AI diffusion in firms – what do we know and what does it mean for policy?

OECD opening remarks

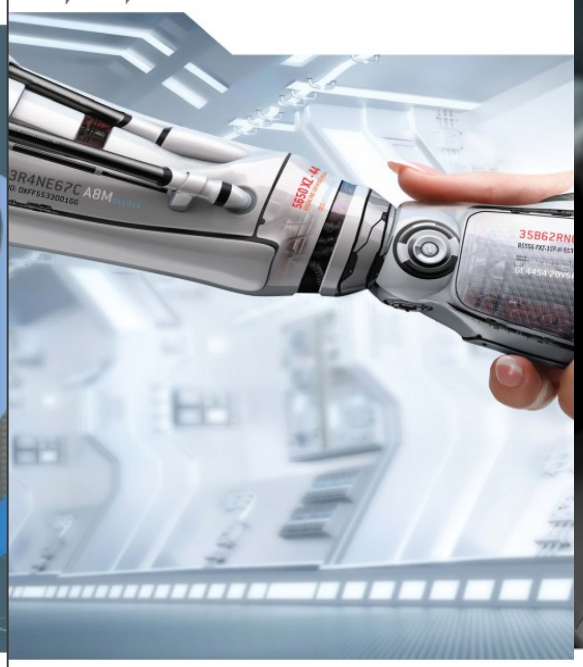
Alistair Nolan
Directorate for Science, Technology and Innovation
OECD

AI-WIPS, Germany

February 3rd 2021

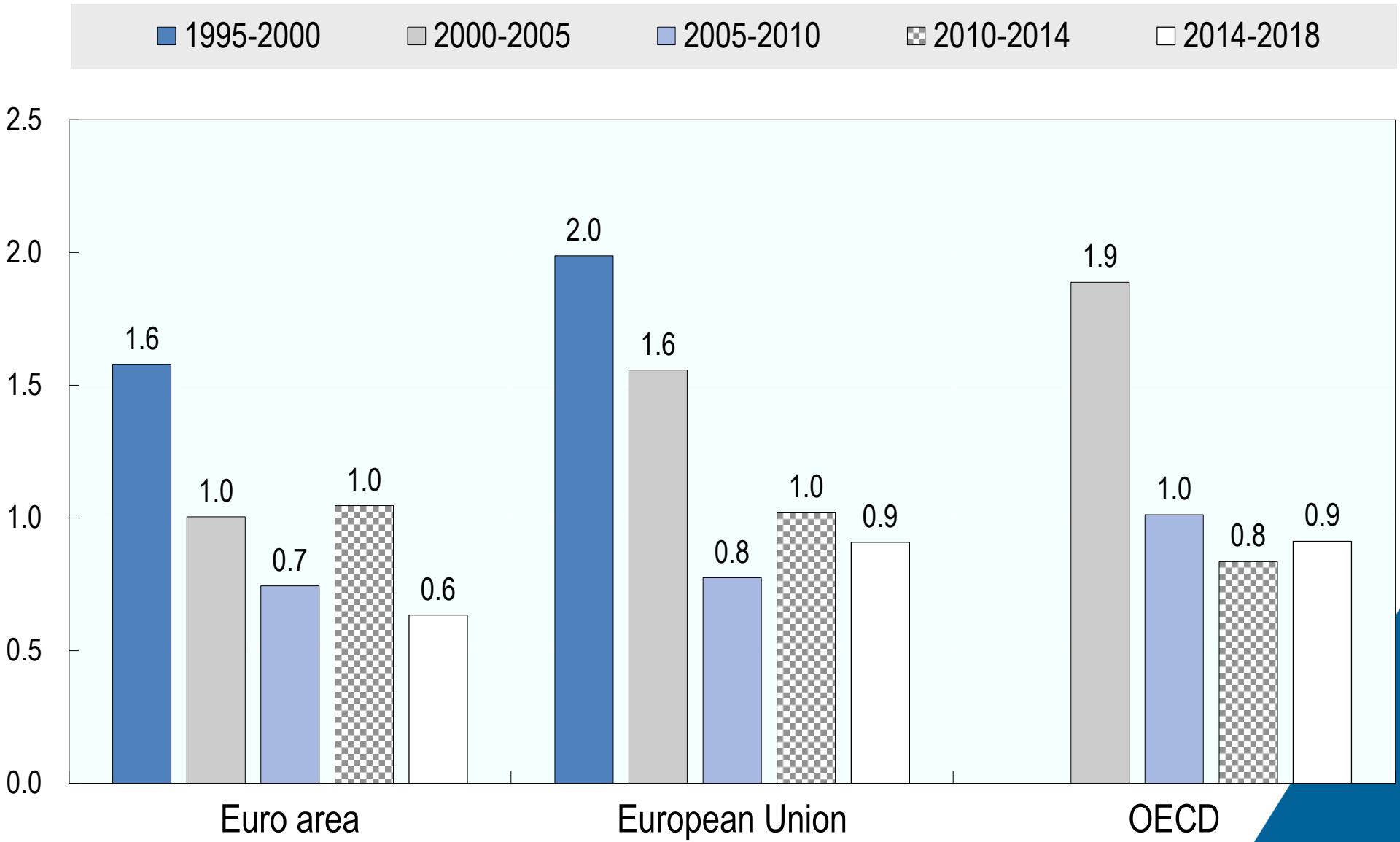
BETTER POLICIES FOR BETTER LIVES

Recent OECD work



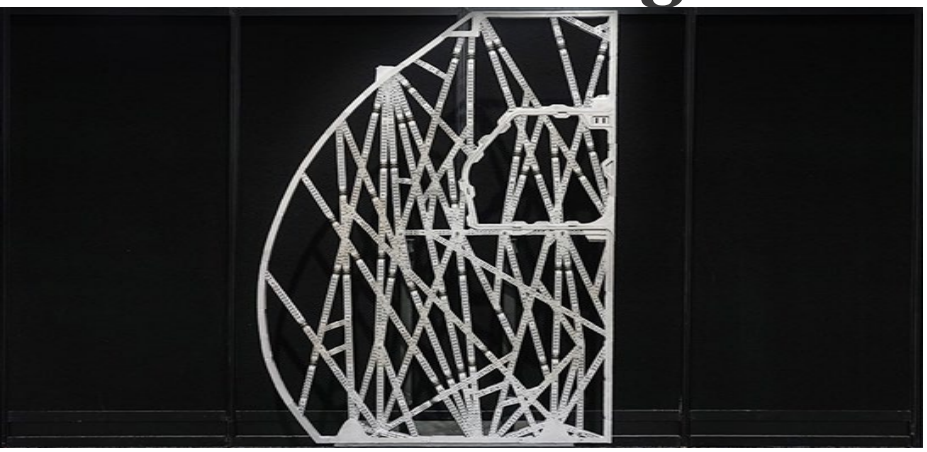
Why does understanding diffusion matter?

Labour productivity growth in the OECD (GDP per hour worked, annual percentage rate)

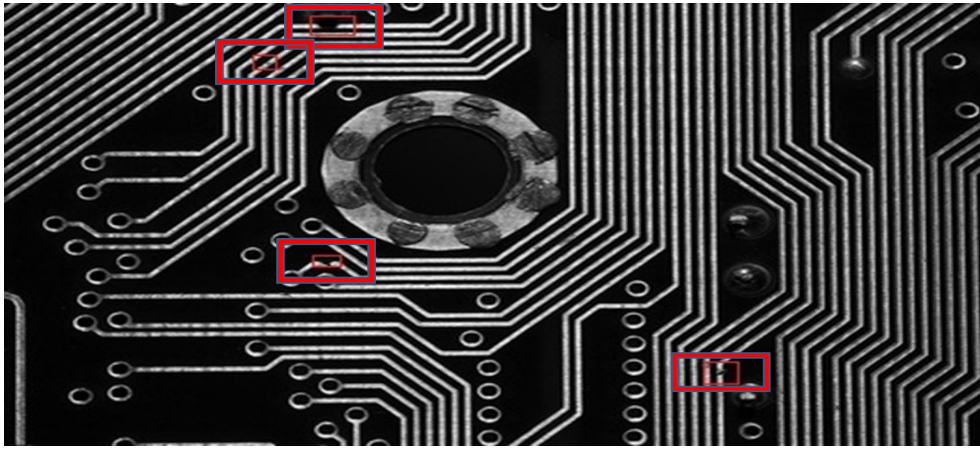


AI Can Now be Applied in Every Stage of Production

Product Design



Fabrication



Process control

Training

AI systems will also help and train workers

Untangling productivity, when AI is everywhere ?

Diffusion effects on the labour market

THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION?*

Carl Benedikt Frey† and Michael A. Osborne‡

September 17, 2013

McKinsey & Company

Industries Functions Featured Insights Locations Careers About Us

McKinsey Global Institute

Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages

November 28, 2017 | Report

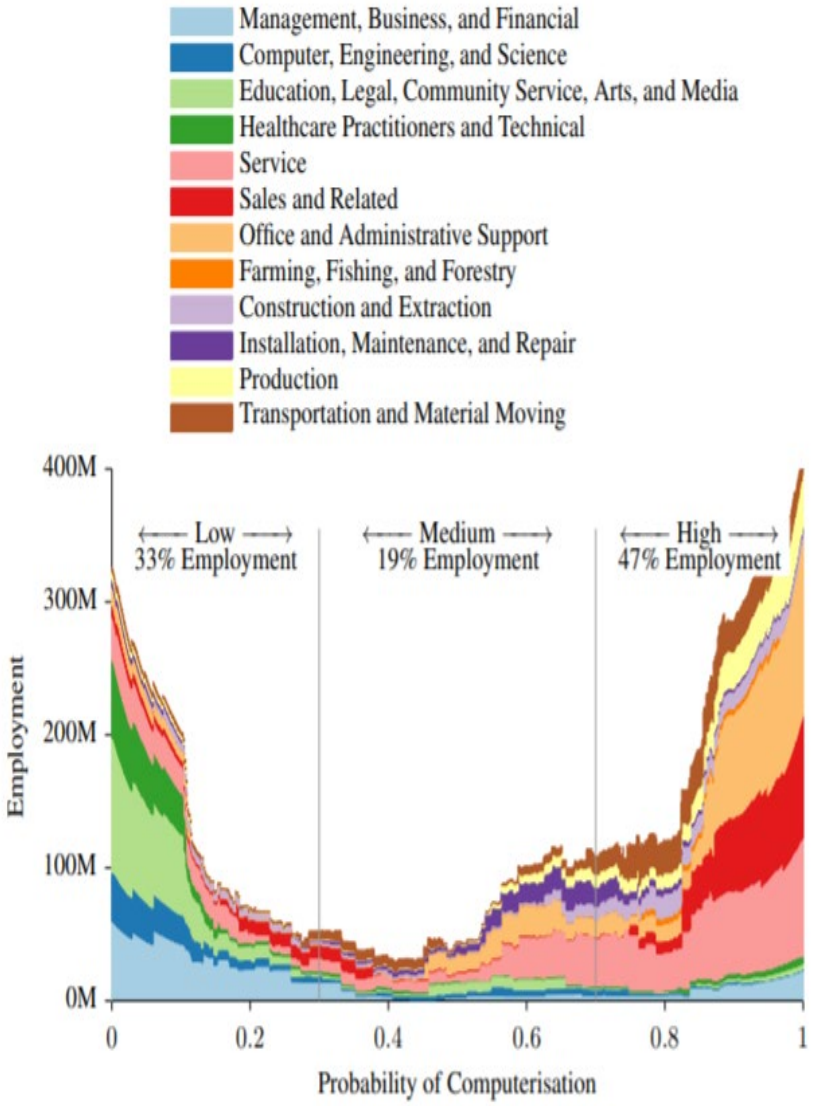
OECD Social, Employment and Migration Working Papers No. 189

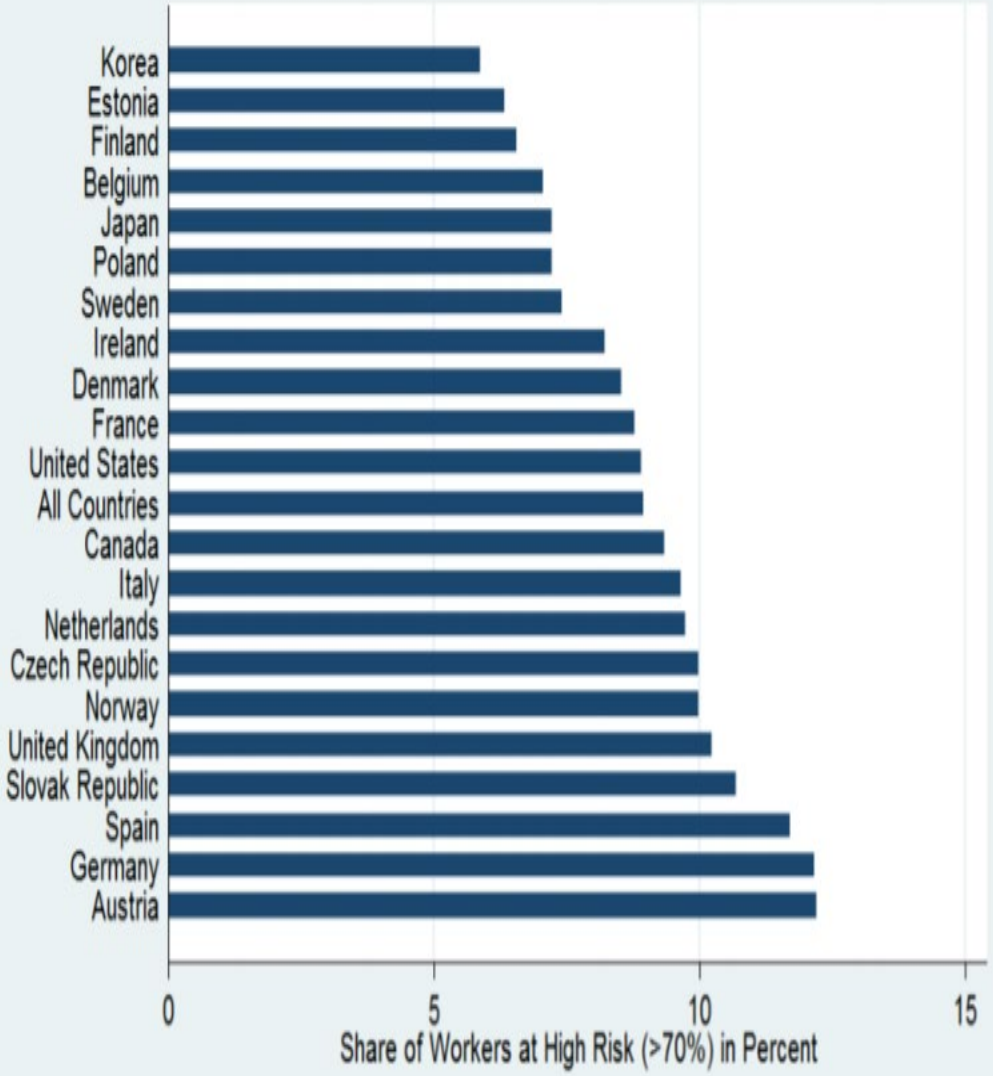
The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis

Melanie Arntz, Terry Gregory, Ulrich Zierahn

https://dx.doi.org/10.1787/5jlz9h56dvq7-en

Diffusion effects on the labour market





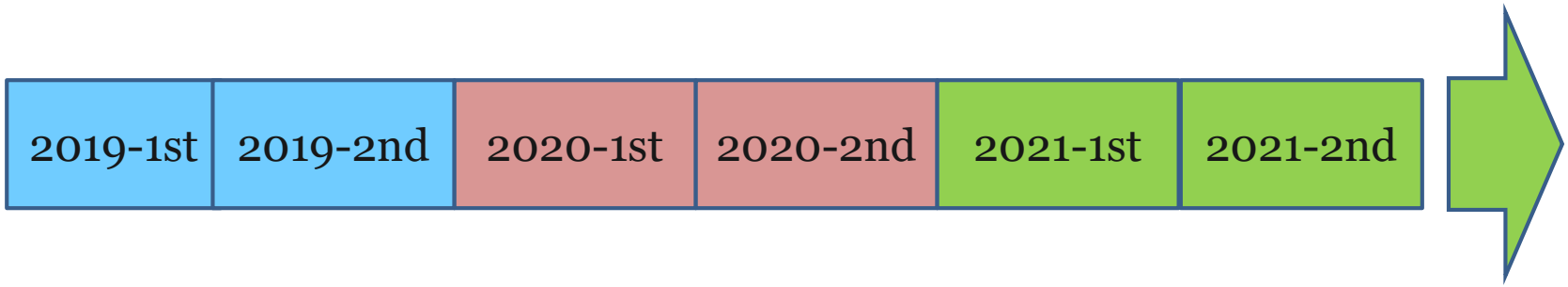
Understanding the Pace of Diffusion

A range of survey types

- NSOs, other national agencies, embedded in established surveys of ICT use, expenditure, R&D, etc.
- Management consultancies – BCG, McKinsey, PwC, etc.
- NGOs/academia/foundations

Measuring diffusion

Time-line of AI (ICT) and other surveys(*)



Japan+

Korea

Results available

France+

Denmark

Results in December

EC-DG Connect

Israel

United States

Results available

EC-Eurostat 2020

Results available

Statistics Canada

Results available

Statistics Sweden

Results available

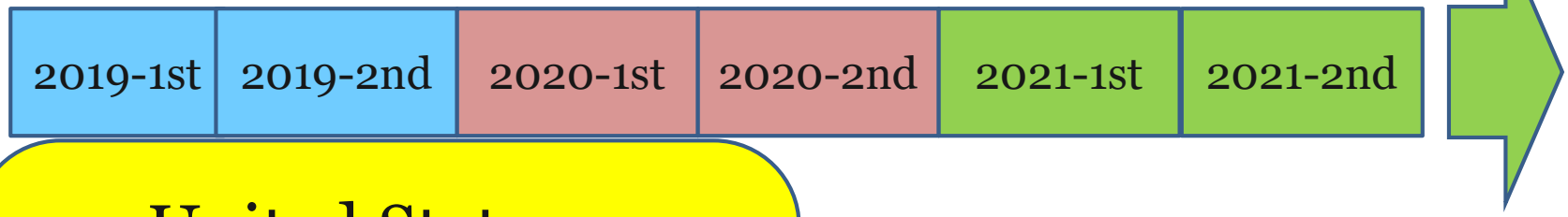
EC-Eurostat 2021

Results available

(*) Not exhaustive.

Measuring diffusion

Time-line of AI (ICT) and other surveys(*)



United States – Machine learning used by

2.2 – 5.4 % of firms

United States

Results available

ostat 0

ults ilable

Statistics Sweden

Results

EC-Eurostat 2021

Statistics Canada

Results available

Canada - AI adopted by

Large enterprises (10.1%), medium-sized (7.1%), small (3.2%).

(*) Not exhaustive.

New survey work

AI diffusion – a new survey

BCG

OECD

A new policy-oriented survey of AI diffusion and use in firms

AI diffusion – a new survey

Starting development of a conceptual framework and analysis plan:

- **How to add value relative to existing surveys ?**
- **International comparability – or deeper and narrower?**
- **Business insight with statistical rigour.**
- **Relate firm data to policy settings ?**

Survey work complemented by case studies

Institutions for technology diffusion

Diffusion mechanisms
Dedicated field Services
Technology-oriented business services
Applied technology centres
Targeted R&D centres
Knowledge-exchange and demand-based instruments
Open technology mechanisms

MEP • MANUFACTURING EXTENSION PARTNERSHIP®

Industrial Research Assistance Program (IRAP)

Fraunhofer

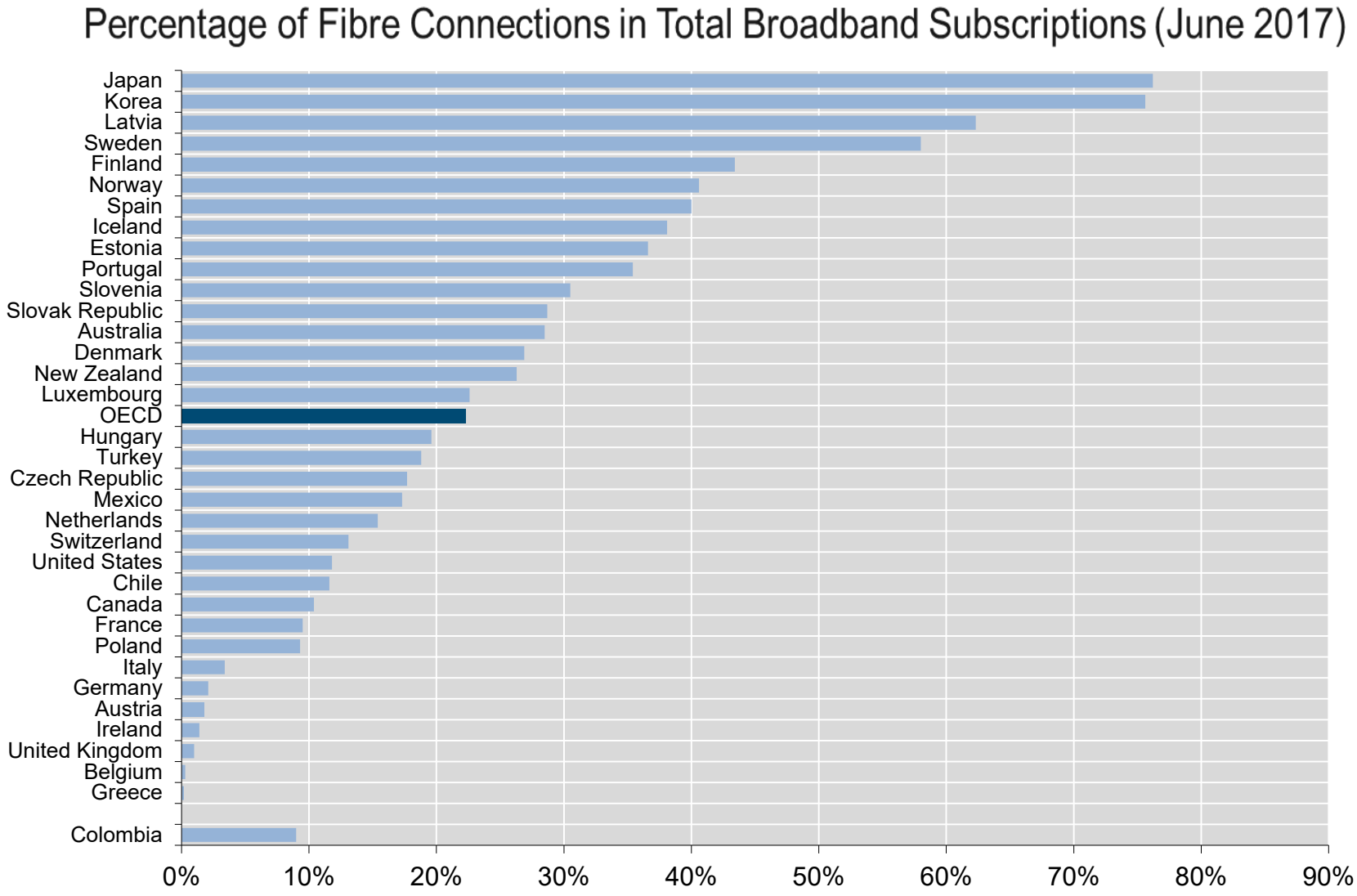
CREATE : Campus for Research Excellence and Technological Enterprise

Innovate UK

BioBricks FOUNDATION

56 national/supranational AI initiatives (2021) oecd.ai/dashboards

Access to fibre-based broadband



Data policies

Data Sharing Agreements and Expertise Bridging

The Alan Turing Institute

Data Study Group

Thank you

alistair.nolan@oecd.org

BETTER POLICIES FOR BETTER LIVES