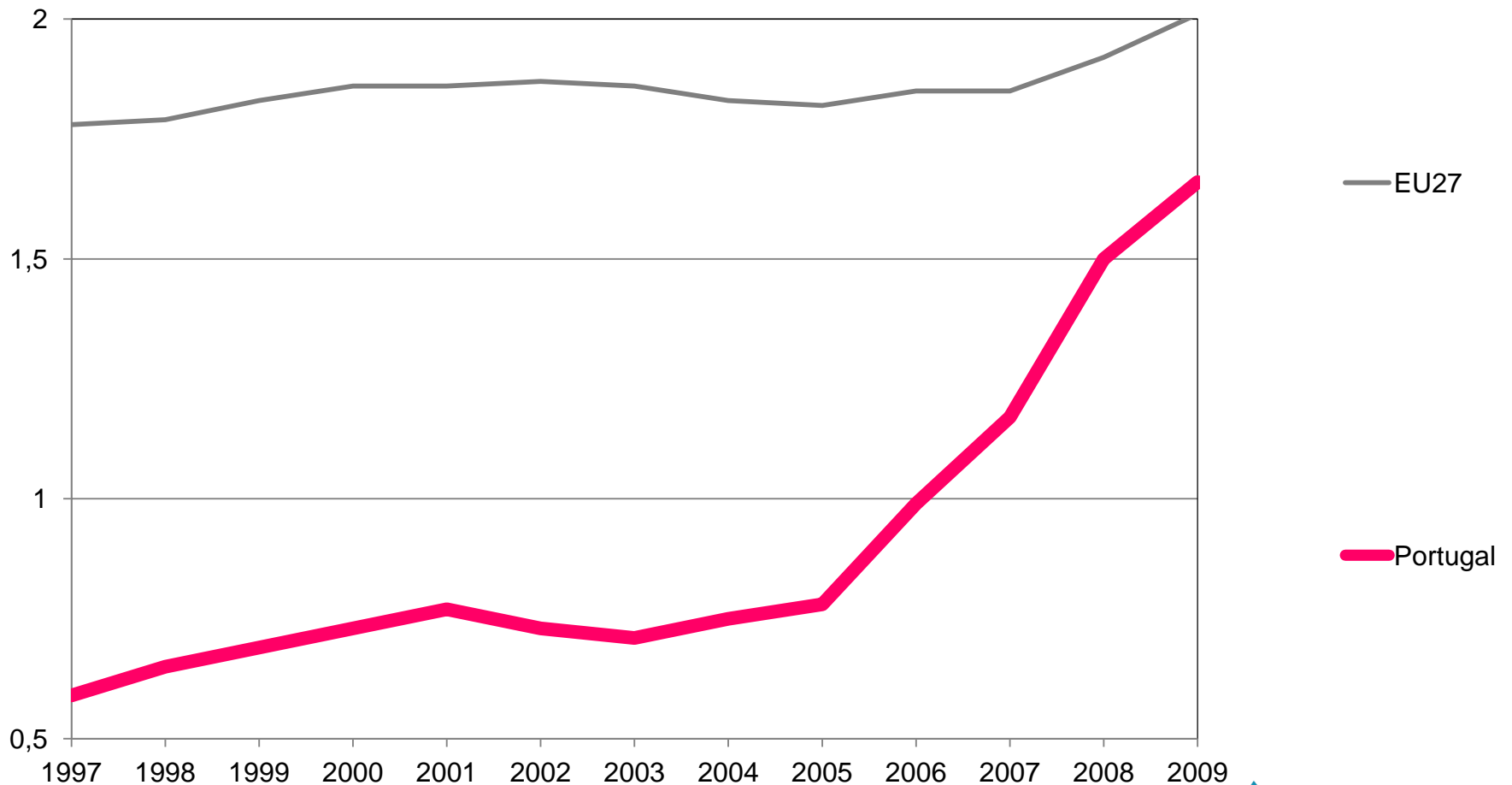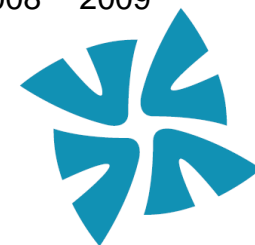
Evolution of R&D Intensity, in Portugal
Highest average growth (23%) of UE27 (total=1.4%) in 2005-2008

Source: EUROSTAT

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Average Annual Growth of R&D Intensity 2005-2009

Country	Growth
Portugal	20,8%
Estonia	11,2%
Ireland	9,1%
Slovenia	6,6%
Spain	5,4%
Denmark	5,3%
Hungary	4,9%
Romania	4,0%
Italy	3,9%
Bulgaria	3,6%
Cyprus	3,6%
Finland	3,3%
Germany	3,2%
Austria	2,9%
Lithuania	2,9%
EU27	2,5%
Czech Republic	2,1%
United Kingdom	2,0%
Luxembourg	1,9%
Belgium	1,7%
France	1,3%
Poland	0,9%
Sweden	0,3%
Greece	
Netherlands	
Malta	
Slovakia	
Latvia	

Source: EUROSTAT

High Growth in Researchers (‰ labor force)
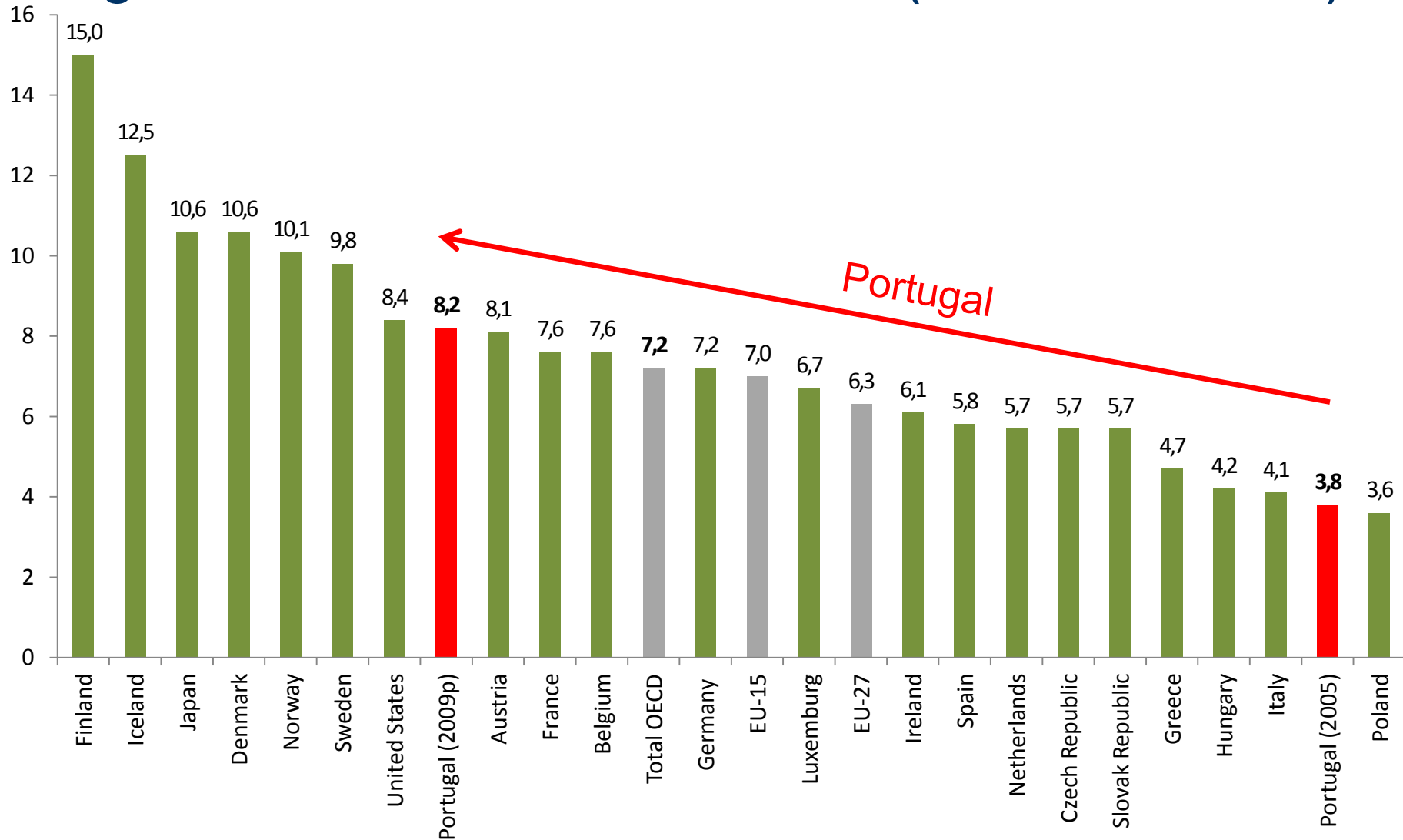
Note: Data for 2008, except for Portugal whose data are for 2005, 2007, 2008, 2009
Source: OECD.

In this Context of High S&T Growth
Strong National e-Science Strategy
National platforms provided by NREN,
with distributed services for research and higher education,
with high economies of scale,
at zero cost for public user institutions.

Infrastructure ● Content ● Distributed Computing ● Cooperative Work at a Distance

National e-Science Strategy

➔ **National Research and Education Network** as a public NGN, presently with dark fiber of the NREN to 85% of Higher Education System, at 10 Gbps and scalable. Other public institutions are connected through circuits rented to operators with more bandwidth than used.

➔ **b-on: Knowledge Library Online** planned in 1999, with 17,100 scientific journals, 18,200 e-books, 12,400 proceedings and transactions titles, 10 referential data bases, free access in all Higher Education and Scientific Institutions, *"big deal"* at national scale

➔ **e-U: Virtual Campus** wireless access integrating all Higher Education *campi*

➔ **RCAAP: Scientific Open Access Repository of Portugal,** presently with 29 institutions, incl. all 14 public universities, and >46,600 documents, protocol w/ Brazil

➔ **INGRID: National GRID Initiative** (1,800 CPUs, 1 PetaByte of disc memory, 2 PetaBytes of magnetic tape robot memory), integrated w/ Spanish GRID (IBERGRID), and part of EGI – European grid Initiative

➔ **IBERCIVIS: Voluntary Computing at the service of science** jointly w/ Spain

➔ **Tools for collaborative work at a distance**
HD Videoconferencing and immersive rooms ● VoIP for all Higher Education and Scientific System, allowing simple collaborative video- and tele- conferencing ● National platform for scientific and educational digital content being developed for Medicine and Future Internet, to be further extended.

National Thematic R&D Networks
Aligning National Effort in ICT Research and Information Society Policies

National Thematic R&D Networks
Bringing together research, industry and university

➜ Electrical Mobility

➜ Smart Energy

➜ Sustainable Cities

➜ Future Internet Technologies

➜ Security and Critical Infrastructures Protection

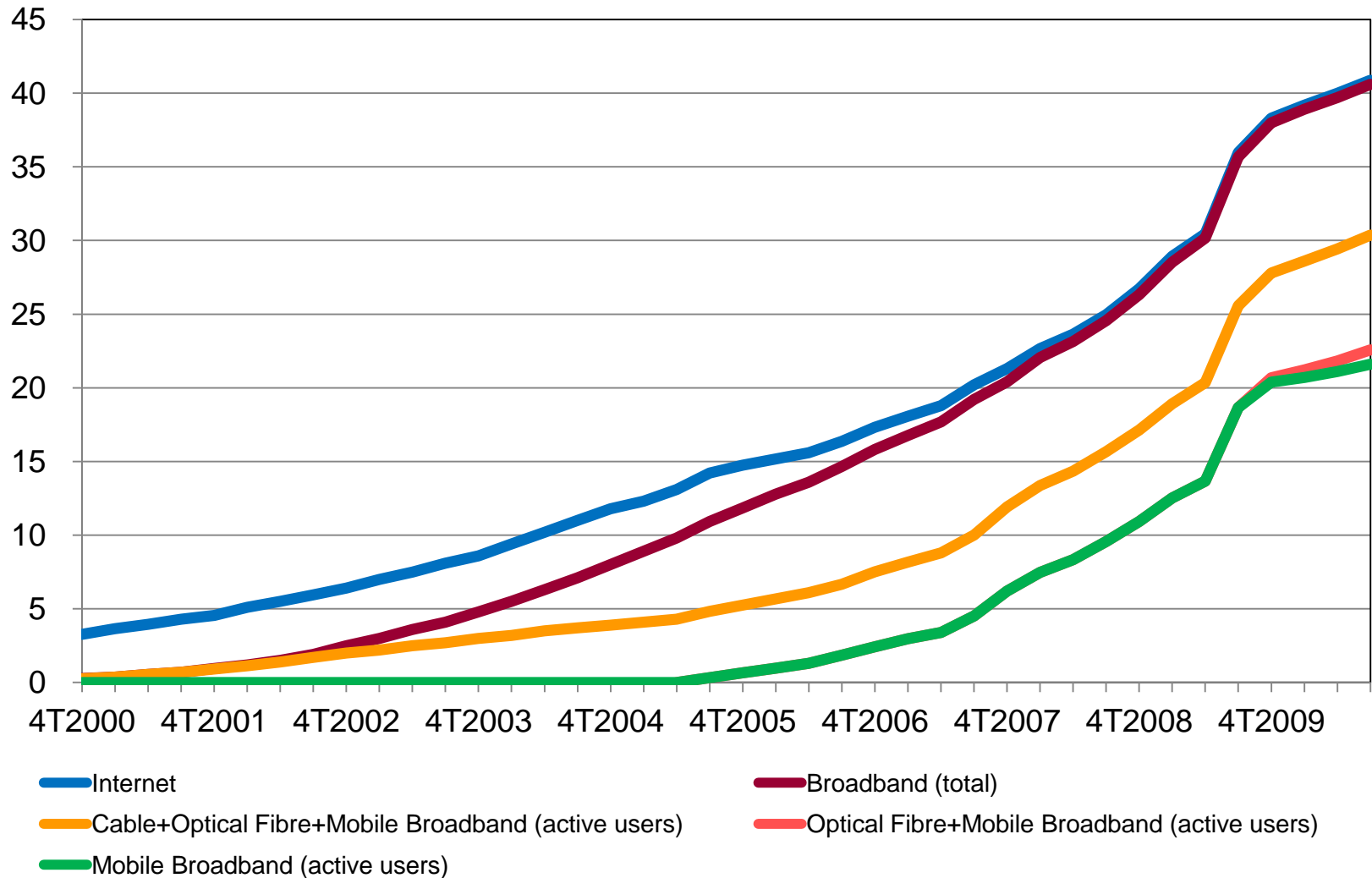➜ Services and Technologies for Interactive Media
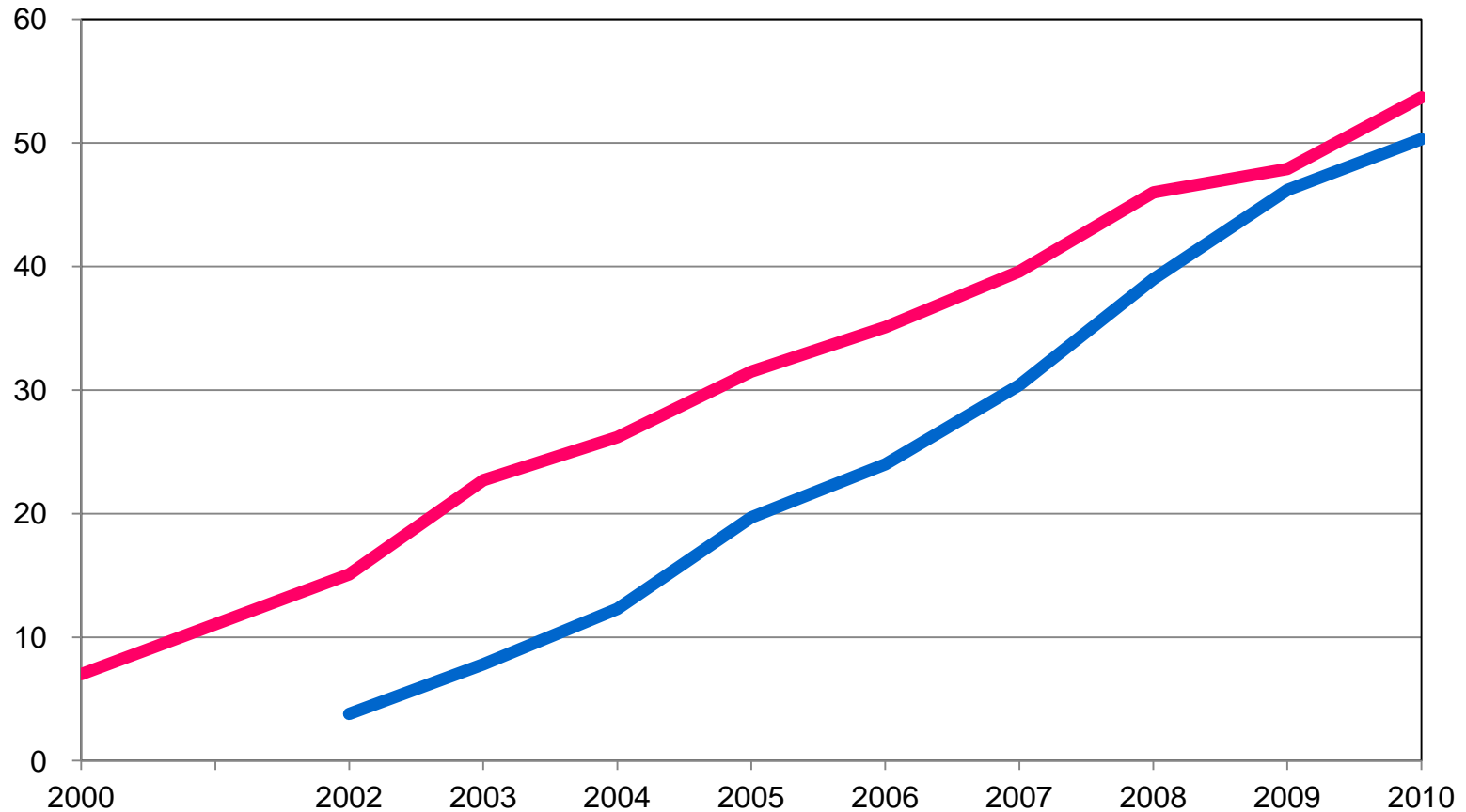
High Increase of Broadband Access
Mobile and High Speed Fixed Access

Internet and Broadband Penetration in the Population (% subscribers in total population, 3Q 2010)

Source: ANACOM
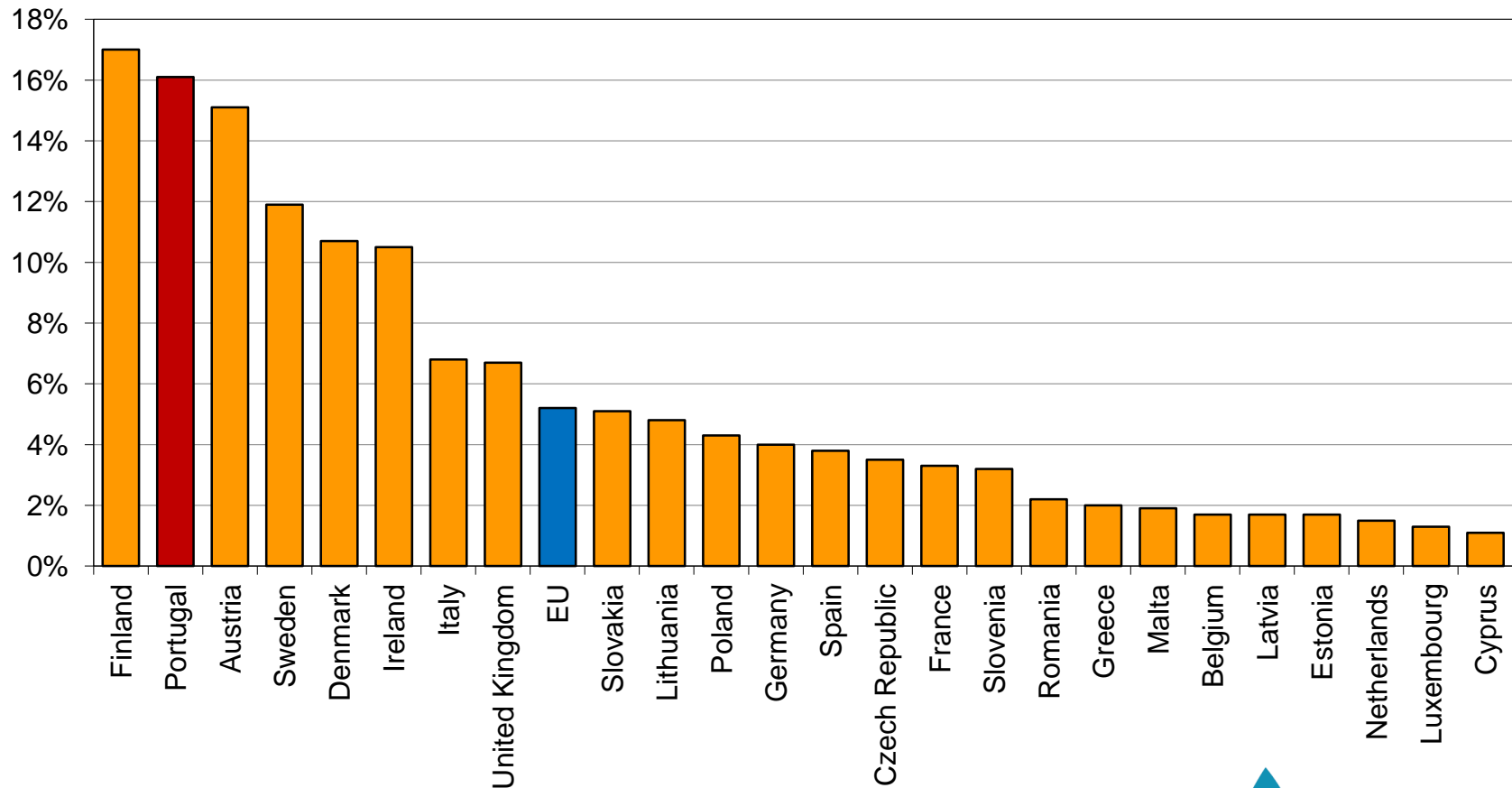
Broadband Penetration in Households (%, 1Q)

Source: EUROSTAT

Internet   Broadband

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Mobile Broadband Penetration in the Population
dedicated data service (cards/modems/keys) – 1st Jan 2010
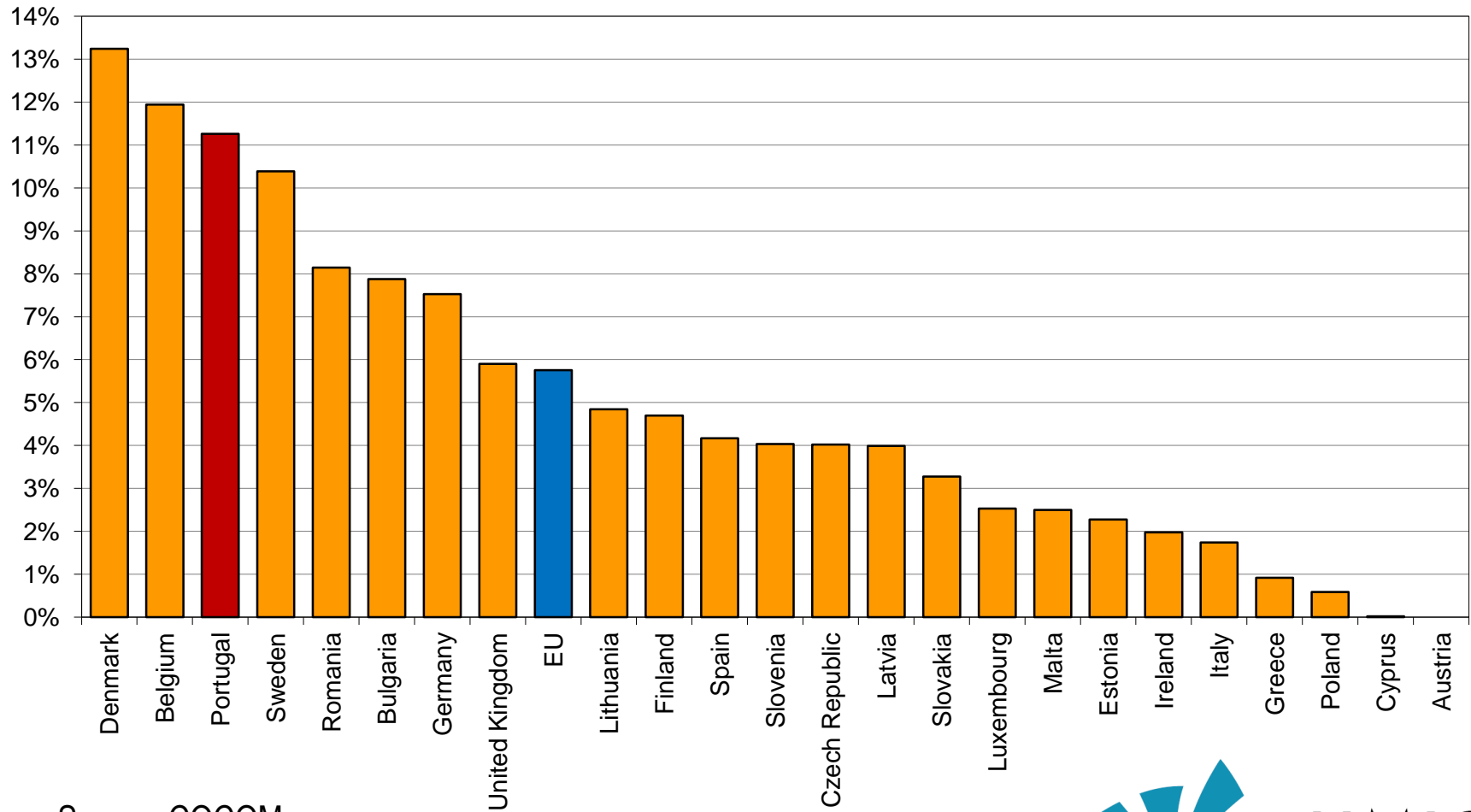

Source: COCOM

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High Speed Fixed Broadband Penetration
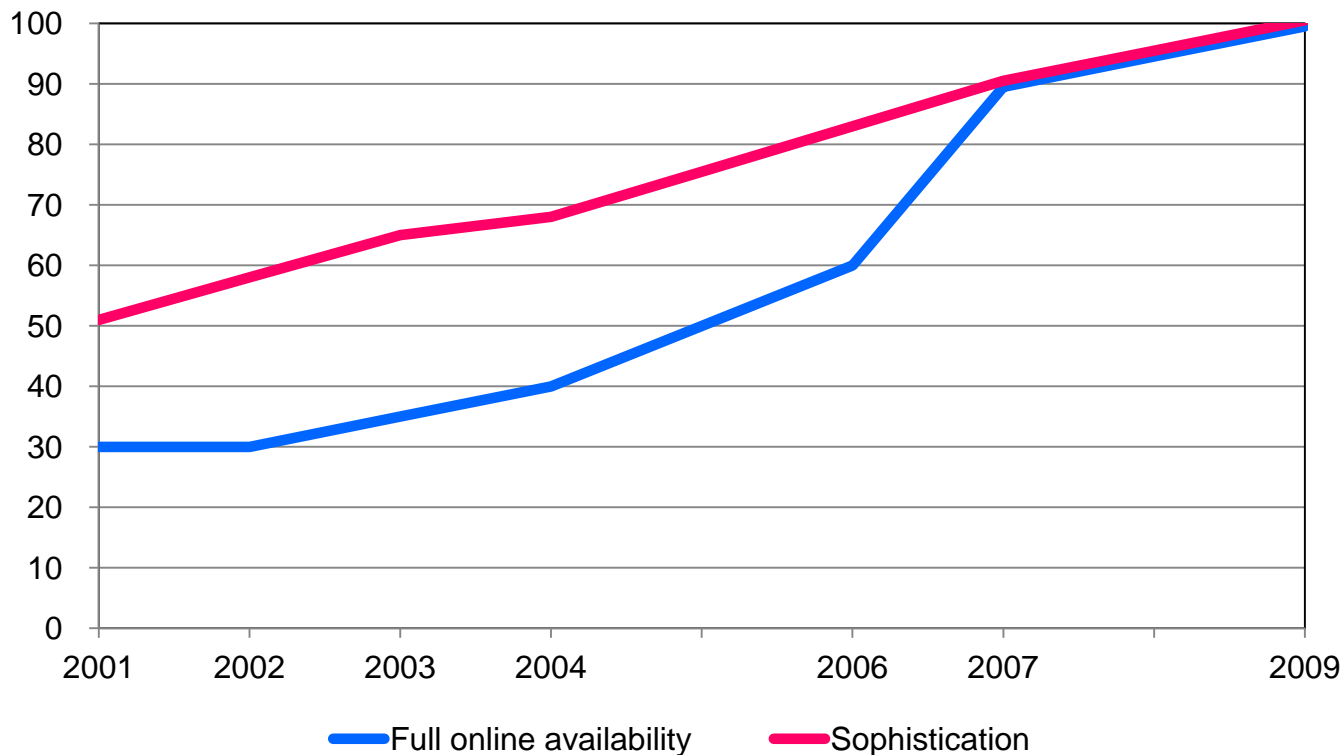## ≥ 10 Mbp/s in the population – 1 Jan 2010

Source: COCOM

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eGovernment

Basic Public Services Online in Portugal
Complete availability and sophistication, 2001-2009

Legend: Full online availability — Sophistication

Note: Data of October of each year, except Apr 2006, May 2007, Nov 2009
Source: Capgemini reports prepared for DGINFSO of the European Commission

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Basic Public Services Online in Portugal

Evolution of Portugal ranking in basic public services online complete availability and sophistication within EU27
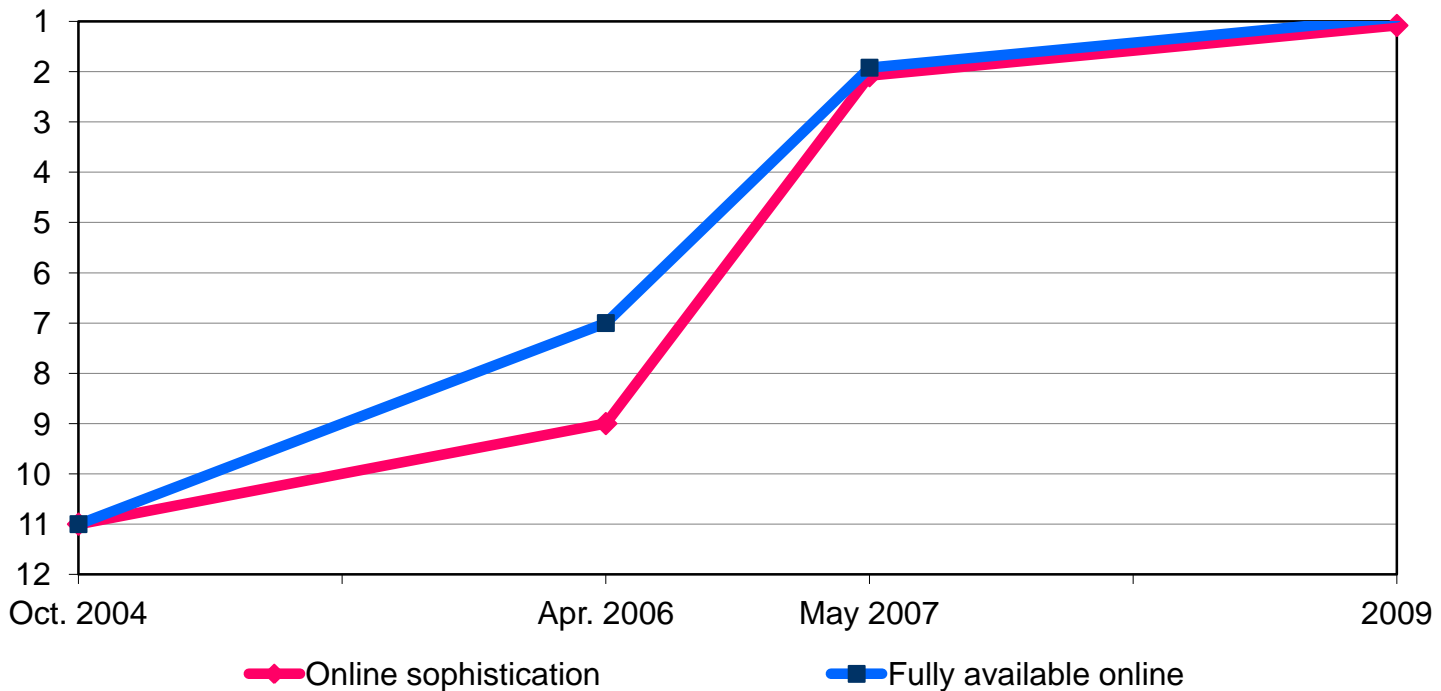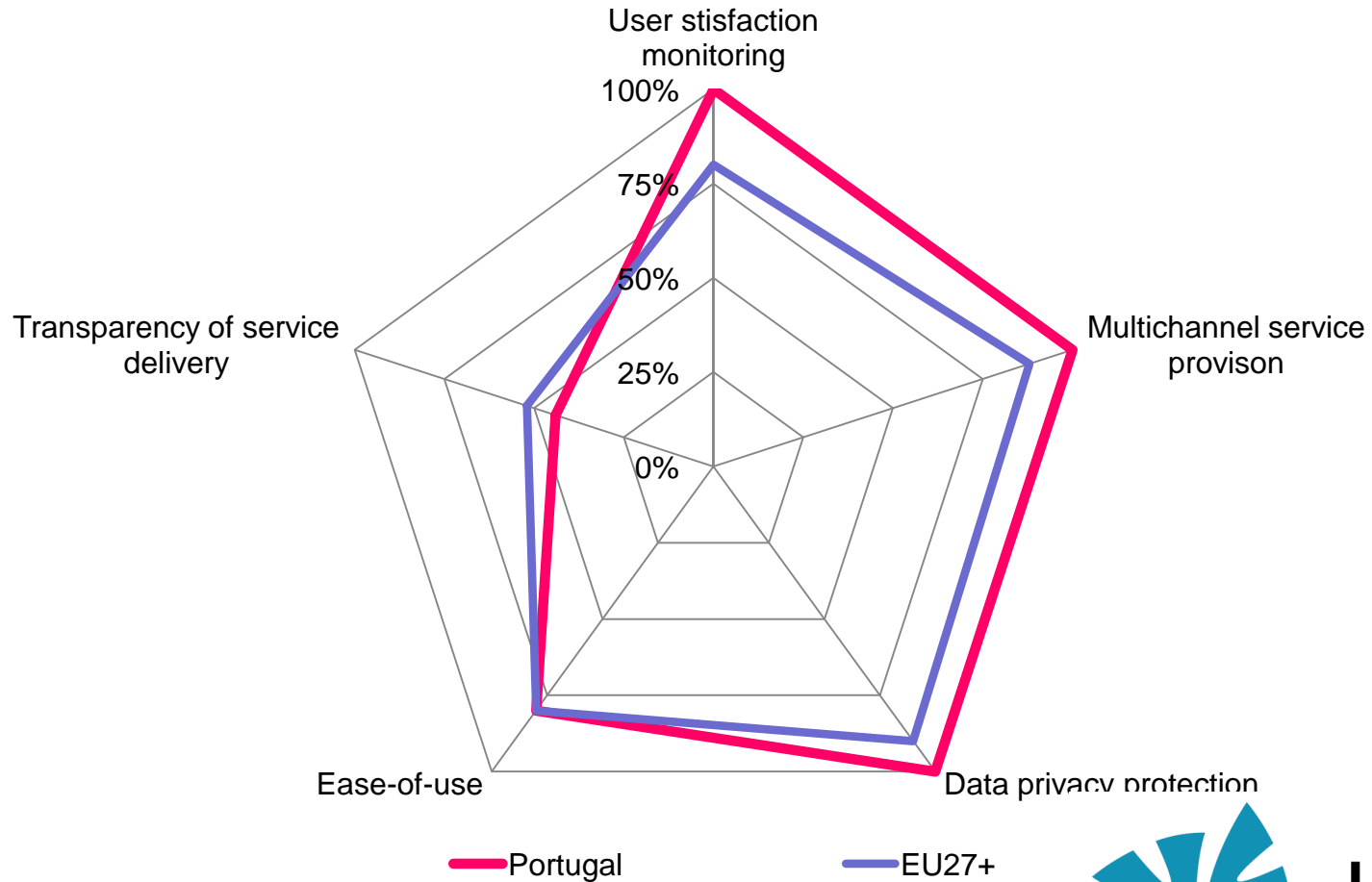

Source: Capgemini reports prepared for DGINFSO of European Commission

User Experience of e-Government Services Delivery 2010

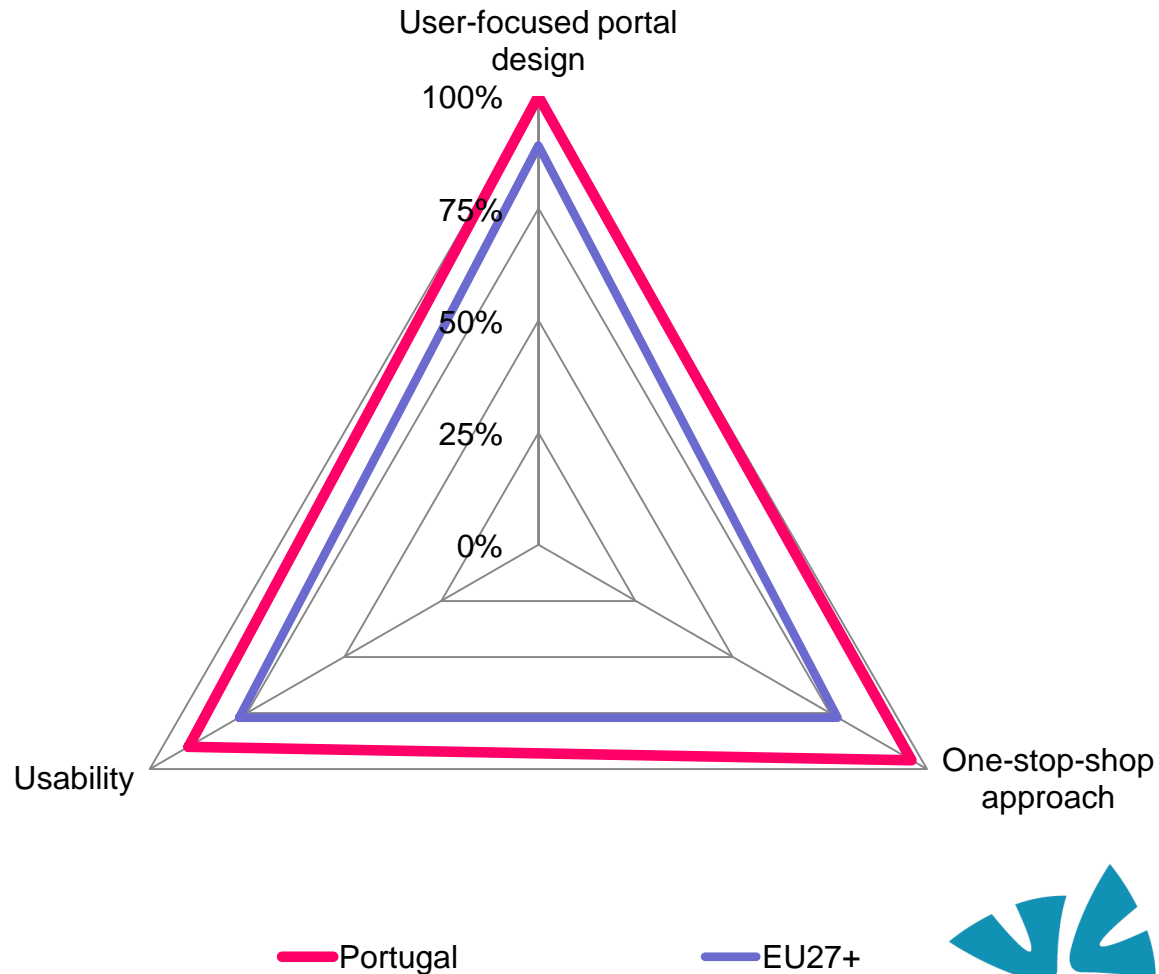Source: eGov Benchmarking Report 2010, DGINFSO, European Commission

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User Experience of e-Government Portals 2010

e-Procurement Pre-Award Process 2010

eAwarding

eNotification

eSubmission

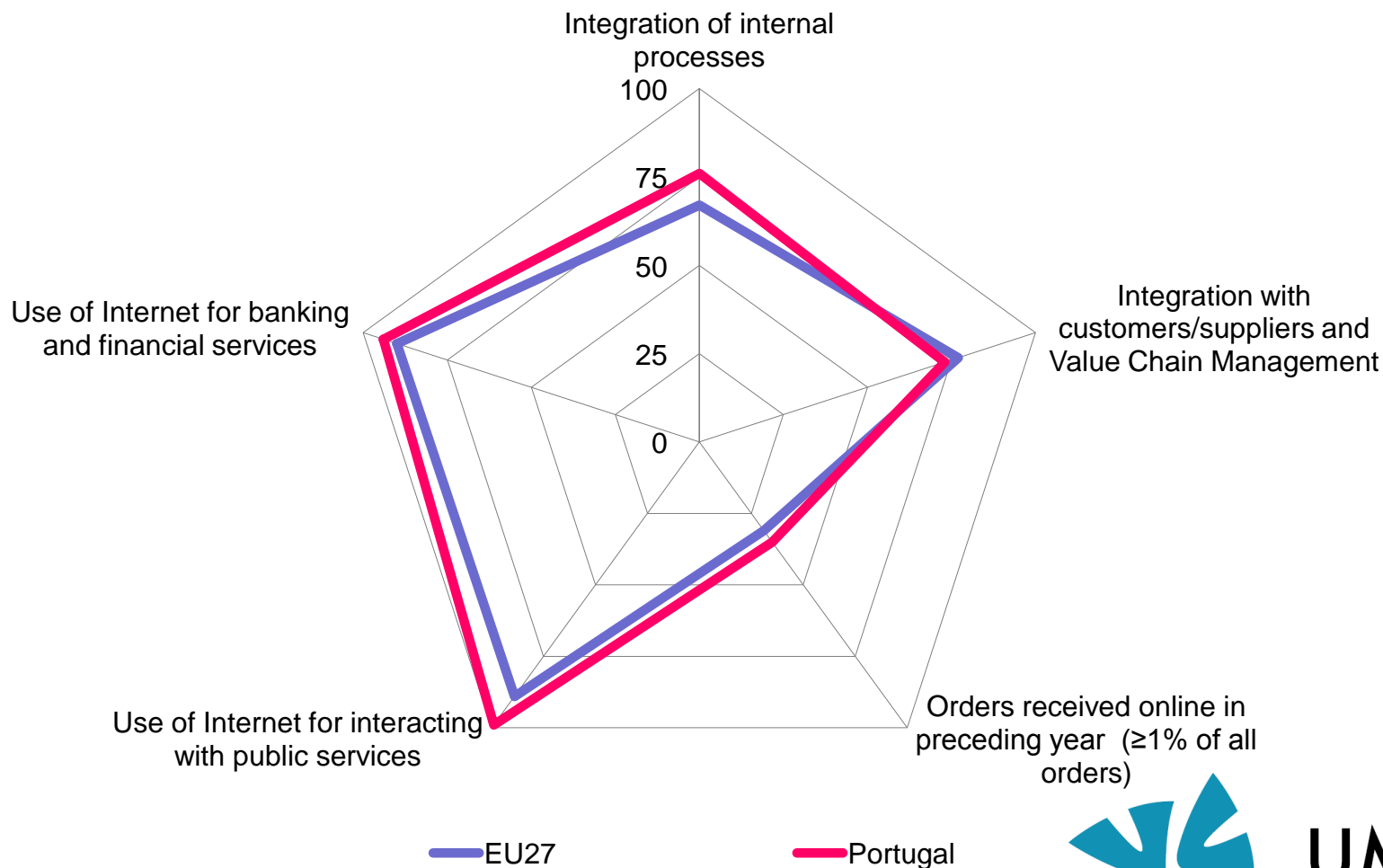100%
75%
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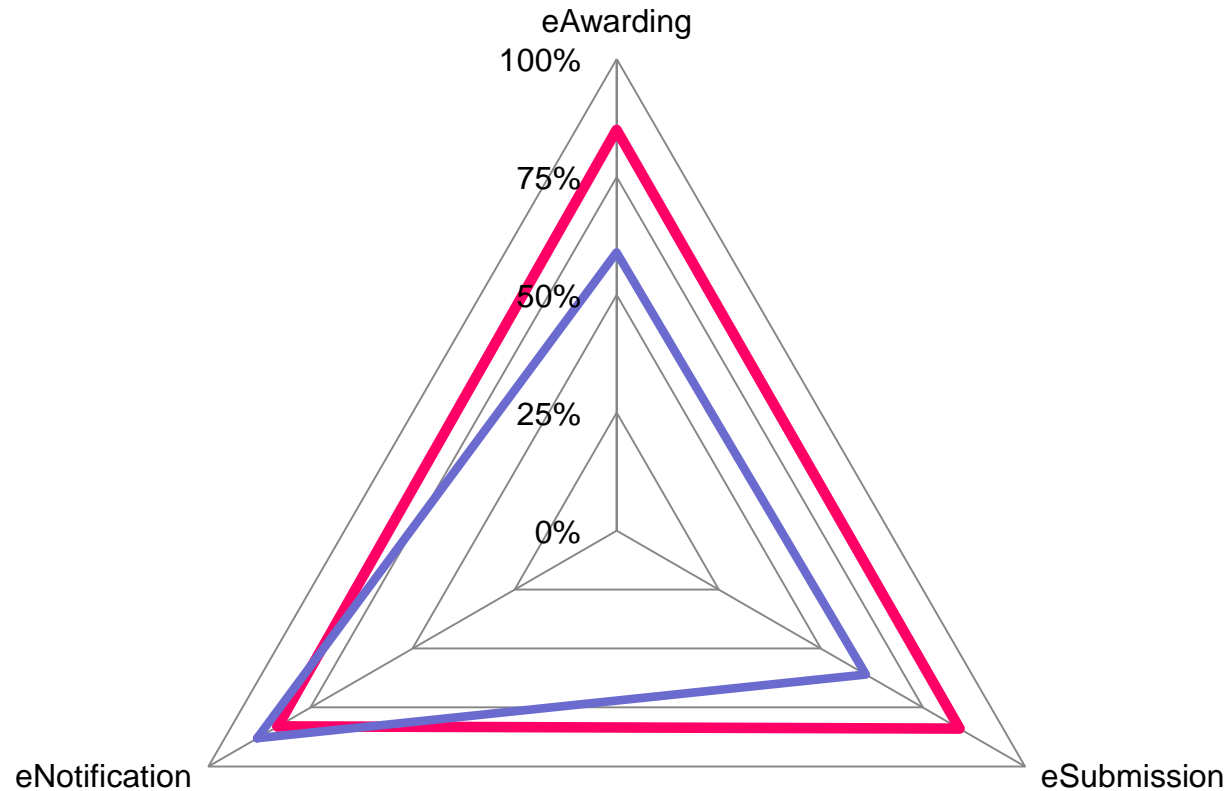
— Portugal   — EU27+

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Source: eGov Benchmarking Report 2010, DGINFSO, European Commission

eBusiness

eBusiness in Large Enterprises in the EU
2010, % of enterprises

Integration of internal processes

Integration with customers/suppliers and Value Chain Management

Orders received online in preceding year (≥1% of all orders)

Use of Internet for interacting with public services

Use of Internet for banking and financial services

EU27   Portugal

Source: EUROSTAT

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eBusiness in all enterprises of EU Member States

2010, % of enterprises
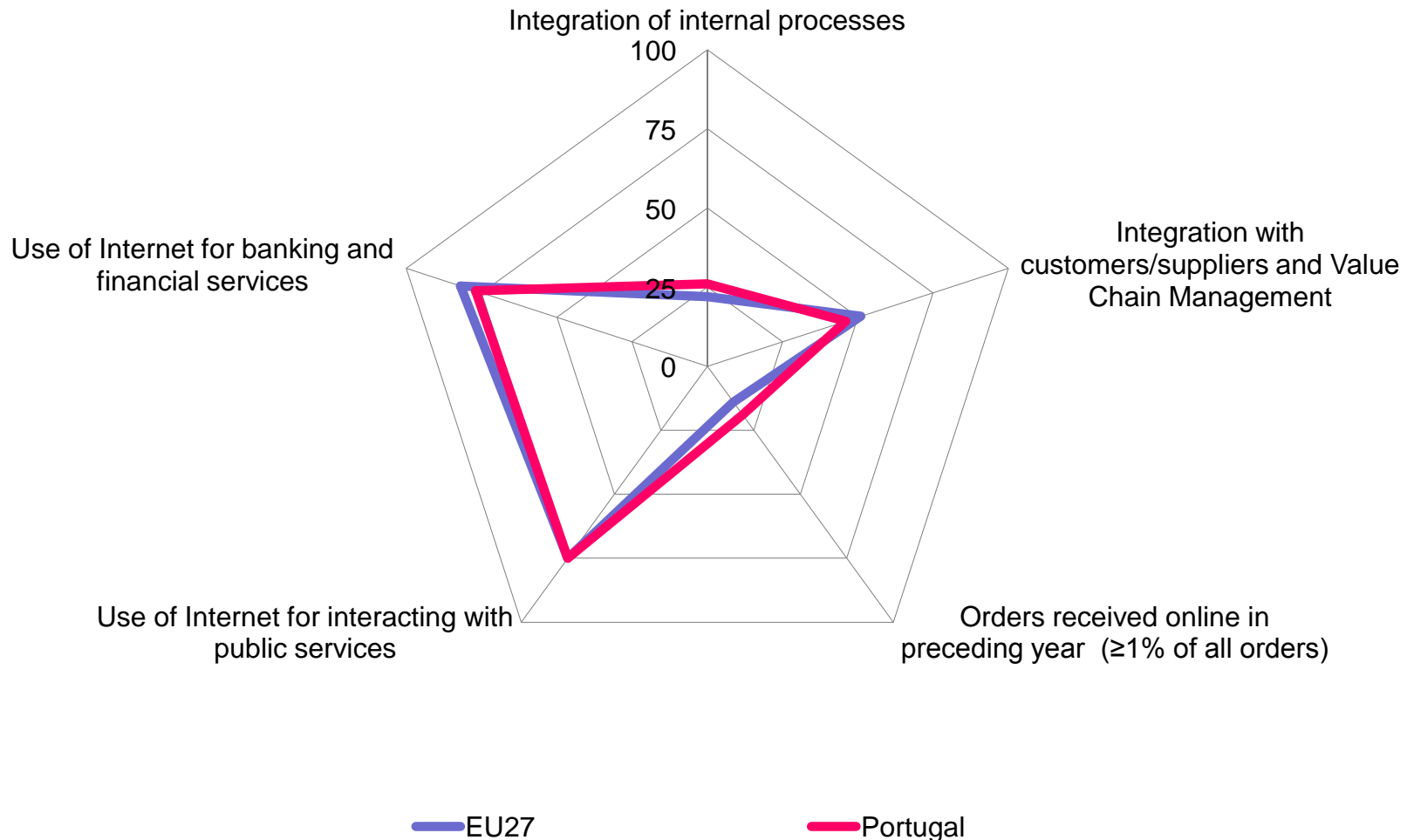
Source: EUROSTAT

eInclusion

33 Digital Cities and Regions, 1999-2009

Açores

Madeira

Açores Digital
Algarve Digital
Almada Digital
ALO Digital
Aveiro Digital
Beira Baixa Digital
Beja Digital
Braga Digital
Coimbra Região Digital
Entre Douro e Vouga Digital
Évora Distrito Digital
Gaia Global
Guarda Distrito Digital
Leiria Região Digital
Região Digital do Litoral Alentejano
Madeira Digital
Maia Digital
Médio Tejo Digital
Metrópolis Digital
Oeste Digital
Portoalegre Digital
Porto Digital
Ribatejo Digital
Seixal Digital
Setúbal - Peninsula Digital
Tâmega Digital
Tavira Digital
Trás-os-Montes Digital
Vale do Ave Digital
Vale do Minho Digital
Vale do Sousa Digital
Valimar Digital
Viseu Digital
Concelhos não incluídos em projectos de cidades e regiões digitais
Concelhos que participaram em dois projectos de cidades e regiões digitais

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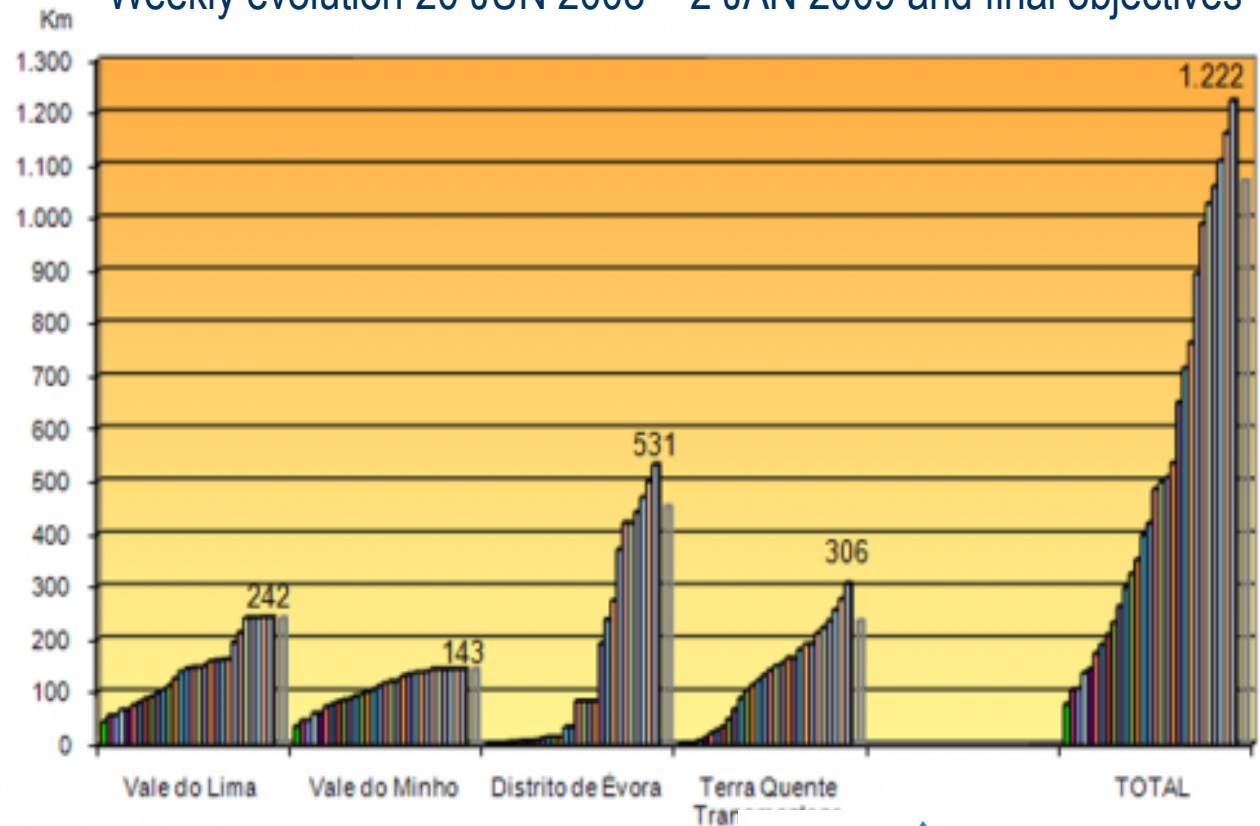
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4 Next Generation Community Networks, 2008

Length of ducts for optical fibre cables
Weekly evolution 20 JUN 2008 – 2 JAN 2009 and final objectives

Regular Internet Users in Portugal
% regular Internet users by educational attainment (1Q 2010)

➜ 96% people with higher education

average UE27 2009 = 92%

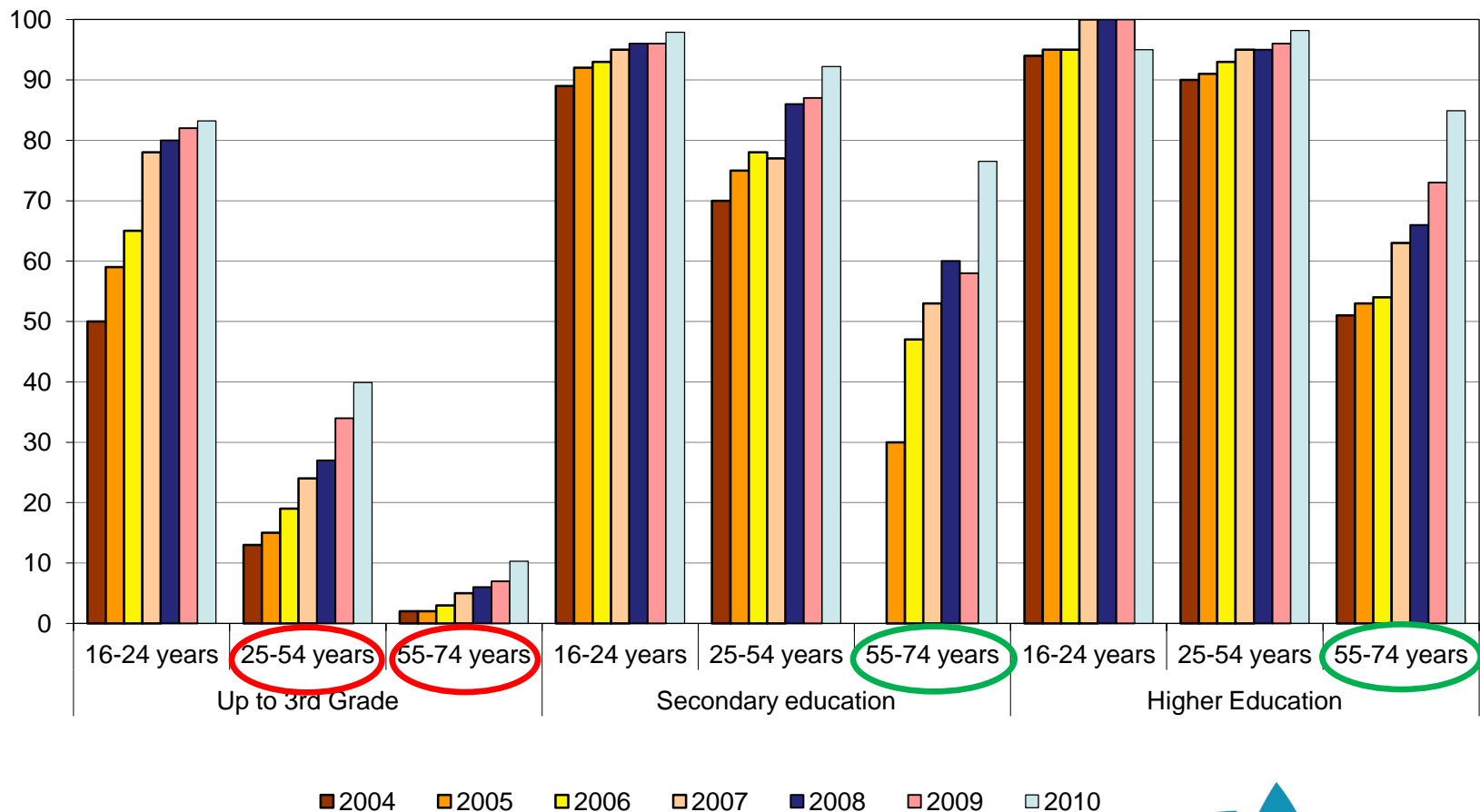➜ 92% people with upper secondary but without higher education

average UE27 2009 = 74%

➜ 34% people without upper secondary education

average UE27 2009 = 48%

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Regular Internet Users in Portugal
by age and educational attainment (1Q 2010)

Legend: 2004, 2005, 2006, 2007, 2008, 2009, 2010

Fonte: EUROSTAT

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Internet Spaces Network
1,170 Telecenters

eSkills development actions for special target groups:
aged, parents, immigrants, people with special needs