



Connectivity Scorecard 2009 Broadband Impact Study

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LECG





How to
benefit from
useful
connectivity

How BB
impacts
economic
productivity

Conclusions
and
takeaways

What does Connectivity Scorecard 2009 offer?

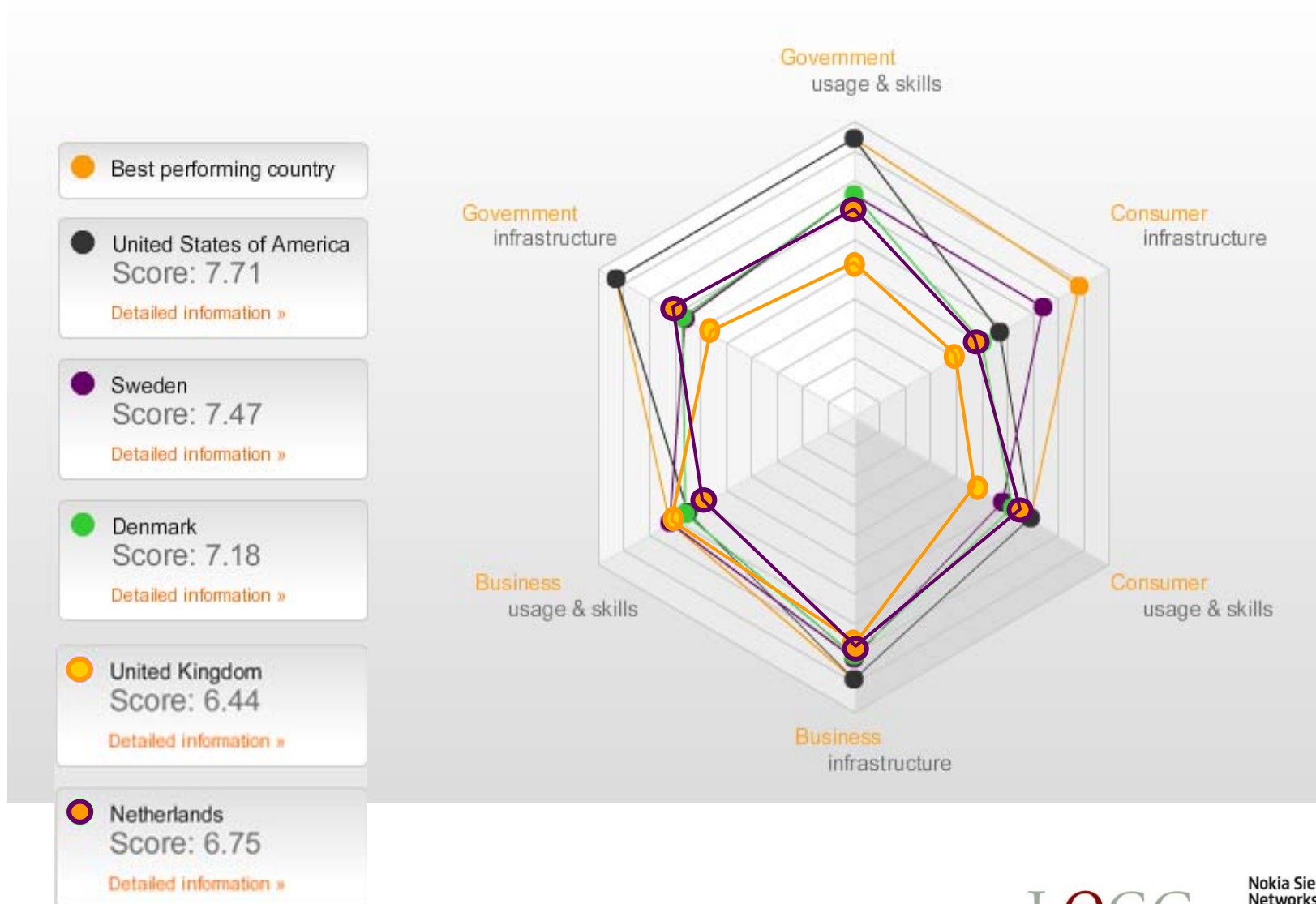
- 1st study to look at both ICT infrastructure deployment AND good use
- Measures the impact of ICT investment on **50 countries** around the world; most new entrants from **Asia, Africa and Latin America**
- Data revision: 2009 version includes several **new, robust and transparent sources of raw data**
- Study uses approximately **30 connectivity indicators** to measure contribution to social and economic prosperity

Overview of 2009 results

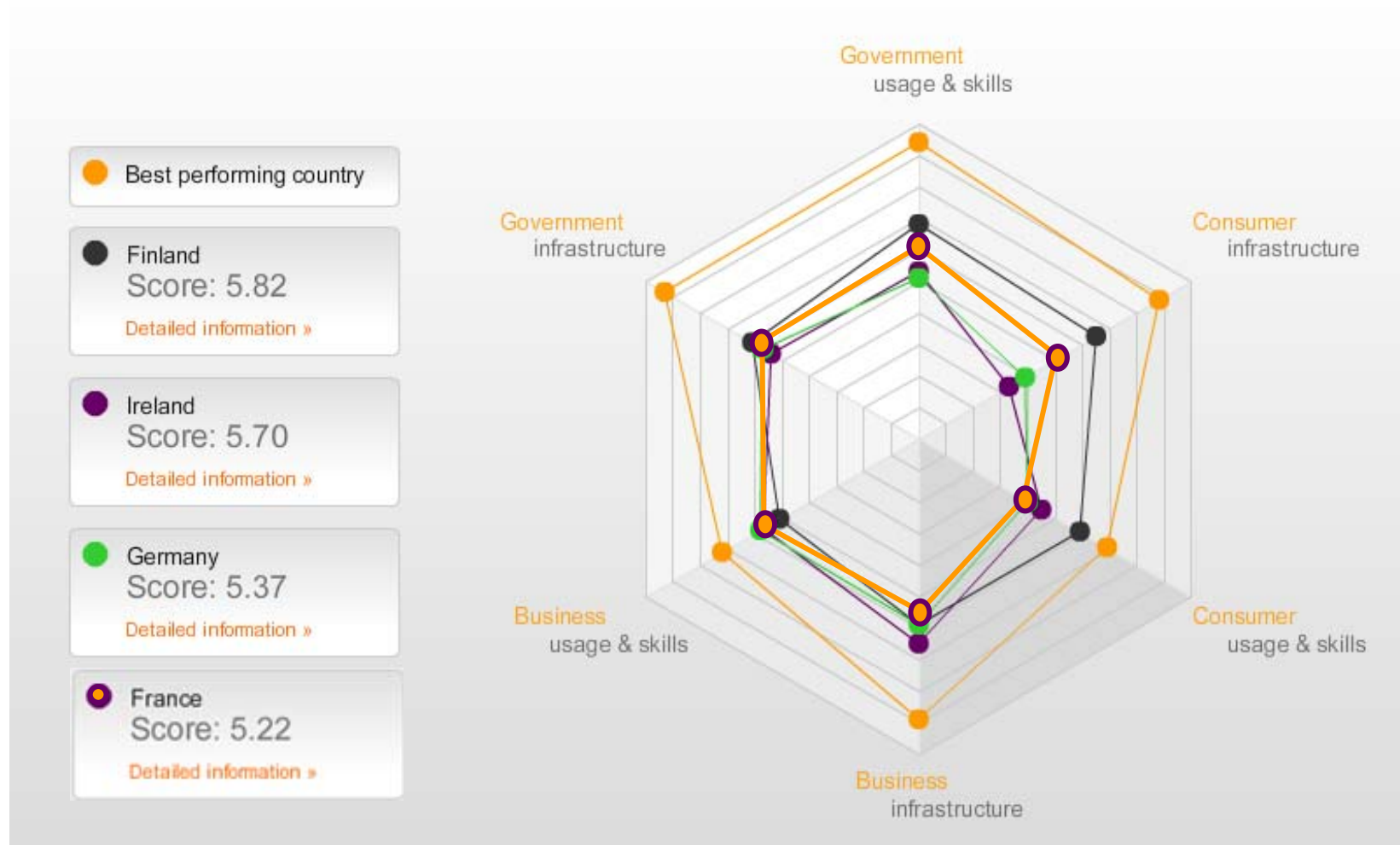
Innovation-driven economies	Connectivity score
United States	7.71
Sweden	7.47
Denmark	7.18
Netherlands	6.75
Norway	6.51
United Kingdom	6.44
Canada	6.15
Australia	6.14
Singapore	5.99
Japan	5.87
Finland	5.82
Ireland	5.70
Germany	5.37
Hong Kong SAR	5.33
France	5.22
New Zealand	4.85
Belgium	4.65
Korea	4.17
Italy	3.99
Czech Republic	3.71
Spain	3.49
Portugal	3.02
Hungary	2.72
Greece	2.62
Poland	2.49

Resource & efficiency-driven economies	Connectivity score
Malaysia	7.07
Turkey	6.71
Chile	6.59
South Africa	5.76
Mexico	5.39
Russia	5.37
Argentina	5.14
Brazil	5.12
Colombia	4.08
Botswana	3.98
Thailand	3.75
Iran	3.62
Ukraine	3.60
Tunisia	3.50
China	3.19
Philippines	3.17
Egypt	3.02
Sri Lanka	2.87
Vietnam	2.75
India	1.88
Indonesia	1.87
Kenya	1.75
Bangladesh	1.60
Pakistan	1.54
Nigeria	1.30

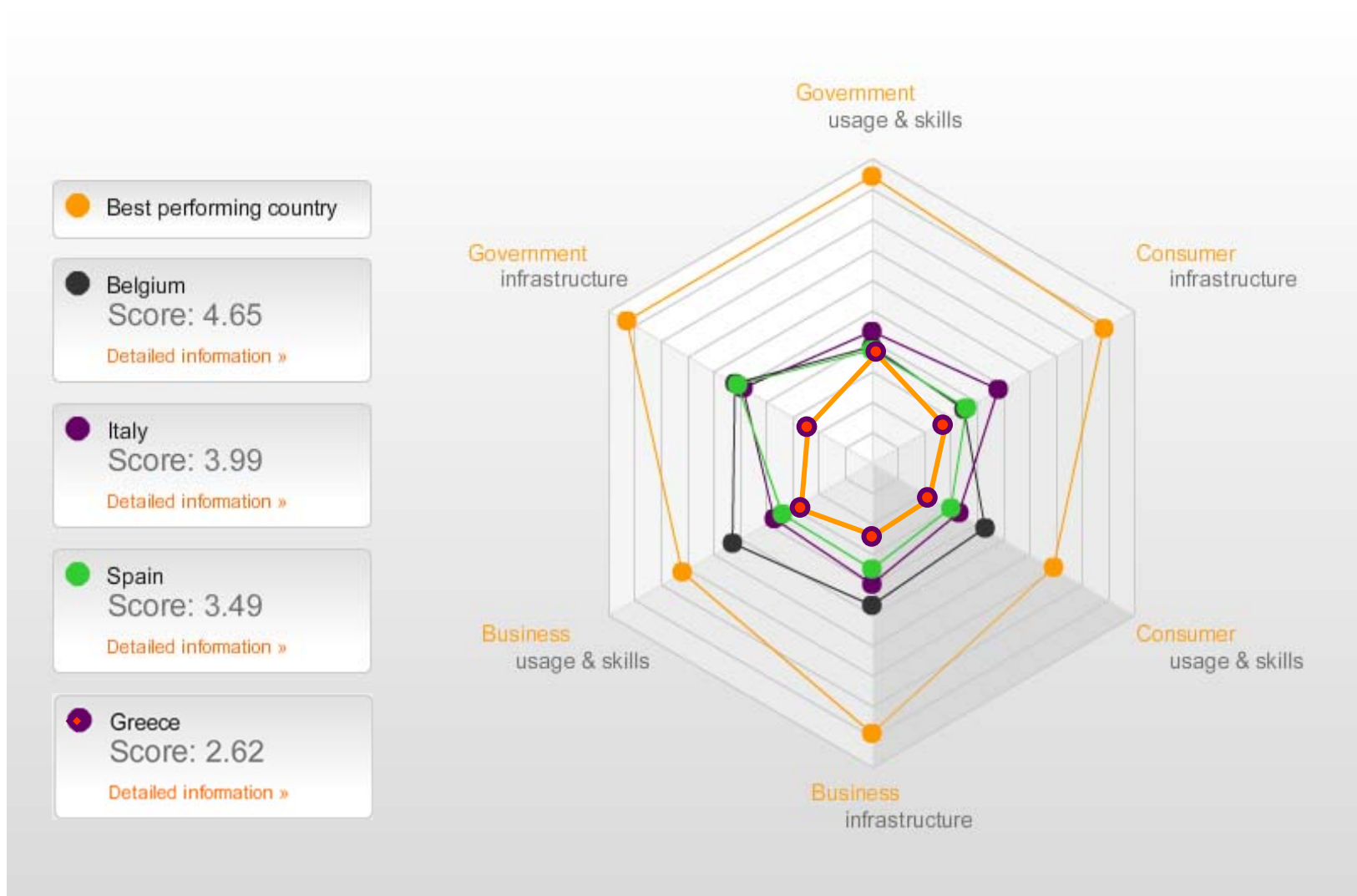
High ICT countries



Medium ICT countries



Low ICT countries



- Best performing country
- Belgium
Score: 4.65
[Detailed information »](#)
- Italy
Score: 3.99
[Detailed information »](#)
- Spain
Score: 3.49
[Detailed information »](#)
- Greece
Score: 2.62
[Detailed information »](#)

No country performed especially well – call to action to step up use of ICT potential

Innovation-driven economies

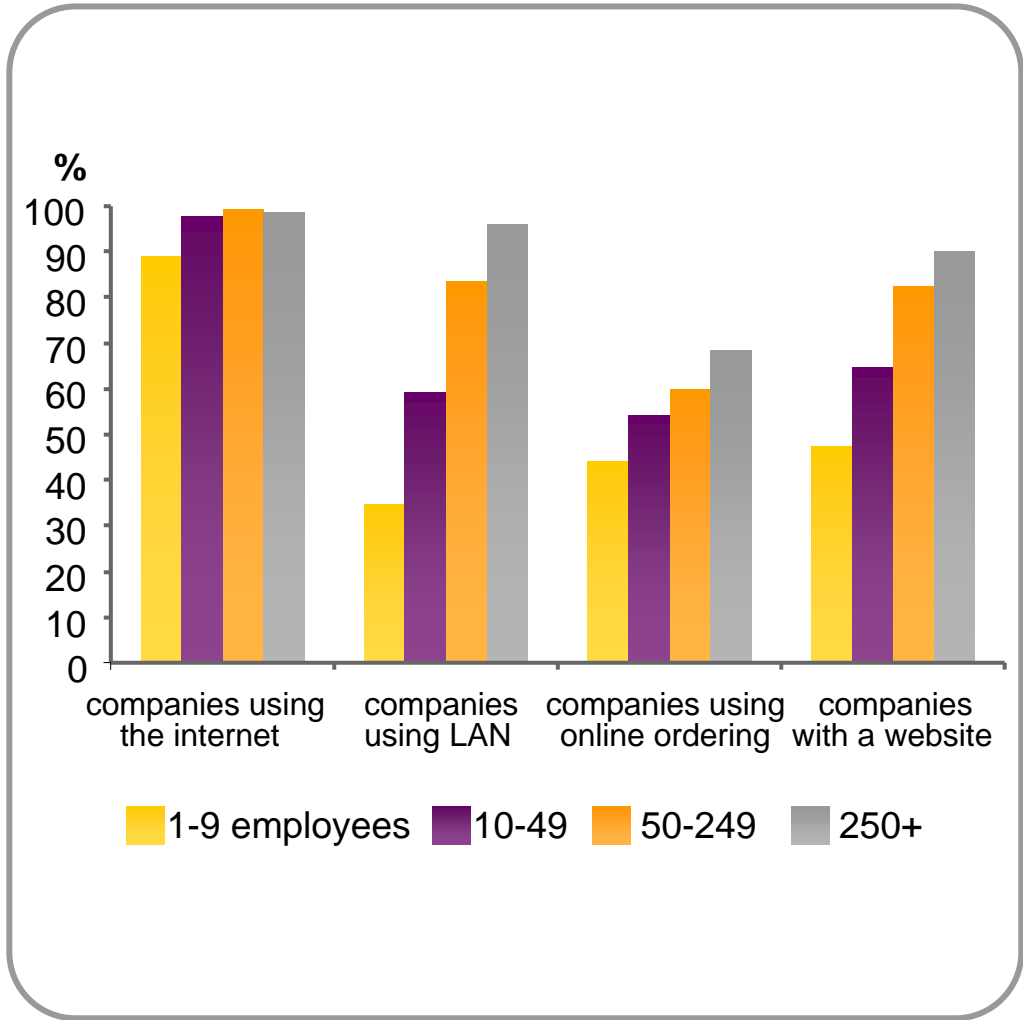
- Median score only **5.37**
- Target 21st century infrastructure
- Improve skills/ enhance workforce training
- Business adoption of “useful connectivity” as source for innovation and productivity

Resource and efficiency-driven economies

- Median score only **3.60**
- Lack of basic access to education
- Focus on public-private co-operation in goals
- Need to move infrastructure to the next level

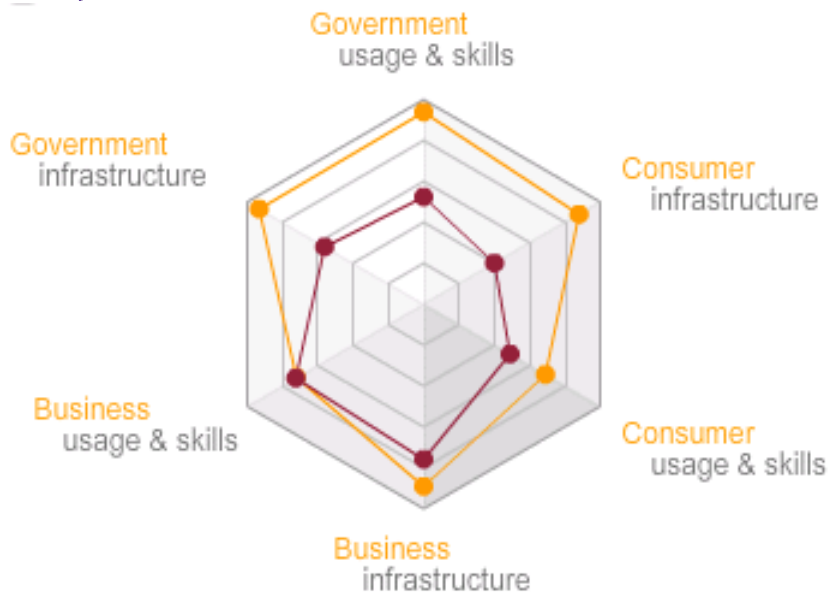


Large vs. small enterprises



- Large enterprises (with 250+ individuals) make much more intensive use of ICT than smaller businesses
 - more regular ICT training; dedicated ICT staff
 - increased use of WLAN; more remote access from home
 - increased use of online ordering; increased website presence and use of intranets
- Telecommunications and financial sectors greater ICT users than “traditional” manufacturing sectors
- Share of large enterprises in terms of revenue and employment significantly different in various European economies

Country example: Strong business connectivity underlines UK performance



● Best performing country ● United Kingdom

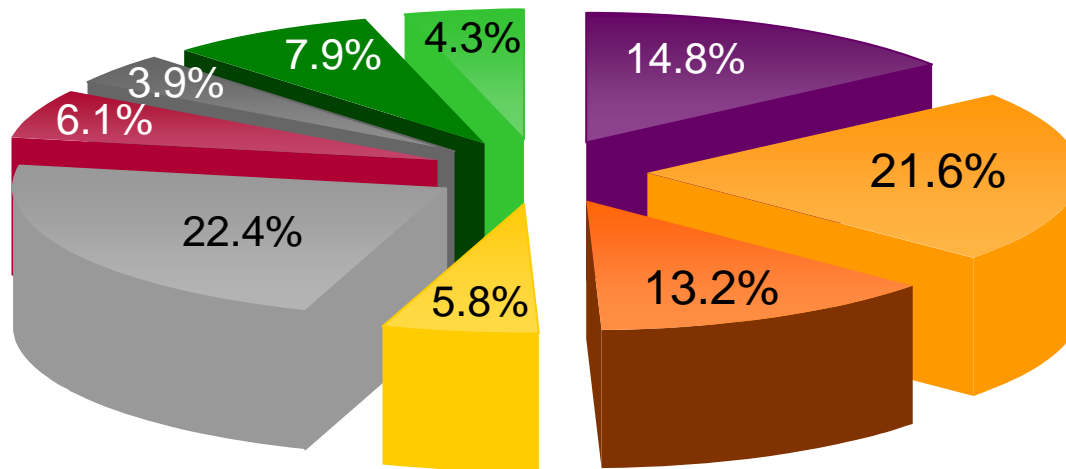
Ranked 6th with:

- Excellent PC and secure server penetration
- High rates of e-commerce in business
- Strong proportion of ICT skills and specialist jobs
- Good spending on ICT resources
- High online government services usage
- Strong share of corporate data revenue from IP and Ethernet

Areas for improvement

- Relatively slow broadband speeds
- Few fiber access networks
- 3G penetration not yet widespread
- Moderate government spending on hardware, software and IT services

Why is UK doing so well? A closer look at its economic model



- UK Post and telecommunications
- UK Real estate and business services
- UK Financial intermediation
- Germany Post and telecommunications
- Germany Real estate and business services
- Germany Financial intermediation
- Italy Post and telecommunications
- Italy Real estate and business services
- Italy Financial intermediation

- Large corporations more important in UK than in Spain, Italy and other EU countries
- ICT-intensive financial and post & telecommunications sectors high share of UK revenue
- Country very successful in attracting inward capital from overseas

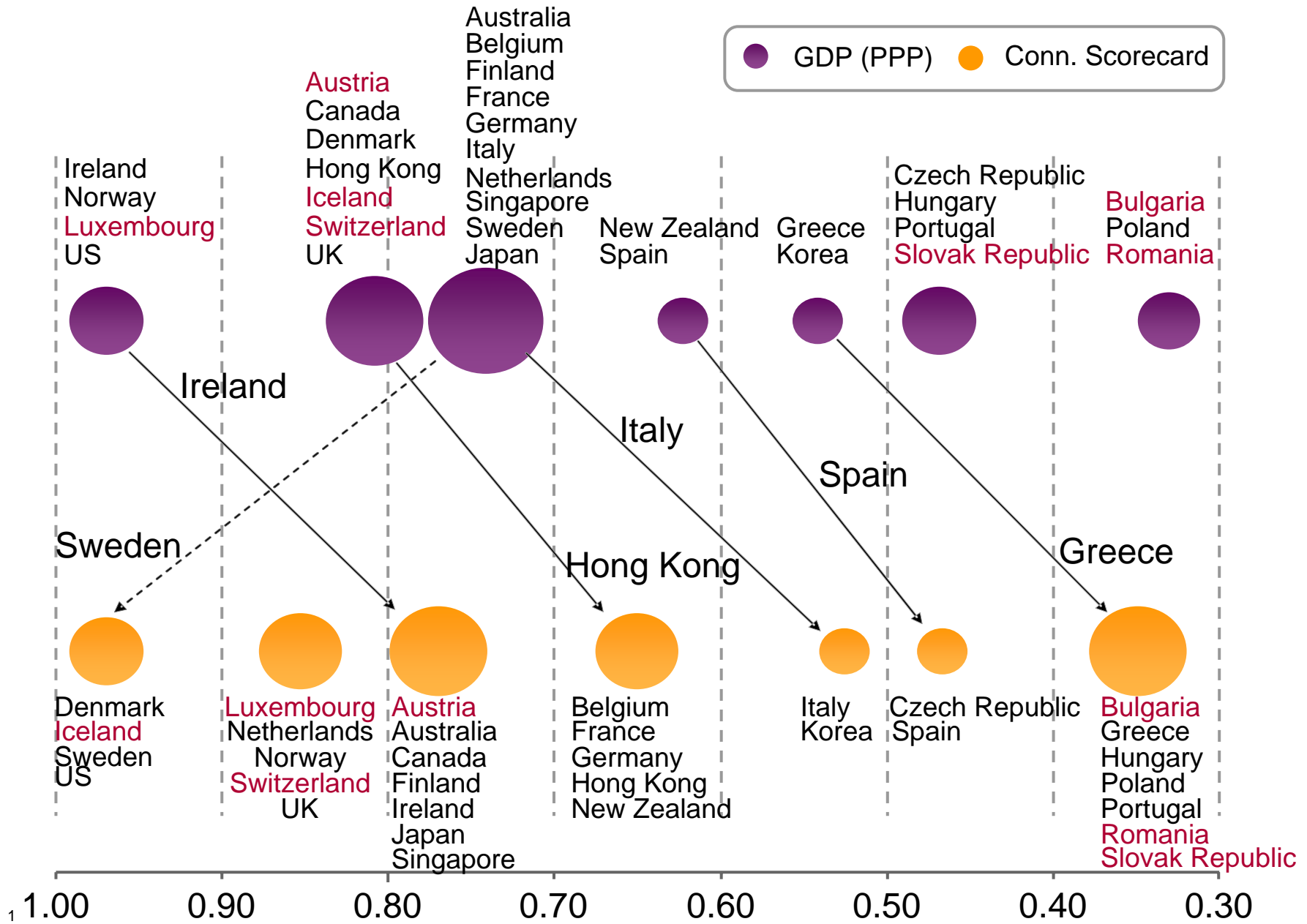
BUT: How sustainable is UK's economic model?

How would other EU/ OECD countries do in Connectivity Scorecard 2009?

Overall trend continues:

- Very high scores for Northern and Western European countries
- Scandinavian countries stand out
- Moderate performance by core continental economies
- Very significant drop-off in ICT performance in Southern and Eastern Europe

Connectivity in Europe – the enhanced view





How to benefit from useful connectivity

How BB impacts economic productivity

Conclusions and takeaways

What does Broadband Impact Study add to Connectivity Scorecard?

- An econometric study to explore the **true impact of broadband investment** – economic value instead of penetration, speed or price
- Studies **15 OECD countries** – 14 European countries and the US (selection based on availability of comparable data)
- Countries divided into **three subgroups** according to their “**ICT intensity**”
- Study captures **effect of broadband penetration** in low ICT intensity nations and adds additional effect of BB penetration in medium and high ICT intensity nations



15 OECD countries studied



High ICT diffusion*

Denmark
Netherlands
Sweden
United Kingdom
United States

Medium ICT diffusion*

Austria
Finland
France
Germany
Ireland

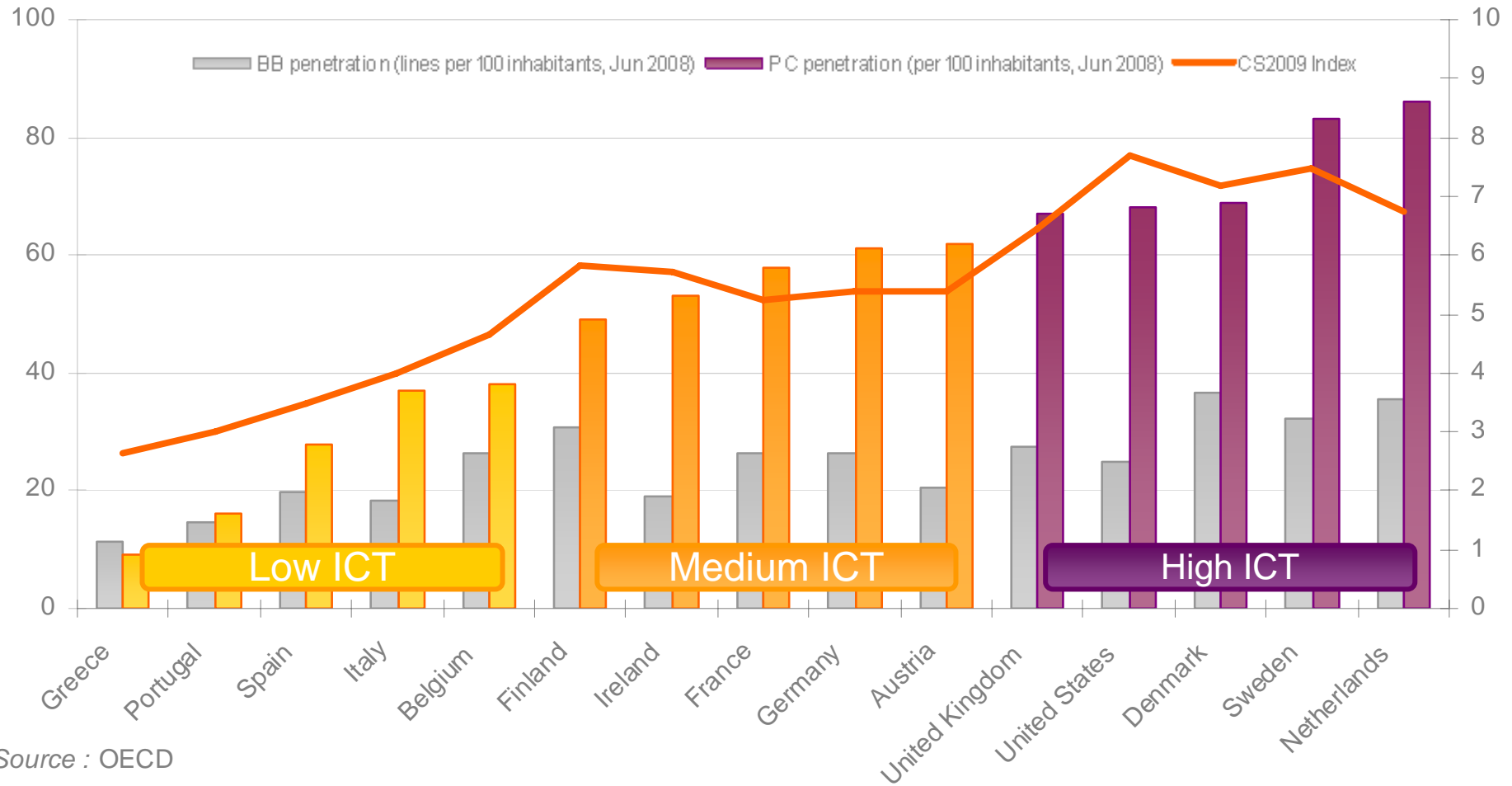
Low ICT diffusion*

Belgium
Greece
Italy
Portugal
Spain

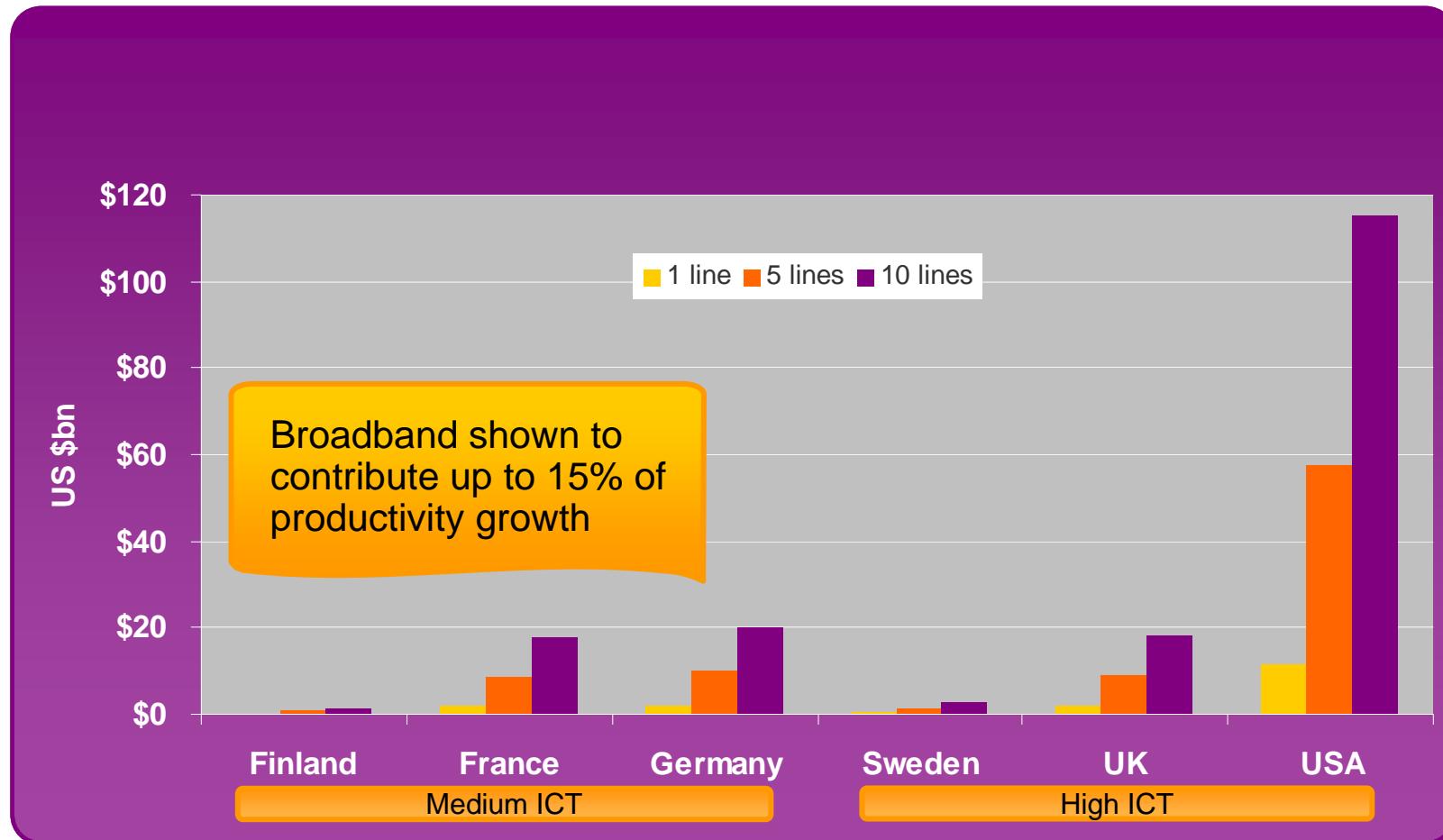
Broadband & PC penetration per 100 inhabitants

PC & BB penetration

Connectivity Scorecard 2009



Estimated economic benefits from broadband penetration (GDP \$bn per additional BB lines)



Key lessons

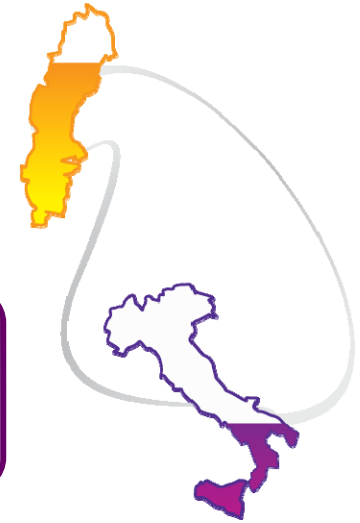
- **Medium and high ICT environments – Northern and Western Europe, North America:** Broadband investment has positive and statistically significant impact on productivity. But challenges remain for all stakeholders about broadband services in remote areas and how to close the internal digital divide.
- **Southern Europe:** Low ICT investment, low skills, lack of innovation and leadership in design and manufacturing; low PC penetration: factors leading to low broadband penetration and limited returns on what broadband has already been deployed.

Making the most of broadband requires a strategy that focuses on ICT more broadly:

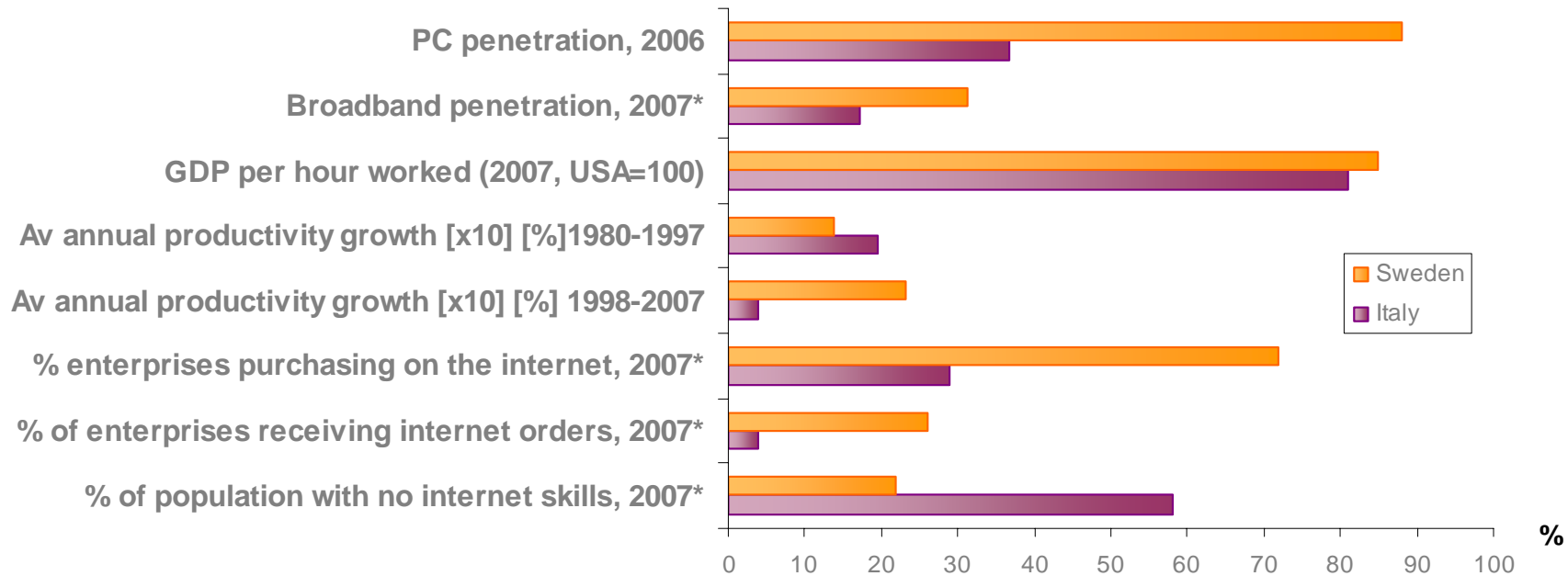
- crucial development of skills
- business interest in ICT as an enabler of change
- expansion of broadband infrastructure
- ICT ecosystem to enable broadband to be a productivity enhancement tool



Country example: Italy versus Sweden



Italy weaker than Sweden in all six sub-categories of Connectivity Scorecard





How to benefit from useful connectivity

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Conclusions and takeaways

Connectivity Scorecard and Broadband Impact Study – two sister ICT projects for the 21st century

- Connectivity Scorecard – the 1st study to rank countries on ICT infrastructure deployment AND good use (“useful connectivity”)
- Broadband Impact Study – a groundbreaking study that measures the impact of broadband on a country’s GDP -> BB increased productivity growth up to 15 percent in some OECD countries



Key messages for European policy makers (1)

- Connectivity is the key driver for improved quality of life
- Increase investment in connectivity, particularly in next-generation broadband networks and "white broadband gaps"
- Eliminate barriers and rigidities to stimulate this investment
- Foster widespread infrastructure to enable "useful connectivity," especially in public areas such as health care, public safety, education and transport
- Benefits of connectivity will materialize when there is widespread ICT savvyness and technology adoption

Key messages for European policy makers (2)

- “Lower ICT” environments
 - Fix both supply and demand side
 - Enable workforce and consumers in terms of ICT skills
 - Remove obstacles to organizational change
- “Higher ICT” environments
 - Use innovative capabilities to promote fast technology adoption and deep and creative technology use
 - Get rid of any digital divide in skills and abilities to exploit broadband
 - Promote broadband but also invest in assets and skills

Your questions,
please.

For further information, link to the
web page:

www.connectivityscorecard.org

