

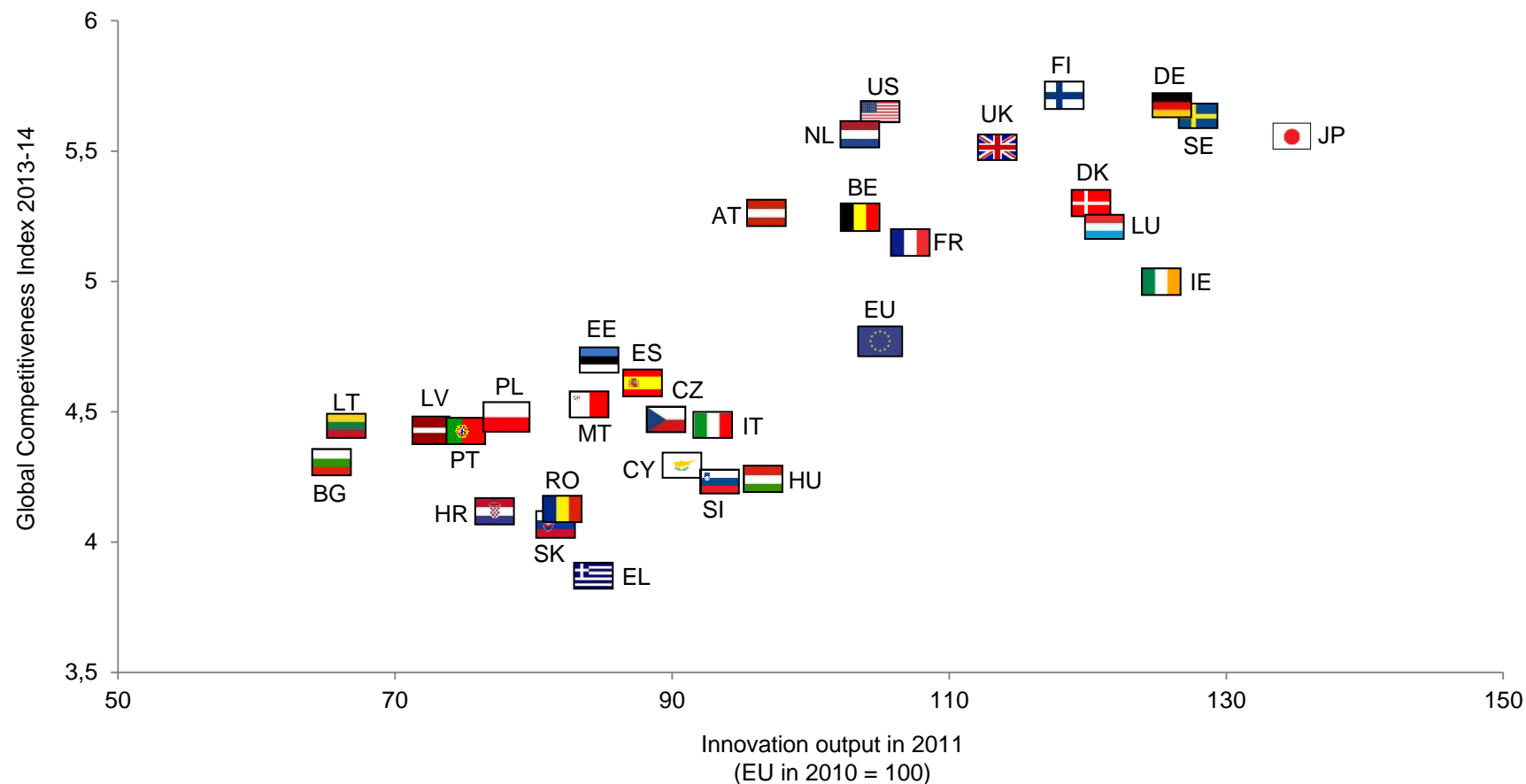


Innovating in the digital era: putting Europe back on track

Presentation of J.M. Barroso,
President of the European Commission,
to the European Council of 24-25 October 2013

Innovation is key to our competitiveness

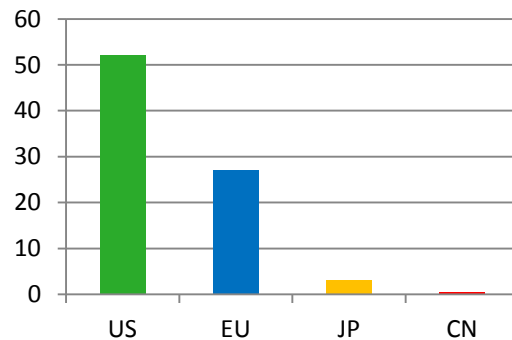
Global competitiveness index *versus* innovation output indicator



To lead globally, the EU needs...

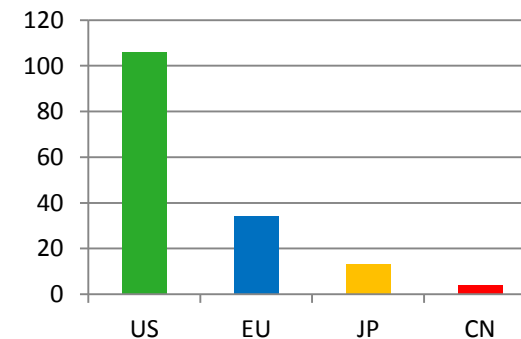
World-class universities

Number of universities in Top 100
(Shanghai index, 2013)



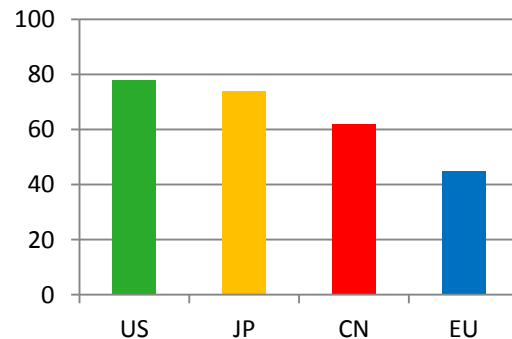
Excellence in science

Number of Nobel Prize winning scientists
in the last 20 years (1994-2013)



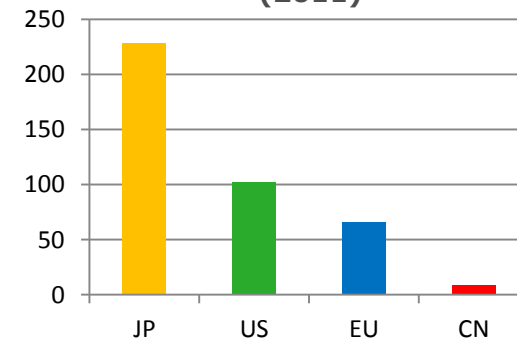
PhDs trained for industry

Share of researchers in the business sector
(% of total researchers, 2010)



Better knowledge transfer between academia & industry

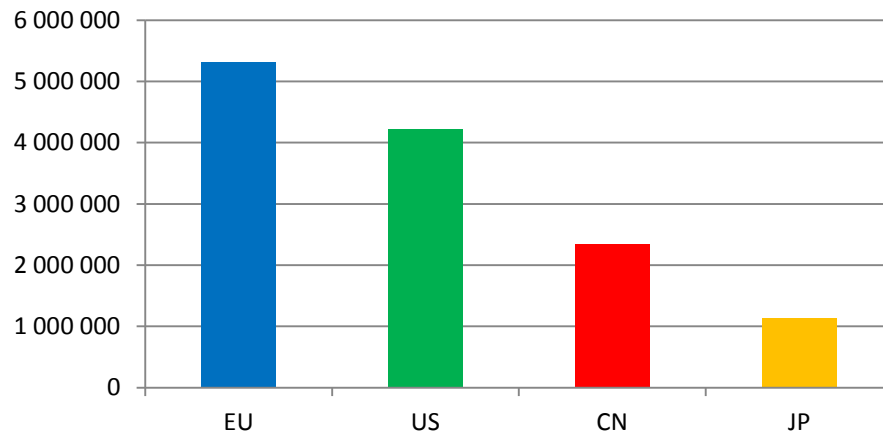
Patent applications per million people
(2011)



The EU has a strong scientific base

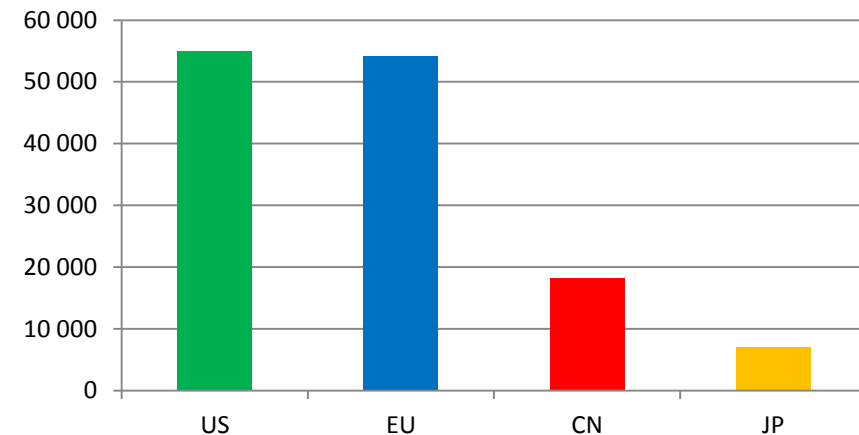
Scientific publications in the last decade

Number of scientific publications,
2000-2011

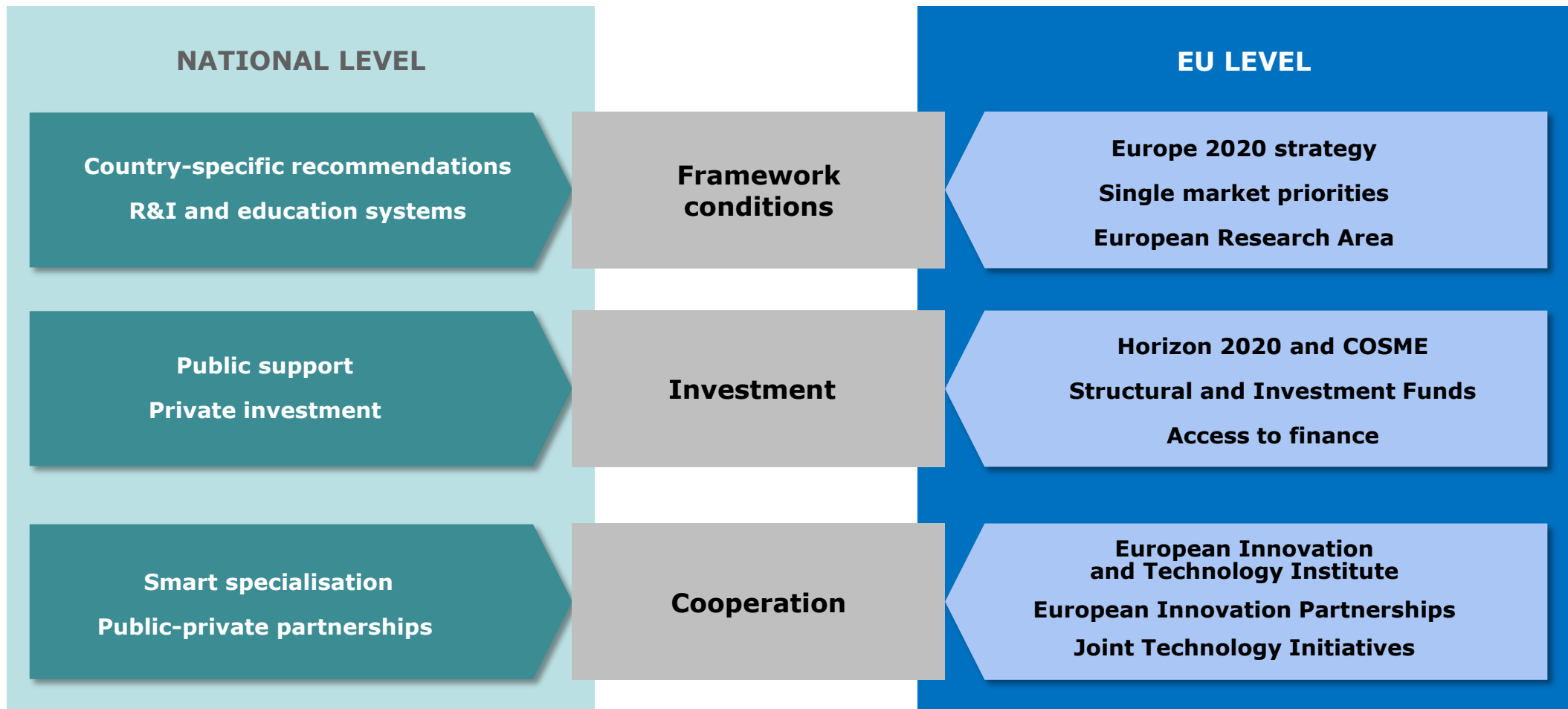


Most cited publications

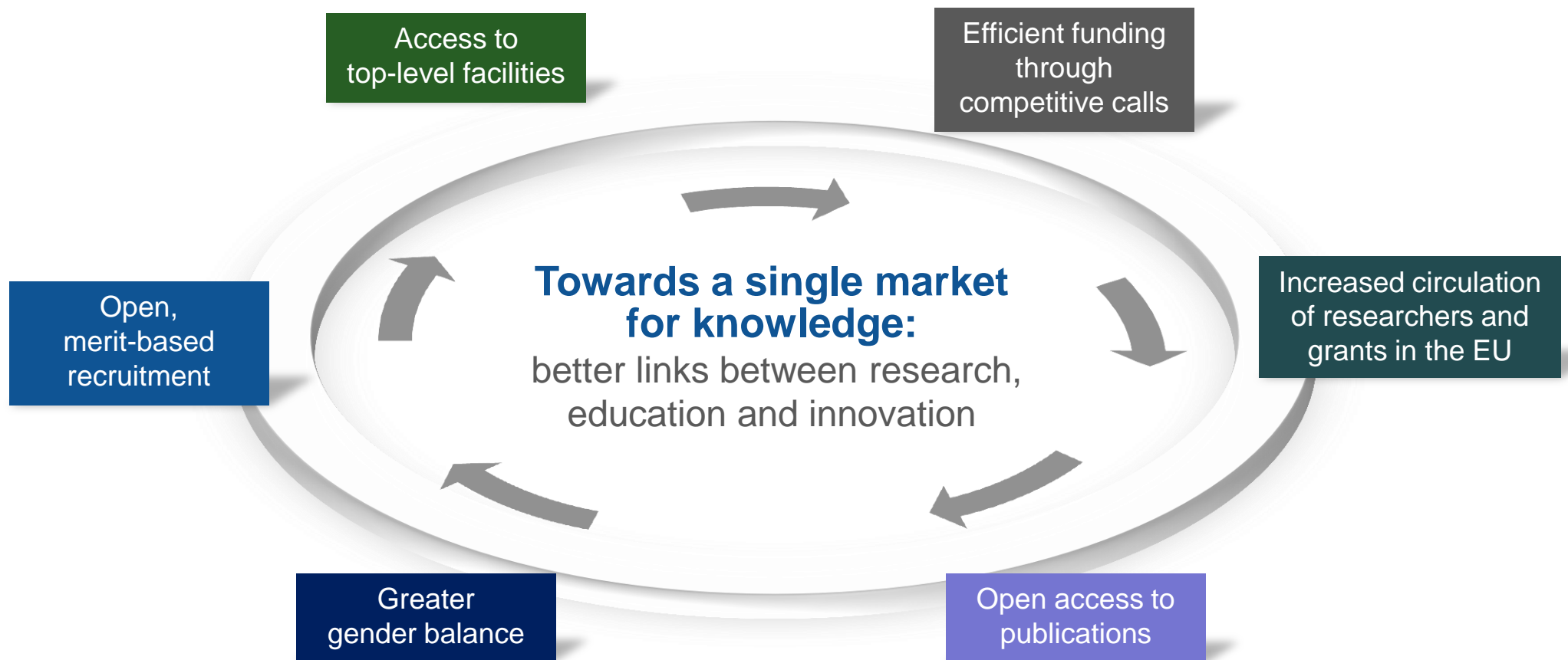
The 10% most cited 2008 publications,
over 2008-2011



A lot can be done



Example 1: The European Research Area



Example 2: The Horizon 2020 programme

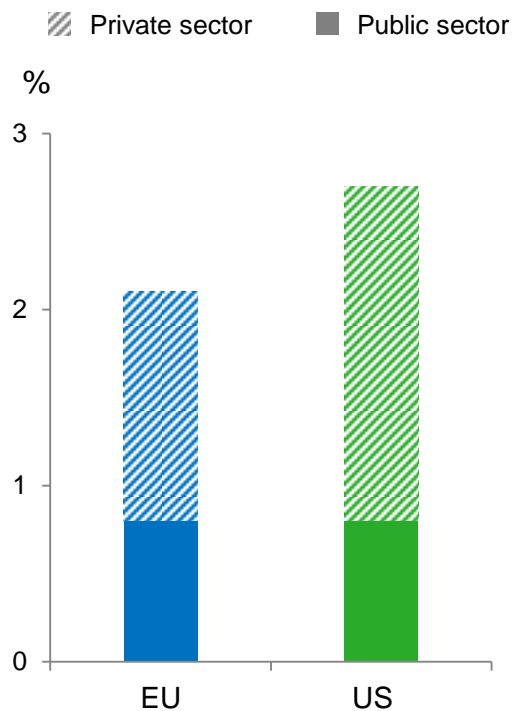
**Horizon 2020: more than € 70 billion
to invest in R&D, 2014-2020**



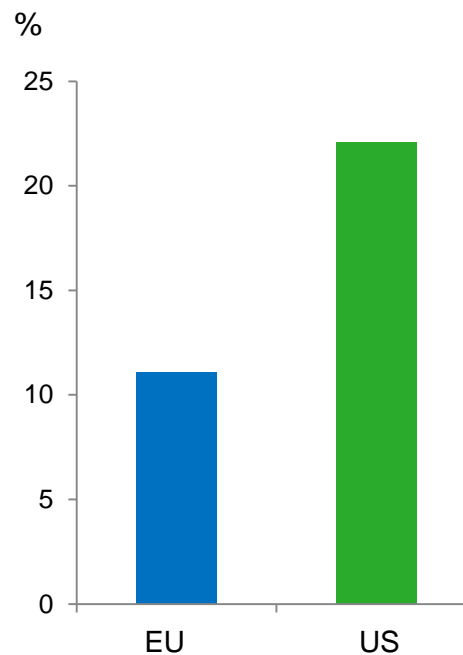
ICT plays a key role

Europe compared to the US: R&D spending, ICT investment and productivity

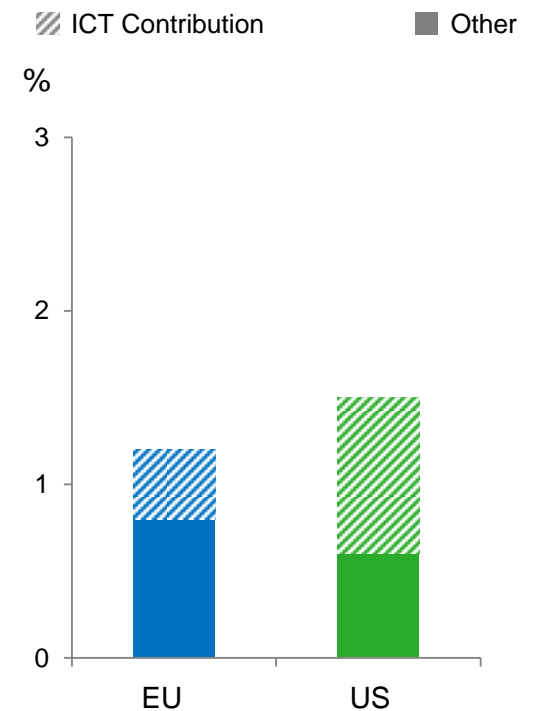
Expenditure on R&D as % of GDP (2011)



Investment in ICT as % of total investment (2011)

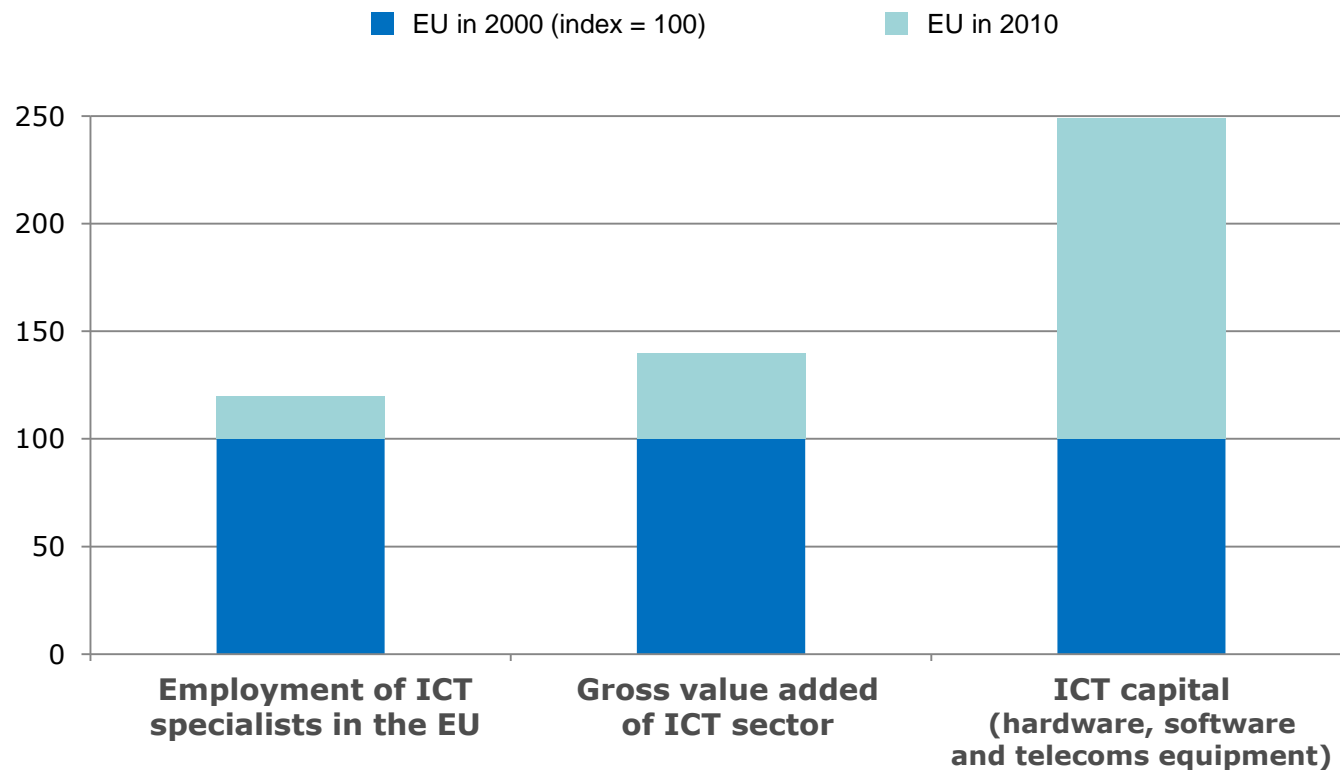


Labour productivity growth and ICT contribution (2001-2011)



The digital economy: sizeable potential...

ICT in the EU: number of jobs, value generated and ICT capital in 2000 and 2010



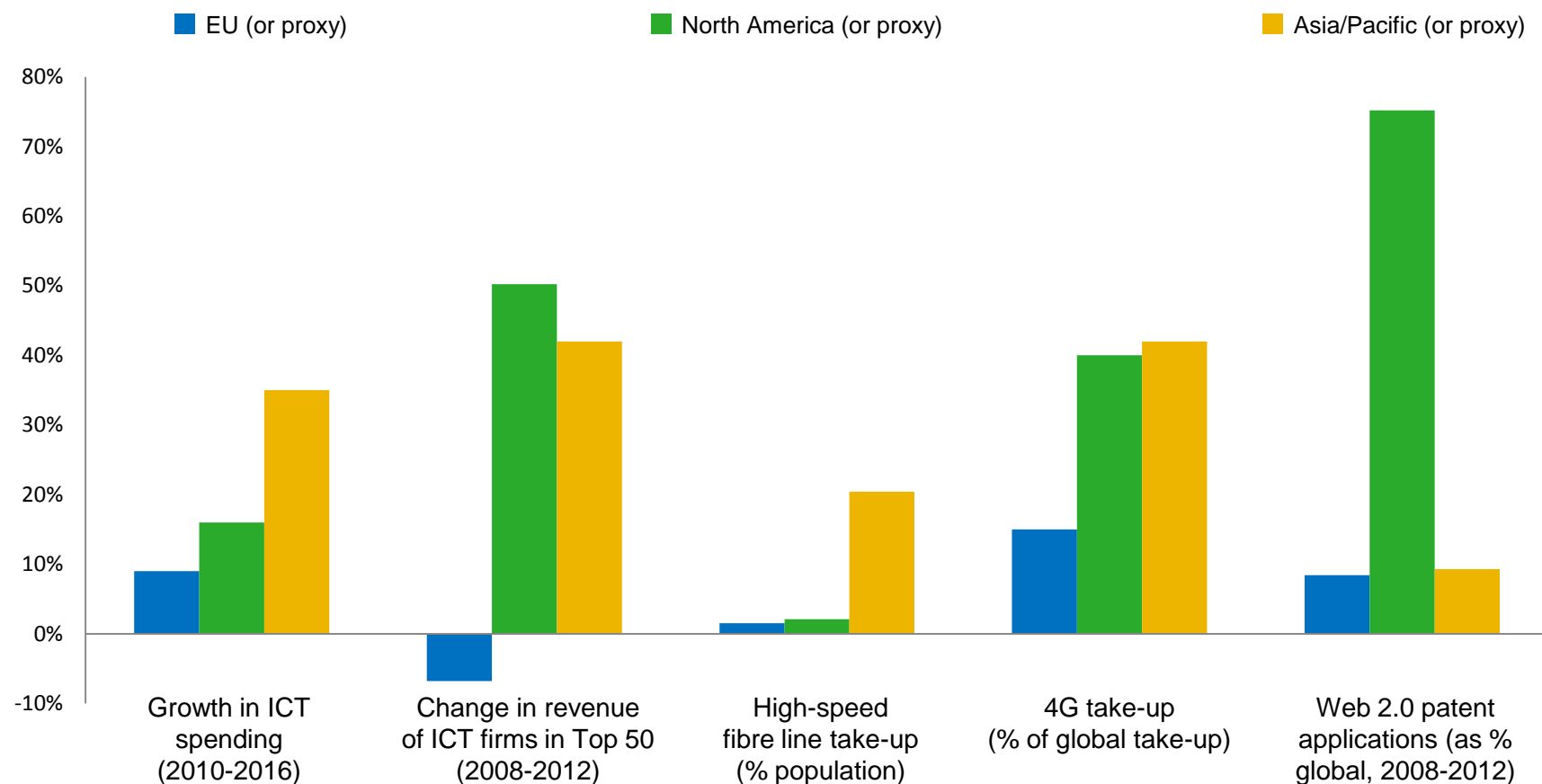
... in a rapidly changing landscape

Number of world-leading firms in ICT ("leading innovators") by region and activity in 2012

	TOTAL ICT	Layer I: element providers (computer hardware, electronic office and telecoms equipment, semiconductors)	Layer II : network operators (fixed line & mobile telecoms)	Layer III: platform, content, application (computer services, internet and software)
World	381	228	22	131
EU	62	23	11	28
US	199	117	2	80

The EU must compete to keep its ranking

Indicators for digital investment, revenue and uptake



Fragmentation is a particular challenge



Why should a Swedish citizen visiting Copenhagen pay **45 times more** to send an email with a smartphone to nearby Malmö...

... than to send one from Malmö to Kiruna in north Sweden, which is **1400 km away**?

New technologies - new opportunities

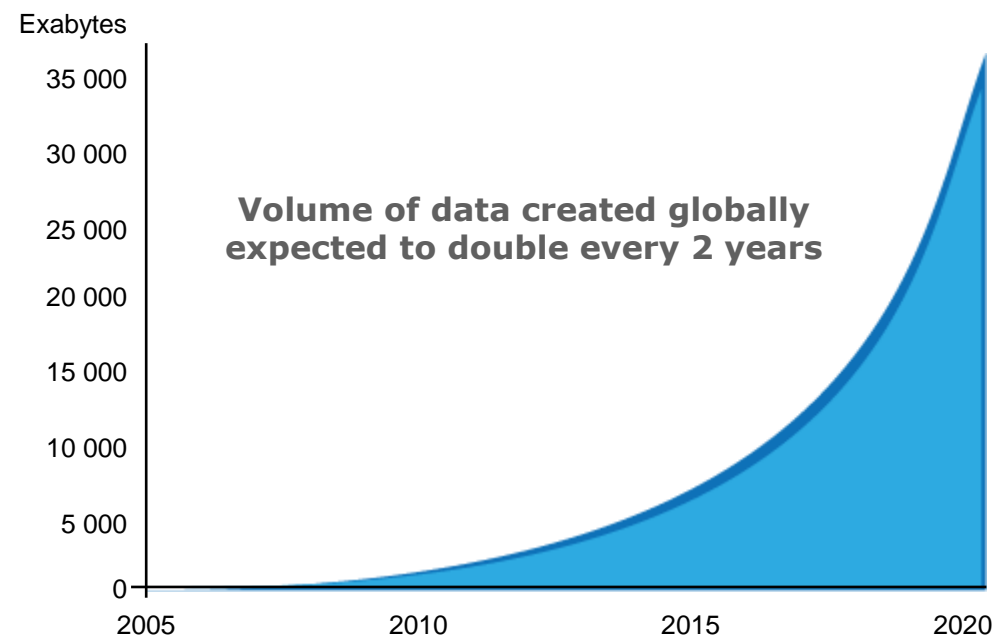
Cloud computing

10-20% cost reduction
for most organisations

400 000 new SMEs by 2016

Close to € 1 000 billion for EU GDP
over 2015-2020

Big Data



Zoom 1: a dynamic telecommunications sector

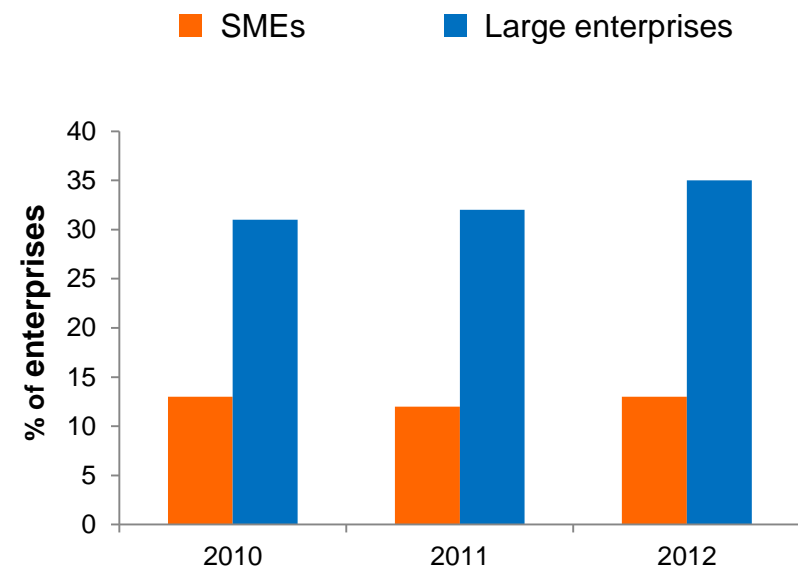


Zoom 2: helping citizens and firms to go online

Level of computer skills in the EU
(% of individuals aged 16-74, 2012)



Share of EU SMEs and large enterprises selling online



Zoom 3: leading by example

