

# The Digital Transformation – challenges for universities

@Thomas\_E\_Jorgen

Thomas Jorgensen  
25 November 2019

# The digital transformation - an ongoing story in higher education

## Top priority for Europe

- The digital transformation must work for all
- Technological sovereignty/retaining competitiveness

## ... A longer story for higher education

- Beginning of the decade saw the 'MOOCs' hype
- Revolution in provision – big, cheap courses would disrupt everything
- Reality check: a good addition to other forms of learning
- **Current AI discussions**
- Disrupted labour markets – are universities ready?
- AI in education
- AI-driven innovation

## The skills challenge

### **More digital technologies means more need for ‘digital skills’**

- **Continuously reports on ‘skills gap’ or need for upskilling**
- **What skills and at what level is more difficult to know**
- Lawyer contesting automated decision making or factory workers using connected machines?

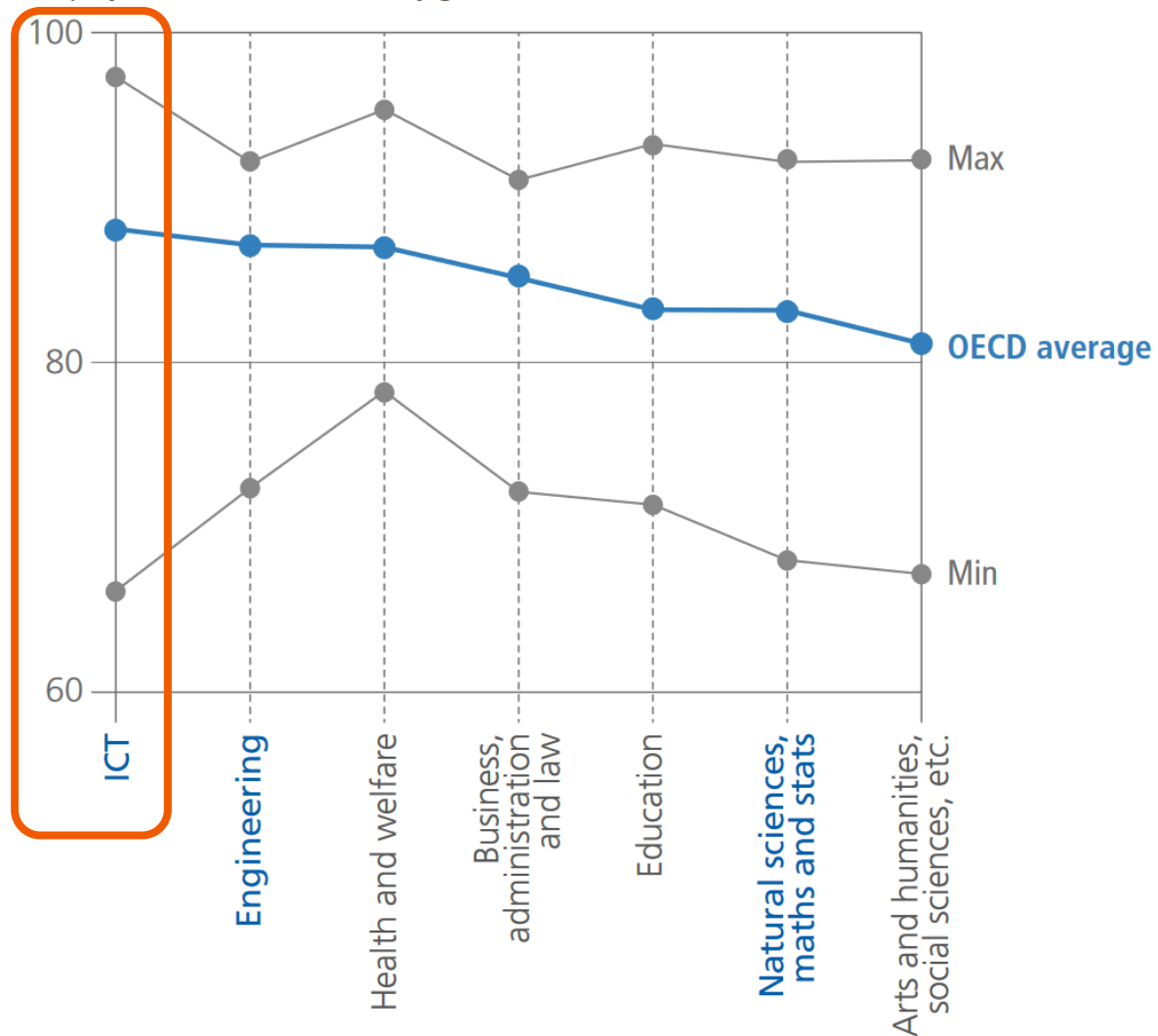
### **Universities are providing digital skills at very different levels**

- **ICT specialists (programmers, data specialists)**
- **Those working closely with for example AI (lawyers, doctors)**
- **All the rest that will need awareness about the digital possibilities**



# STEM graduates have better employment prospects, though not across the board

Employment rate (%) of tertiary graduates (2016)

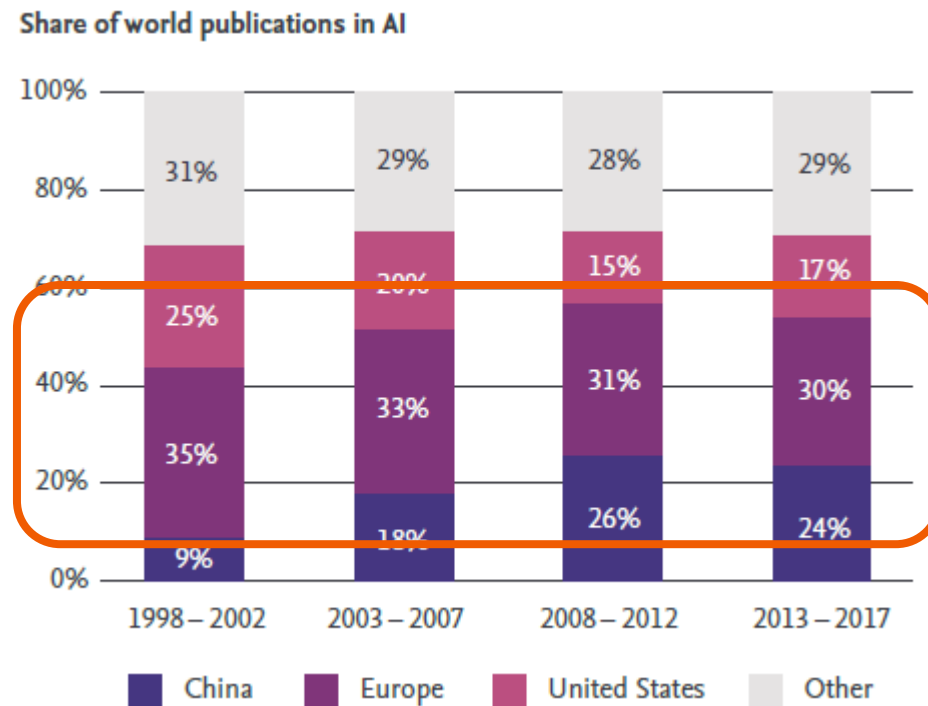


Employment prospects – ICT highest and lowest

OECD (Education at a glance 2017)

# Research

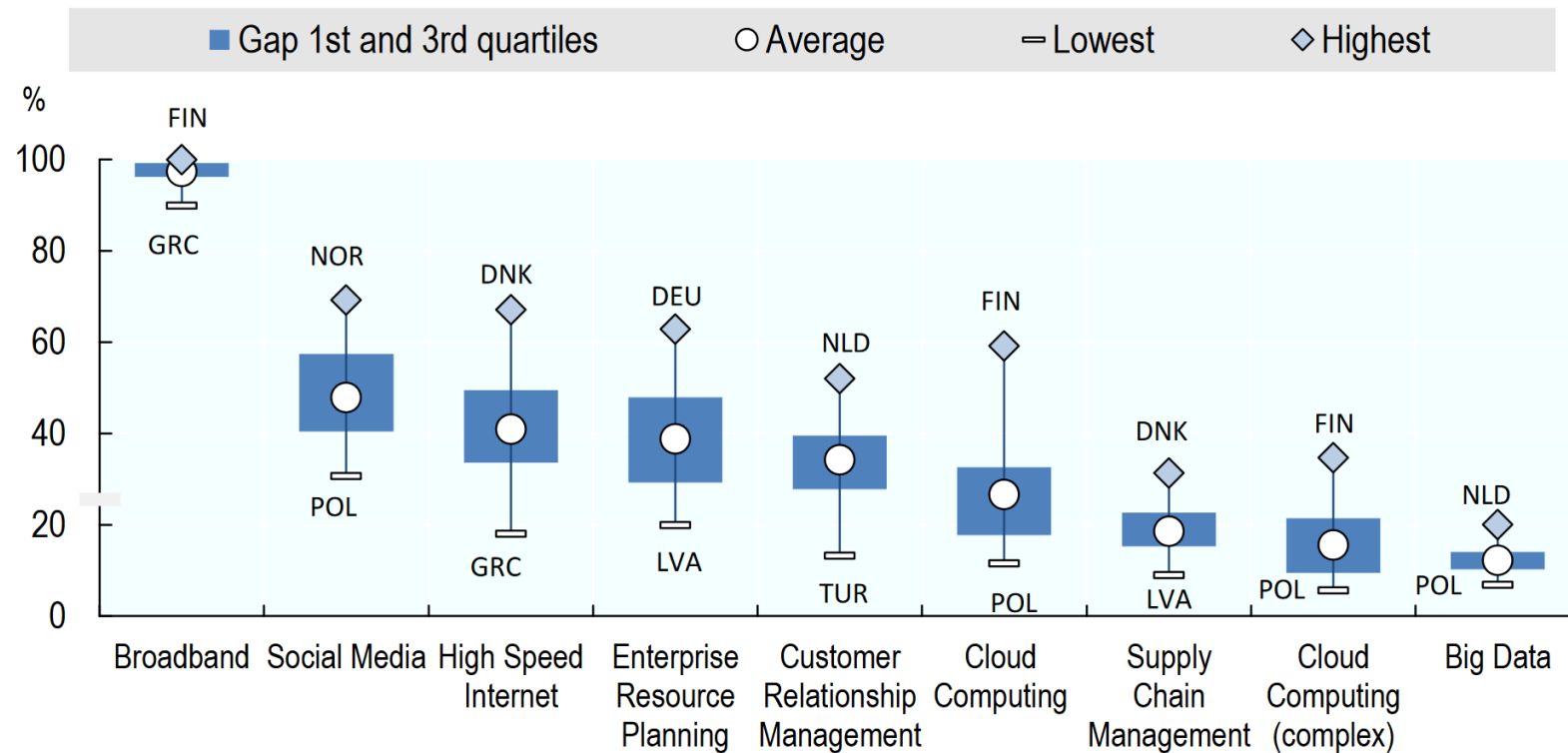
Europe is the largest AI region in terms of scholarly output ... though the US leads in impact



# Uptake of technology

## Much of existing technology is not being used by companies

**Figure 1. The diffusion of digital technologies is uneven across countries and industries**  
 As a percentage of enterprises with ten or more employees, 2016  
 Panel A: Diffusion across countries



Source OECD (Digital technology diffusion, working paper 1476, 2018)

## Uptake of technology II

### Universities have a central role for uptake of technology

- **Graduates with new knowledge bring it their workplace**
- **Universities engage in technology transfer through intermediary organisations (tech transfer offices)**
- **Student, graduates and researchers found start-ups that offer high-tech services**

## The diversity challenge



Technological innovation is in the centre of of societal change

... but it is led by white males:

- 80% of ICT students were male in 2015 (OECD)
- 93% of all funds raised by European VC-backed companies went to all-male founding teams in 2018 (ATOMICO)
- Almost half of women reported that they have experienced discrimination in the European tech sector (ATOMICO)

This is a societal problem in part to be solved by universities



## The data challenge

Open science includes open data

How can it be made FAIR (Findable, Accessible, Inter-operational, and Reusable)

This requires the right skills, storage and procedures – often led by universities that provide the data



**FAIRSFair**  
Fostering Fair Data Practices in Europe

# Summary

**There are big challenges for Europe – and there are big challenges for universities**

- **Skills**
- **Uptake of technology**
- **Diversity**
- **Data**
- **... And more**

**How can we move forward?**

# Thank you for your attention

[www.eua.eu](http://www.eua.eu)

