National e-Science Policy

CERN **IT** Division visit to FCCN

Lisbon, 12th November 2010

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Ministry of Science, Technology and Higher Education, **Portugal**
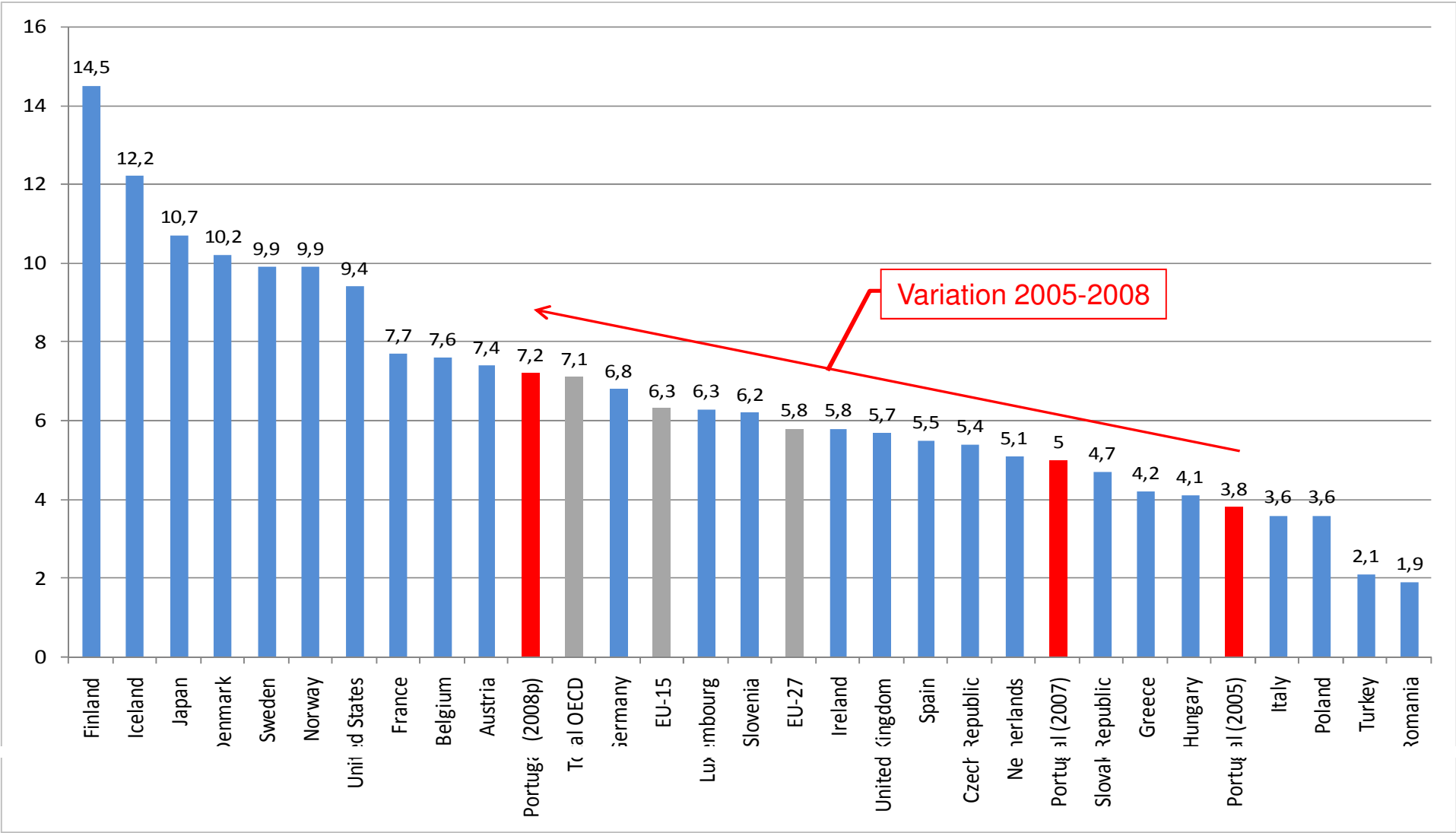
Knowledge Society Agency Mission

→ 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

UMIC
Knowledge Society
Agency

Context of Very High S&T Growth in Portugal
Almost doubling from 2005 to 2008 researchers and R&D intensity

Very High Growth of Researchers (‰ labor force)
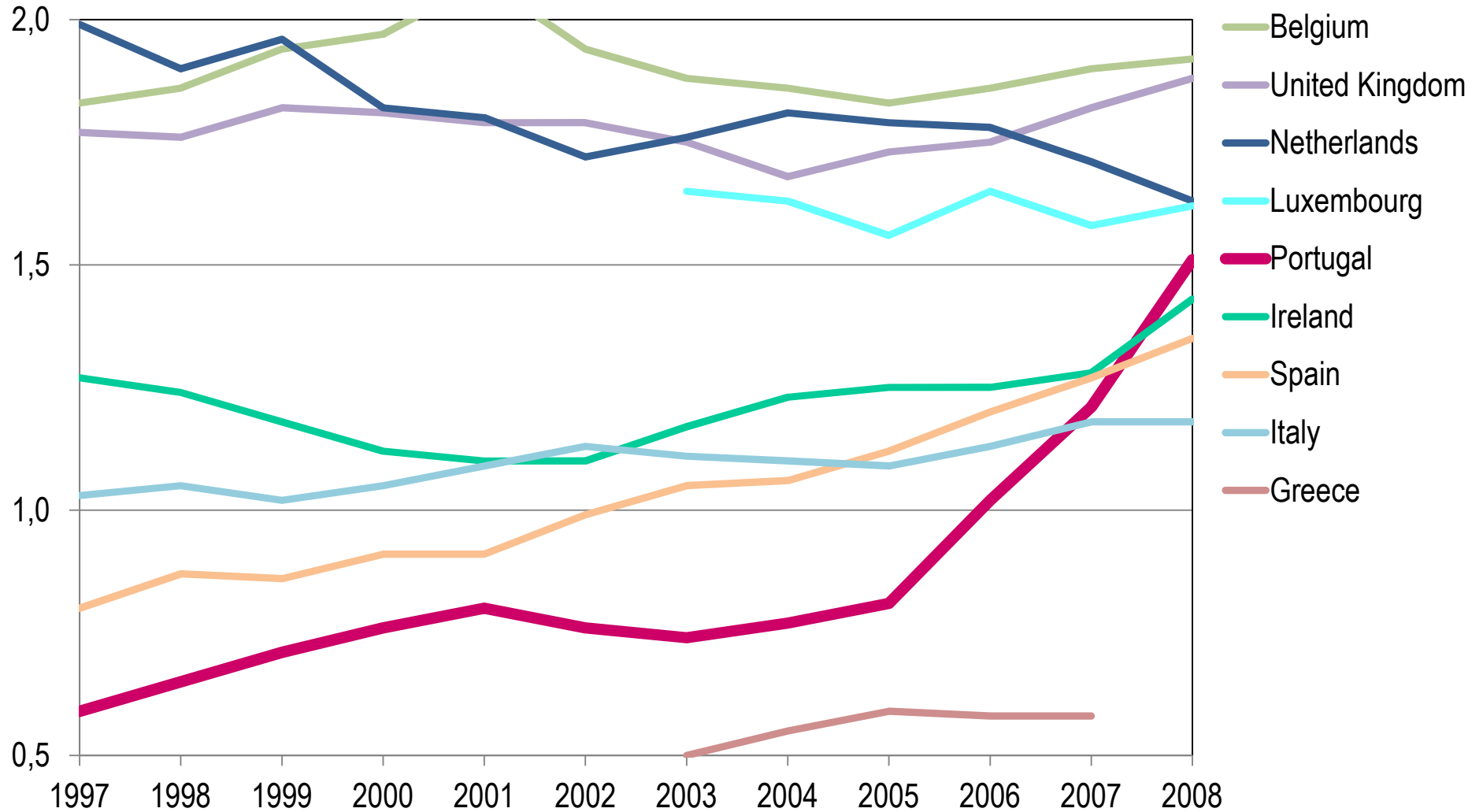

Variation 2005-2008

Country	Value
Finland	14,5
Iceland	12,2
Japan	10,7
Denmark	10,2
Sweden	9,9
Norway	9,9
United States	9,4
France	7,7
Belgium	7,6
Austria	7,4
Portugal (2008p)	7,2
Total OECD	7,1
Germany	6,8
EU-15	6,3
Luxembourg	6,3
Slovenia	6,2
EU-27	5,8
Ireland	5,8
United Kingdom	5,7
Spain	5,5
Czech Republic	5,4
Netherlands	5,1
Portugal (2007)	5
Slovak Republic	4,7
Greece	4,2
Hungary	4,1
Portugal (2005)	3,8
Italy	3,6
Poland	3,6
Turkey	2,1
Romania	1,9

Note: Except for Portugal data are for 2007
Source: OECD

Very High Growth of R&D Expense in GNP (%)
Highest average growth (23%) of UE27 (total=1,4%) in 2005-2008

Legend:
- Belgium
- United Kingdom
- Netherlands
- Luxembourg
- Portugal
- Ireland
- Spain
- Italy
- Greece

X-axis: 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008

Y-axis: 0,5 1,0 1,5 2,0

Source: EUROSTAT

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

National e-Science Strategy Infrastructure

➔ **National Research and Education Network** as a public NGN, presently with fiber owned by the NREN to 85% of Higher Education System, at 10 Gbps and scalable

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

National e-Science Strategy
Content

➔ **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

➔ **RCAAP: Scientific Open Access Repository of Portugal,** presently with 29 institutions, including all 14 public universities, and >48,200 documents, protocol w/ Brazil

➔ **ZAPPIENS.PT,** HD scientific, educational and cultural video repository under Creative Commons and DRM licensing

National e-Science Strategy
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 from any computer

→ **National platform for scientific and educational digital content** being developed for Medicine and Future Internet, to be further extended

National e-Science Strategy
Distributed Computing

➔ **INGRID: National GRID Initiative** (1,800 CPUs, 1 PetaByte of disc memory, 2 PetaBytes of magnetic tape robot memory, national node at FCCN w/ other nodes throughout Portugal), integrated w/ Spanish GRID (IBERGRID), and part of the EGI – European Grid Initiative

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