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E-skills –
What is going on in Luxembourg? An Introduction

www.houseoftraining.lu

CHAMBRE DE COMMERCE LUXEMBOURG LSC LUXEMBOURG SCHOOL FOR COMMERCE

IFBL L'INSTITUT

ATTF LUXEMBOURG

Major technological trends

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mobility and mobile apps: technologies that enable voice and data connections between people, and increasingly between objects, while on the move.

social media: enterprise social media describes companies' use of social media tools for business purposes.

cloud: cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provided and released with minimal management effort or service provider interaction;

big data analytics: the process of collecting, organising and analysing large sets of data ('big data') from a variety of different sources to discover and derive value from patterns and other useful information;

the Internet of things (IoT): describes the network of physical objects that feature an IP address for internet connectivity, and the communication that occurs between these objects and other internet-enabled devices and systems.

Digital transformation is a challenge for European SMEs

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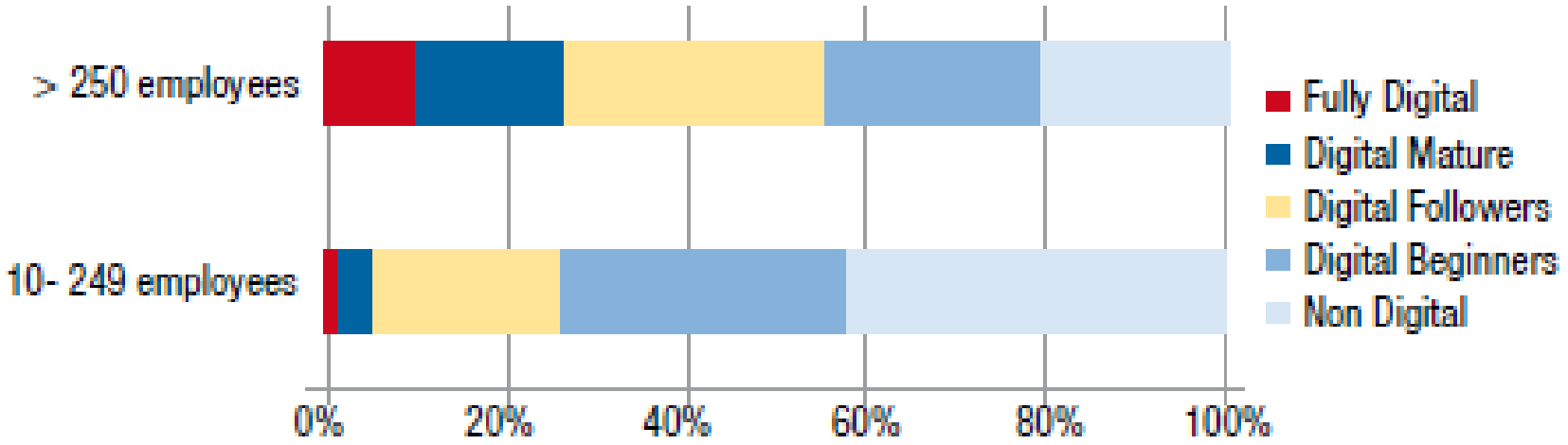


Source: IDC European vertical markets survey 2012

21.2% OF YOUNG PEOPLE IN THE EU ARE UNEMPLOYED

90% OF JOBS NEED DIGITAL SKILLS

BUT ONLY HALF OF THE EU POPULATION IS DEEMED DIGITALLY SKILLED

825,000

UNFILLED VACANCIES FOR ICT* PROFESSIONALS BY 2020

*ICT

5.1% NEETS

NOT IN EDUCATION, EMPLOYMENT, OR TRAINING

3.4% = 7.4 MILLION

ICT WORKFORCE IN EUROPE IN 2012

EUROPEAN WORKFORCE

STUDENTS ENROLLMENTS (EU27, 2013)

2,402,000

STUDENTS ACROSS EUROPE STUDYING HUMANITIES AND ARTS

731,000

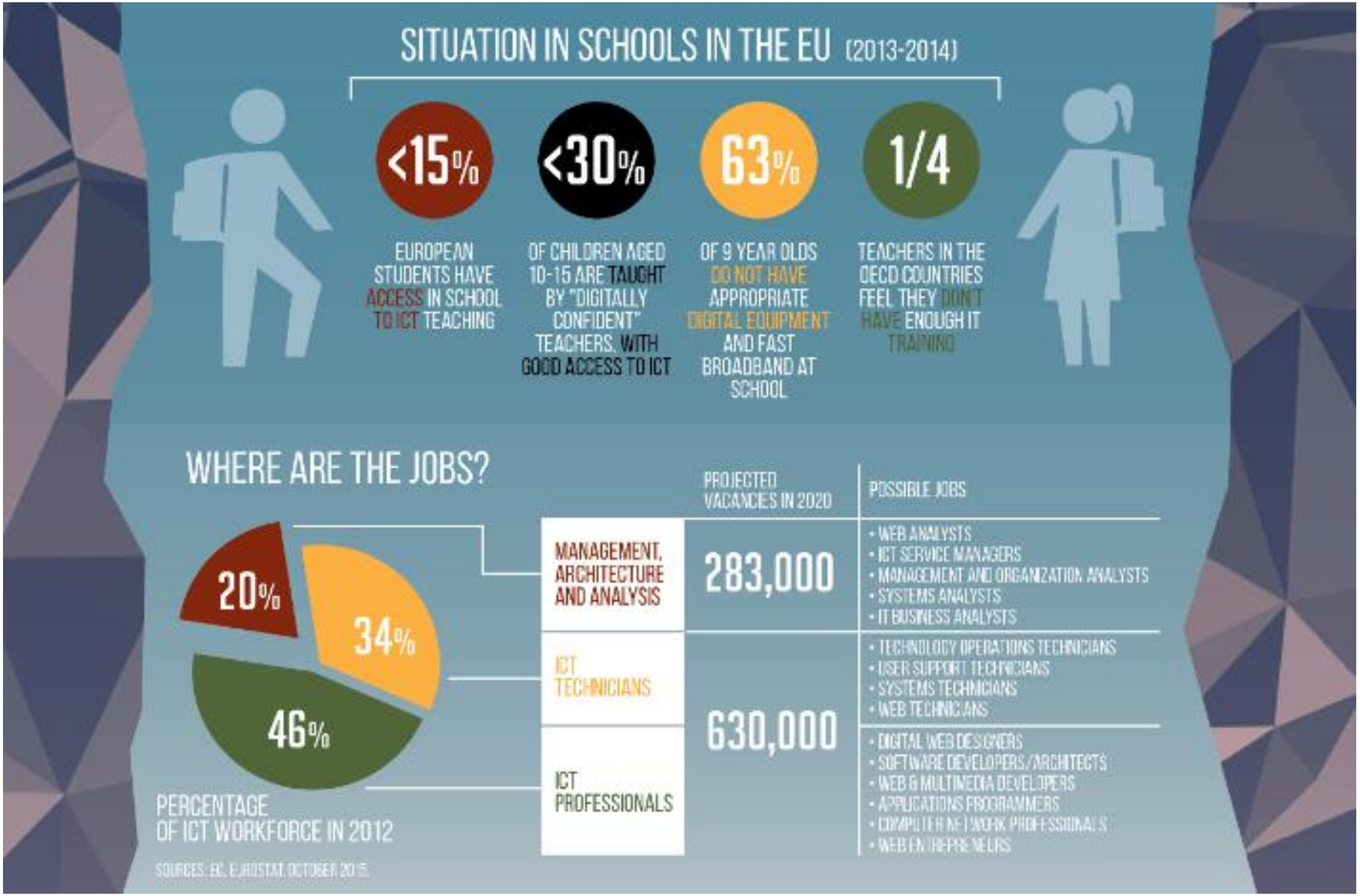
STUDENTS ACROSS EUROPE STUDYING COMPUTING

FALL IN ICT AND STEM GRADUATES:

9.5%

FEWER ICT GRADUATES SINCE 2006-2014

STEM


SITUATION IN SCHOOLS IN THE EU (2013-2014)
<15%
EUROPEAN STUDENTS HAVE ACCESS IN SCHOOL TO ICT TEACHING
<30%
OF CHILDREN AGED 10-15 ARE TAUGHT BY "DIGITALLY CONFIDENT" TEACHERS. WITH GOOD ACCESS TO ICT
63%
OF 9 YEAR OLDS DO NOT HAVE APPROPRIATE DIGITAL EQUIPMENT AND FAST BROADBAND AT SCHOOL
1/4
TEACHERS IN THE OECD COUNTRIES FEEL THEY DON'T HAVE ENOUGH IT TRAINING
WHERE ARE THE JOBS?
20%
34%
46%
PERCENTAGE OF ICT WORKFORCE IN 2012
SOURCES: EC, EUROSTAT, OCTOBER 2015
PROJECTED VACANCIES IN 2020
POSSIBLE JOBS
MANAGEMENT, ARCHITECTURE AND ANALYSIS
283,000
• WEB ANALYSTS
• ICT SERVICE MANAGERS
• MANAGEMENT AND ORGANIZATION ANALYSTS
• SYSTEMS ANALYSTS
• IT BUSINESS ANALYSTS
ICT TECHNICIANS
630,000
• TECHNOLOGY OPERATIONS TECHNICIANS
• USER SUPPORT TECHNICIANS
• SYSTEMS TECHNICIANS
• WEB TECHNICIANS
ICT PROFESSIONALS
• DIGITAL WEB DESIGNERS
• SOFTWARE DEVELOPERS/ARCHITECTS
• WEB & MULTIMEDIA DEVELOPERS
• APPLICATIONS PROGRAMMERS
• COMPUTER NETWORK PROFESSIONALS
• WEB ENTREPRENEURS

A Digital Europe needs Digital Skills

European Commission

Grand Coalition for Digital Jobs

CodeWeek.eu

all you need is CODE

eSKILLS FOR JOBS 2015

@eSkillsGrowthEU #DA15eskills #DA15eu

Young People

Nearly all young people are **online**

but they need to be prepared for their digital future

95% of the **16-24 year olds** in the EU are **regular internet users**

Education has to adapt to the digital era

Less than half of **children** are in **schools** that are highly **digitally**-equipped

Only 20-25% of **school children** are taught by **digitally confident** & **supportive teachers**

Curricula need to be redesigned to **integrate digital skills** & **learning**

We need to raise the number of students in ICT – especially women

The number of **ICT graduates** has **decreased** by **13%** between 2006 & 2013

There are **twice as many male as female graduates** in STEM (science, technology & mathematics)

Students in **all domains** need to be **educated** in **digital skills**, **not just those** who choose an **ICT career**

Working Age People

Digital technologies create new jobs

There is **rising demand** for **ICT professionals**. These jobs are in **all sectors** of the economy

Every job in **ICT** creates **3 more jobs** elsewhere in the economy

With **high unemployment** in Europe, these jobs are sorely **needed**

The whole workforce needs to be digitally trained

32% of the **EU workforce** have **low** or **no digital skills**

15% of the workforce in the EU has **never used** the **Internet**

The **lack of graduates** in **ICT** is leading to a **gap** estimated at **825 000 unfilled jobs** by **2020**

Provide training & support for the unemployed towards a career in digital domains

online learning

Coding clubs

apprenticeships

Older People

Everybody needs to go digital

By 2060 **one in three Europeans** will be **over 65 years old**

53% of the older population in the EU has **never used the Internet**

Services are increasingly designed as digital by default. The need for public services is particularly strong amongst the older population but only 23% access them online

We need to raise awareness of the benefits of going digital

The **most common reasons** for **not going online** are

- **lack of interest**
- **lack of skills**
- **cost factors**

Provide support to older people to get online & develop digital skills

Digital services should be accessible to everyone

Use **innovative solutions** e.g. twinning with younger people online

Older people have **disabilities** to a greater extent than others

This acts as a **barrier** to **technology use**

Europe needs to:

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- ➔ **re-focus funds and programmes to support digital transformation better**
- ➔ **promote the importance of digital leadership**
- ➔ **make digital transformation part of the educational mainstream**
- ➔ **increase the supply of new, highly specialised skills**

European Schoolnet. (2015). *THE e-SKILLS Manifesto* (2015th ed.). Brussels: European Schoolnet.

EU initiatives so far (an extract)

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- **ICT for Work – Digital Skills in the Workplace**, launched in 2014, and ICT in Schools study, 2012, of which an update will be launched in 2015.
- **Grand Coalition for digital jobs**, a multi-stakeholder partnership that endeavors to facilitate collaboration among business and education providers, public and private actors to take action attracting young people into ICT education, and to retrain unemployed people.
- **Opening up Education**, an action plan to facilitate schools and universities to deliver high quality education through ICT and digital content, as well as the digital skills.
- **Eskills Campaign**, an initiative based on the Communication "e-Skills for the 21st Century: fostering competitiveness, growth and jobs", 2007.
- **European Coding Initiative** led by ICT-companies and European Schoolnet to bring coding skills to teachers, kids and adults.

New policy initiatives proposed as part of the digital single market

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- ➔ Address digital skills at the highest political level
- ➔ Boost the Grand coalition
- ➔ Grow and strengthen National Coalitions for Digital Jobs
- ➔ Encourage a better use of the European funding toward digital skills development
- ➔ Improve the analysis and the forecast of skills needs
- ➔ Modernize education by for example:
  - increasing trainings in digital skills for workforce and for consumers in the short term.
  - making sure that everybody acquires horizontal digital skills (e.g. coding and digital media skills)
  - harnessing digital technologies for learning (eg platforms of learning ressources, MOOCs, connected classrooms etc.).
  - promoting and facilitating mobility for learners and improving

And in Luxembourg ?

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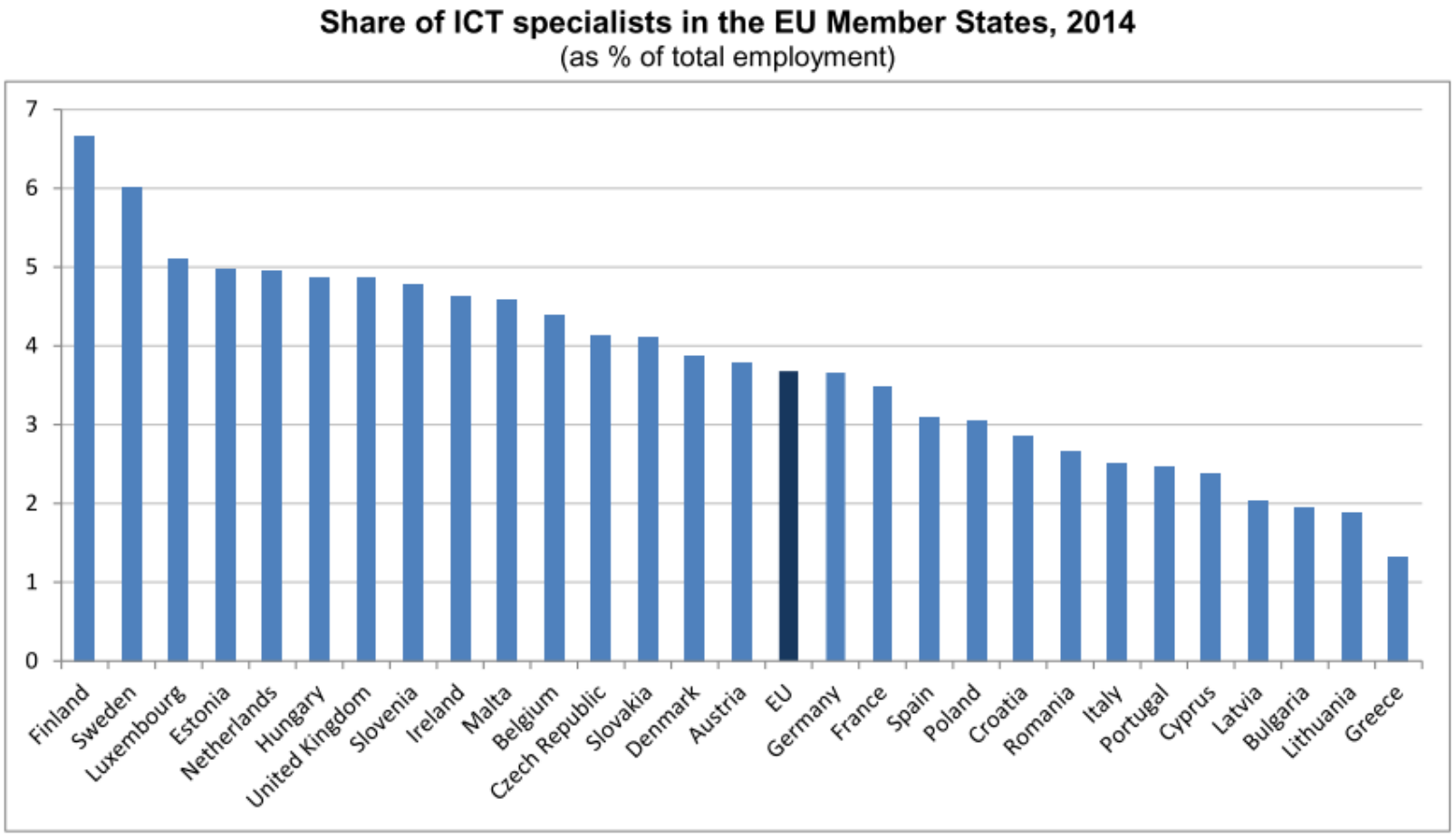

Source: Eurostat

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Basic ICT skills to a large extend available but growing signs "Second level digital divide" with a lot of ICT specialists employed and even more needed – but very low interest in Science, Technology, Engineering and Mathematics studies

	Luxembourg				EU
	DESI 2016		DESI 2015		DESI 2016
	Value	Rank	Value	rank	Value
2a1 Internet Users % individuals (aged 16-74)	97% (2015) ↑	1	93% (2014)	1	76% (2015)
2a2 Basic Digital Skills % individuals (aged 16-74)	86% (2015)	1	n.a.	-	55% (2015)
2b1 ICT Specialists % employed individuals	5.1% (2014) ↑	3	4.9% (2013)	4	3.7% (2014)
2b2 STEM Graduates Graduates in STEM per 1000 individuals (aged 20 to 29)	3.6 (2013) ↑	28	2.8 (2012)	28	18

Source: European Commission

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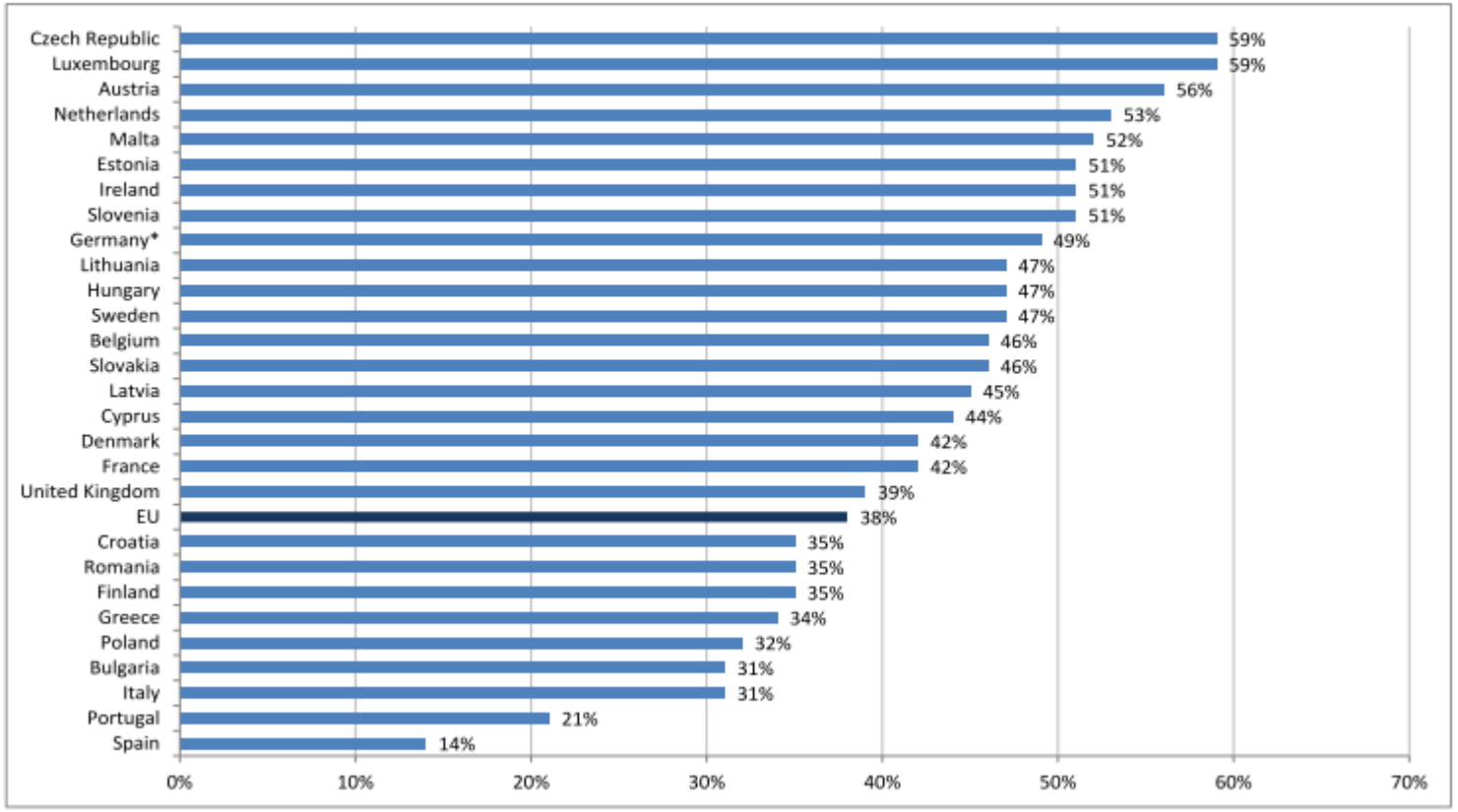
Share of enterprises which had hard-to-fill vacancies for jobs requiring ICT specialist skills, 2014
(as % of enterprises which recruited / tried to recruit personnel for jobs requiring ICT specialist skills)



Source: Eurostat

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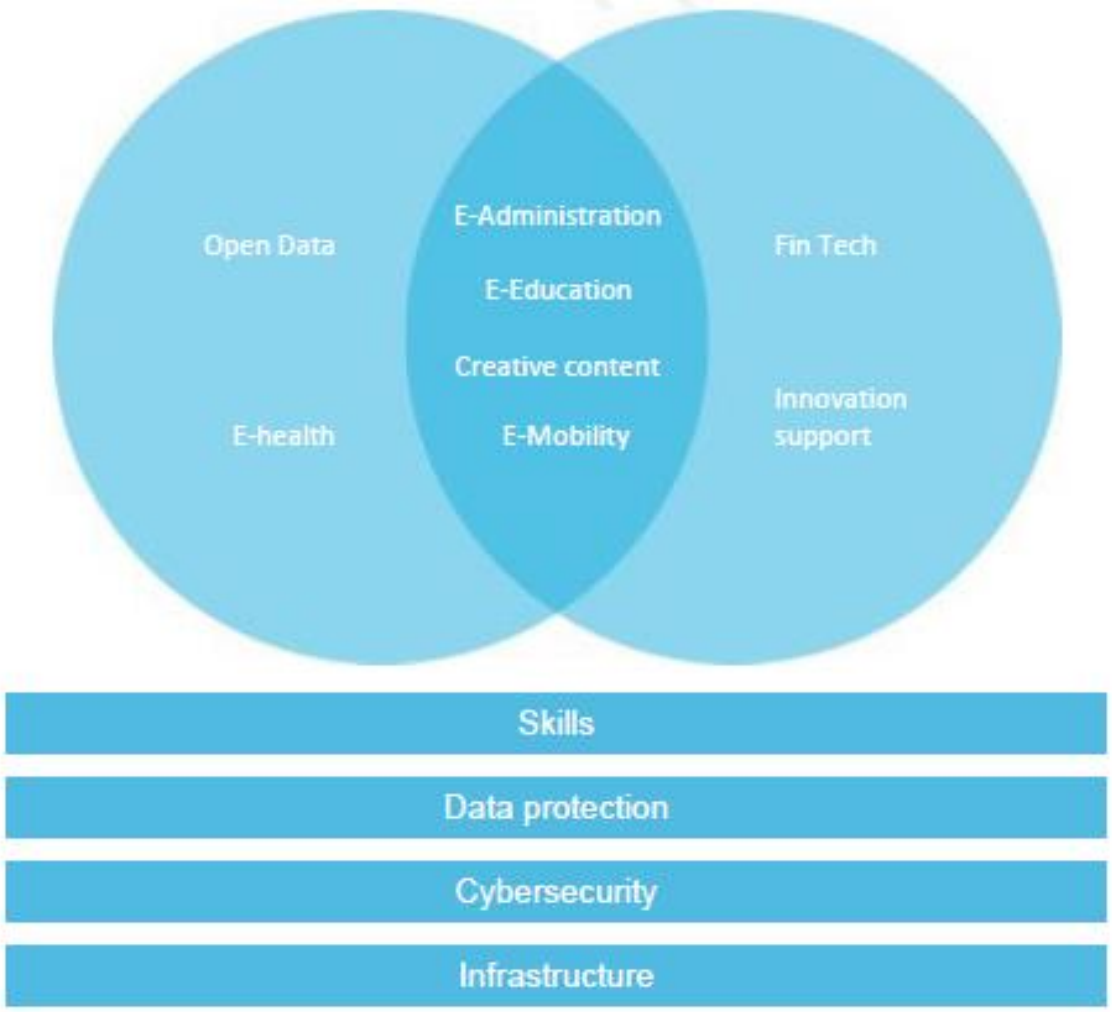

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