

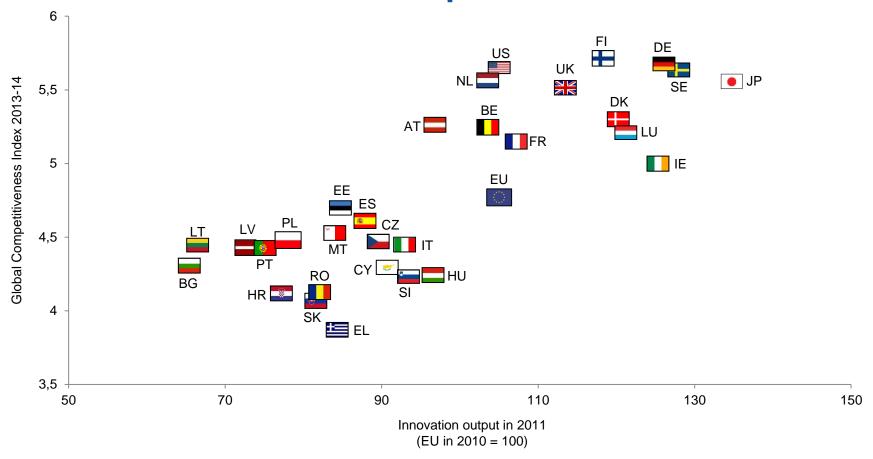
Commission Innovating in the digital era: putting Europe back on trac Comisia Europeană Európska komisia Evropska komisija Europe Euroopan komissio Commission européenne Commission of the European Commission,

President of the European Commission, Oni Ewropea Europese Commissie Komisja European Commission, а kommissionen Европейска комисия Evrop to the European Council of 24-25 October 2013 ópai Bizottság Commissione europea Europos Komisija Eiro ie Komisi ean Commission Comisión Europea Euroopa Komisjo ie Komisja Europejska Comissão Europeia Comisia Euro Omissia лтissionen Европейска комисия Evropská komise E Сото οωπαϊκή Επιτροπή European Commission Comisión



Innovation is key to our competitiveness

Global competitiveness index *versus* innovation output indicator

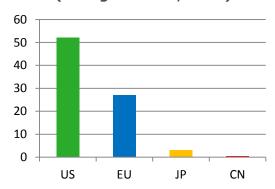




To lead globally, the EU needs...

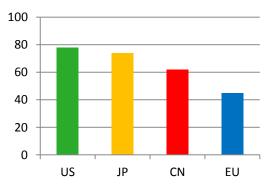
World-class universities

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



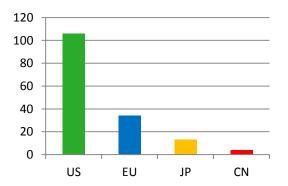
PhDs trained for industry

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



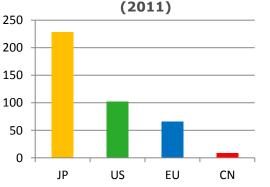
Excellence in science

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



Better knowledge transfer between academia & industry

Patent applications per million people



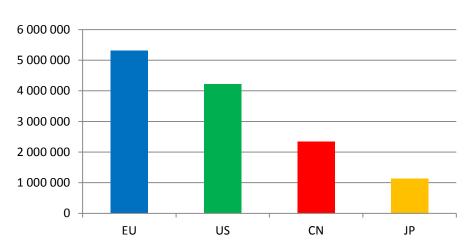
Sources: Shangai/ARWU index, Nobel Prize Committee, OECD, European Commission 2



The EU has a strong scientific base

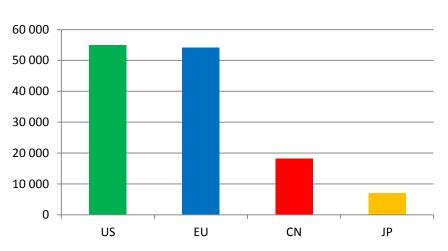
Scientific publications in the last decade

Number of scientific publications, 2000-2011



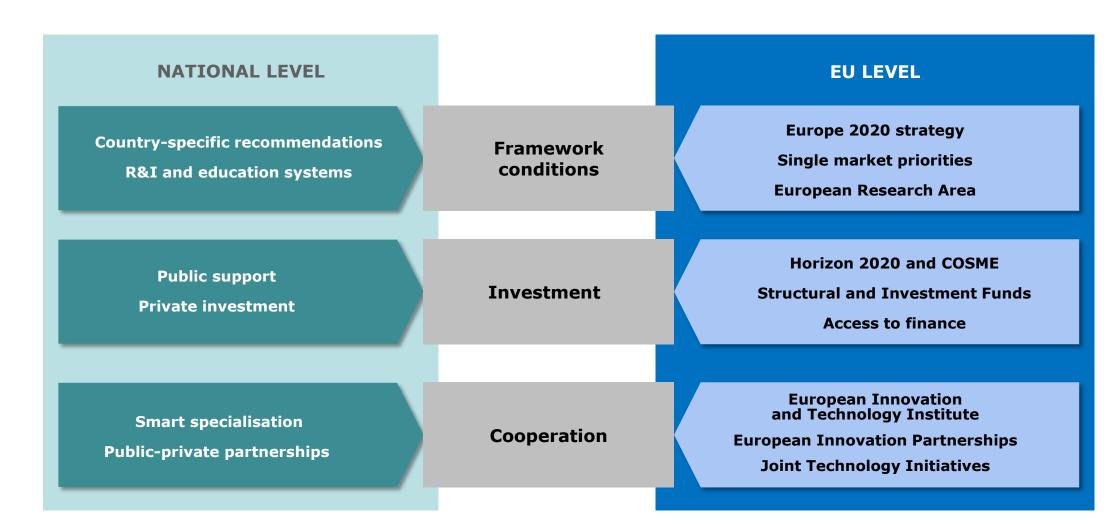
Most cited publications

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



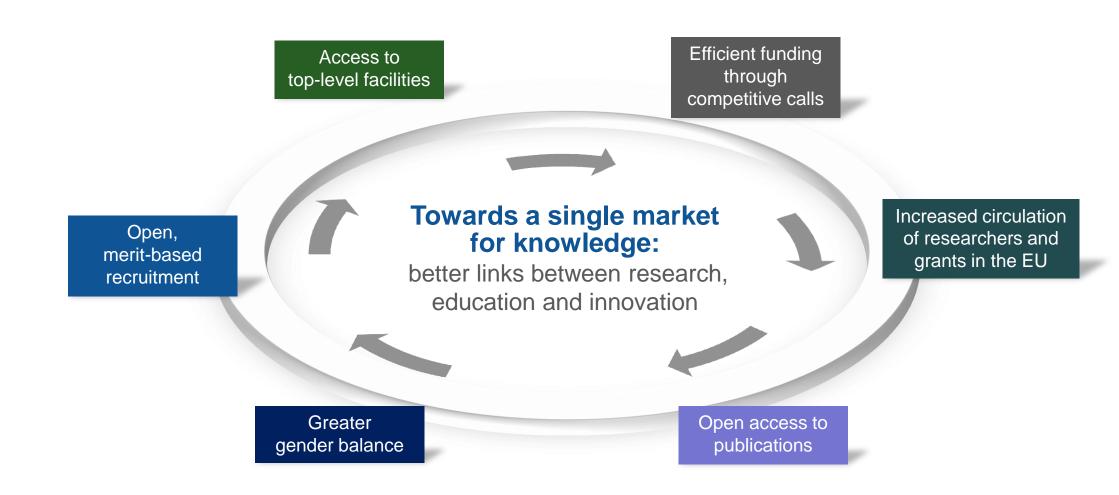


A lot can be done





Example 1: The European Research Area





Example 2: The Horizon 2020 programme

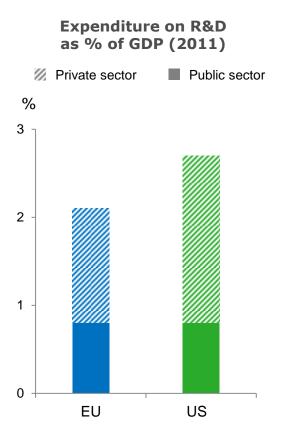
Horizon 2020: more than € 70 billion to invest in R&D, 2014-2020

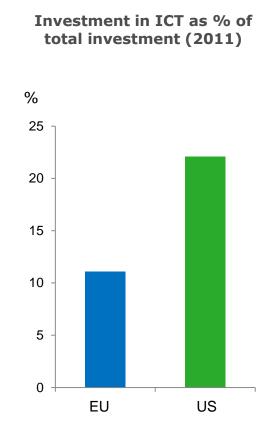


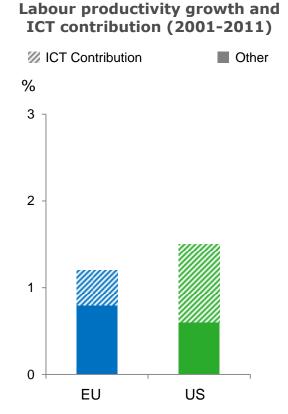


ICT plays a key role

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



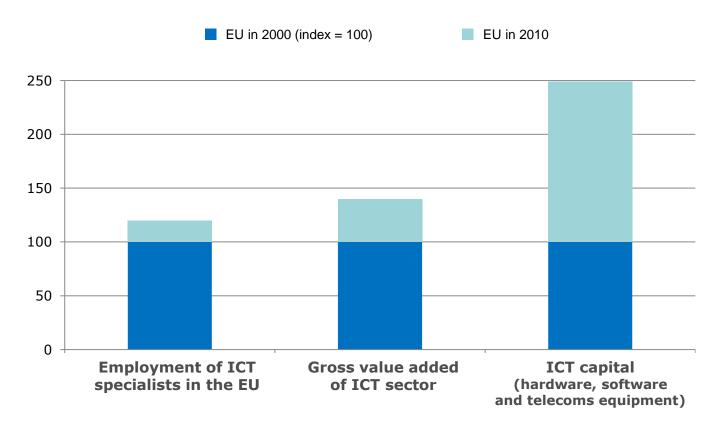






The digital economy: sizeable potential...

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





... in a rapidly changing landscape

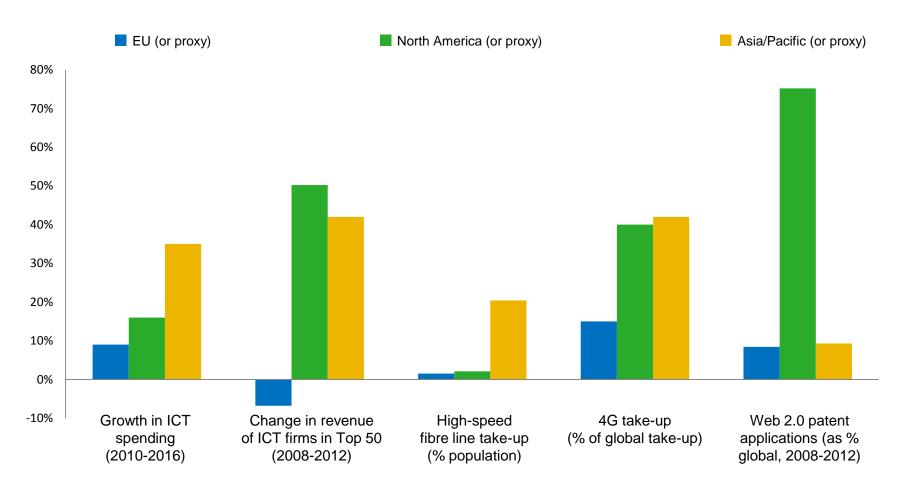
Number of world-leading firms in ICT ("leading innovators") by region and activity in 2012

	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



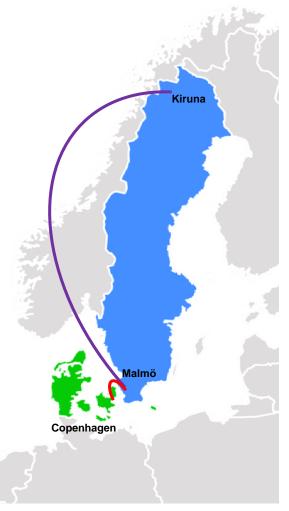
The EU must compete to keep its ranking

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?

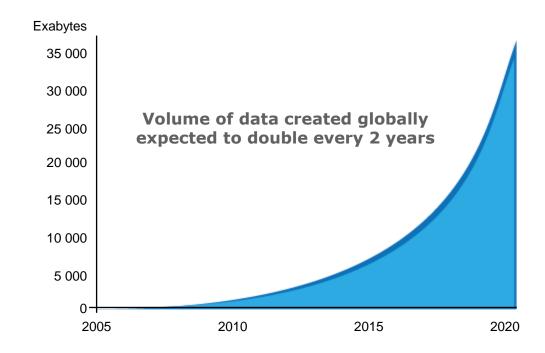


New technologies - new opportunities

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





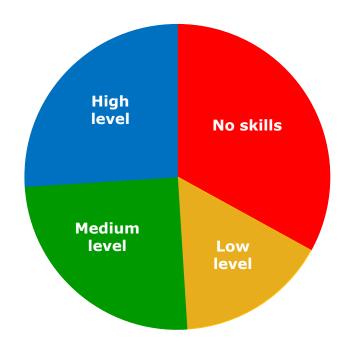
Zoom 1: a dynamic telecommunications sector



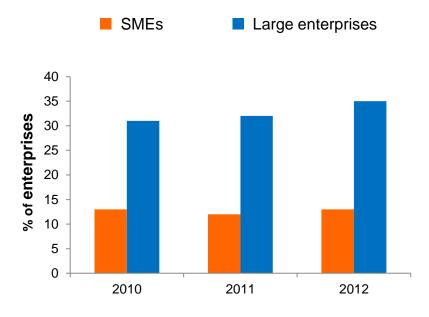


Zoom 2: helping citizens and firms to go online

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

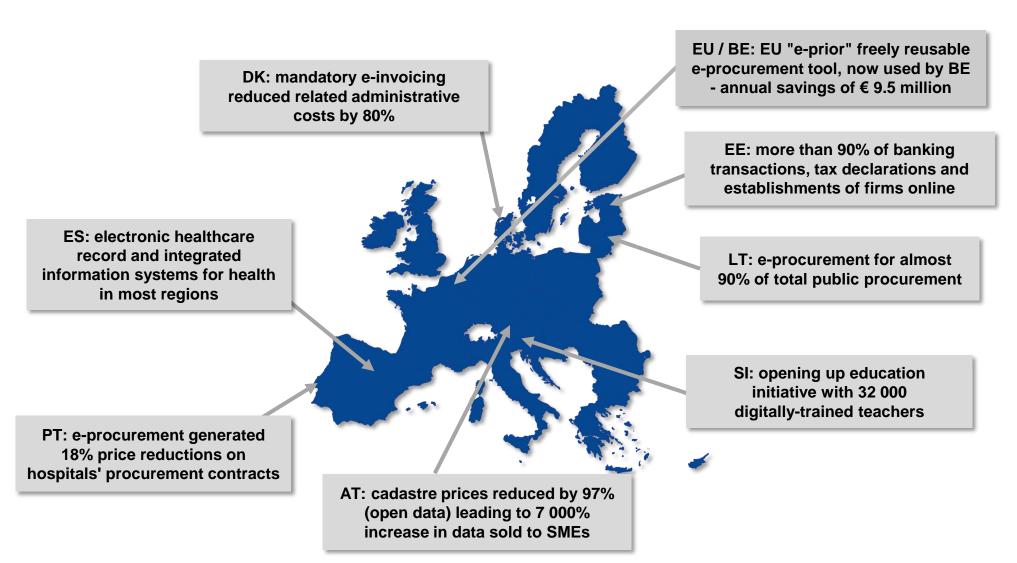


Share of EU SMEs and large enterprises selling online





Zoom 3: leading by example





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