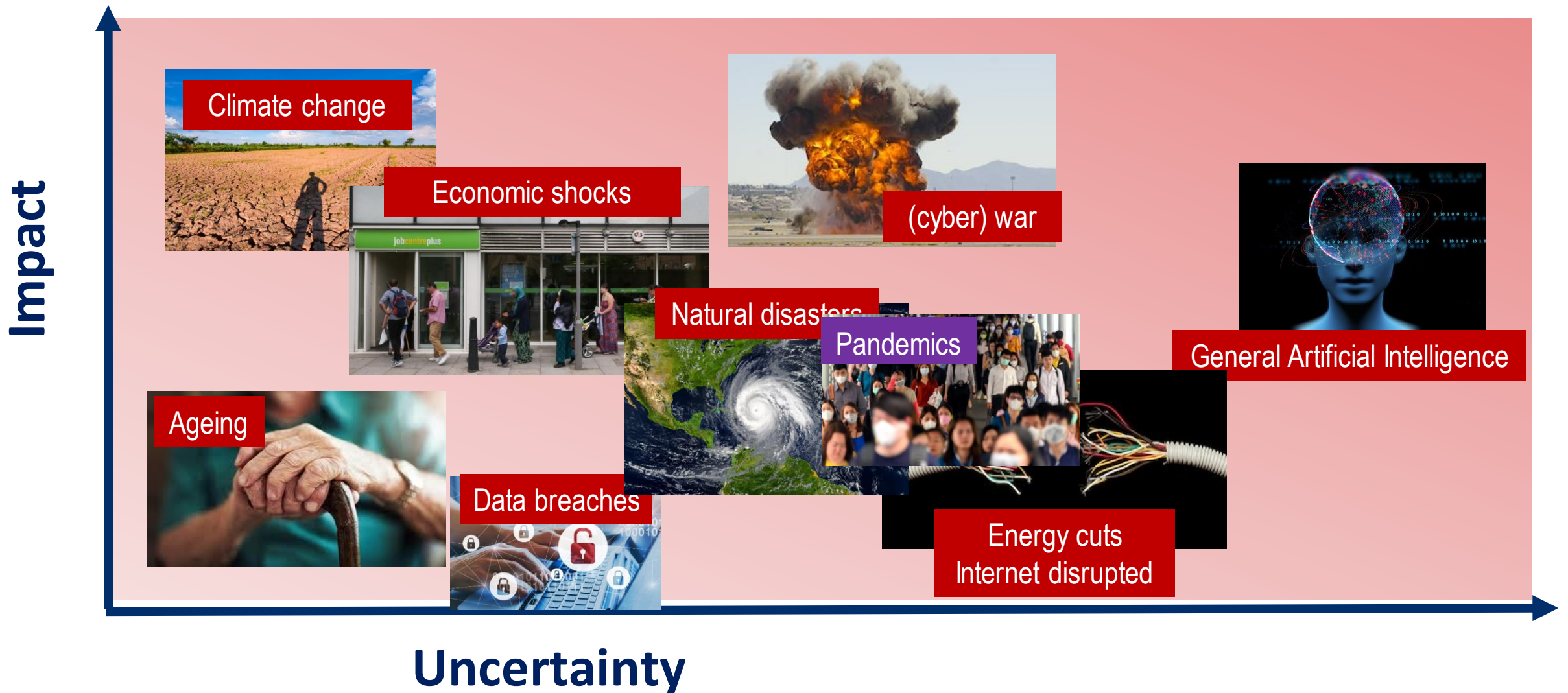




Social repercussions of current challenges

OECD Berlin Centre
Andreas Schleicher

The future will always surprise us



Many disconnects

Infinite growth imperative

Financial economy

The wealthy

Gross domestic product

Technology

Governance

Finite resources of planet

Real economy

The poor

Well-being of people

Social needs

Voicelessness of people

New sources of growth

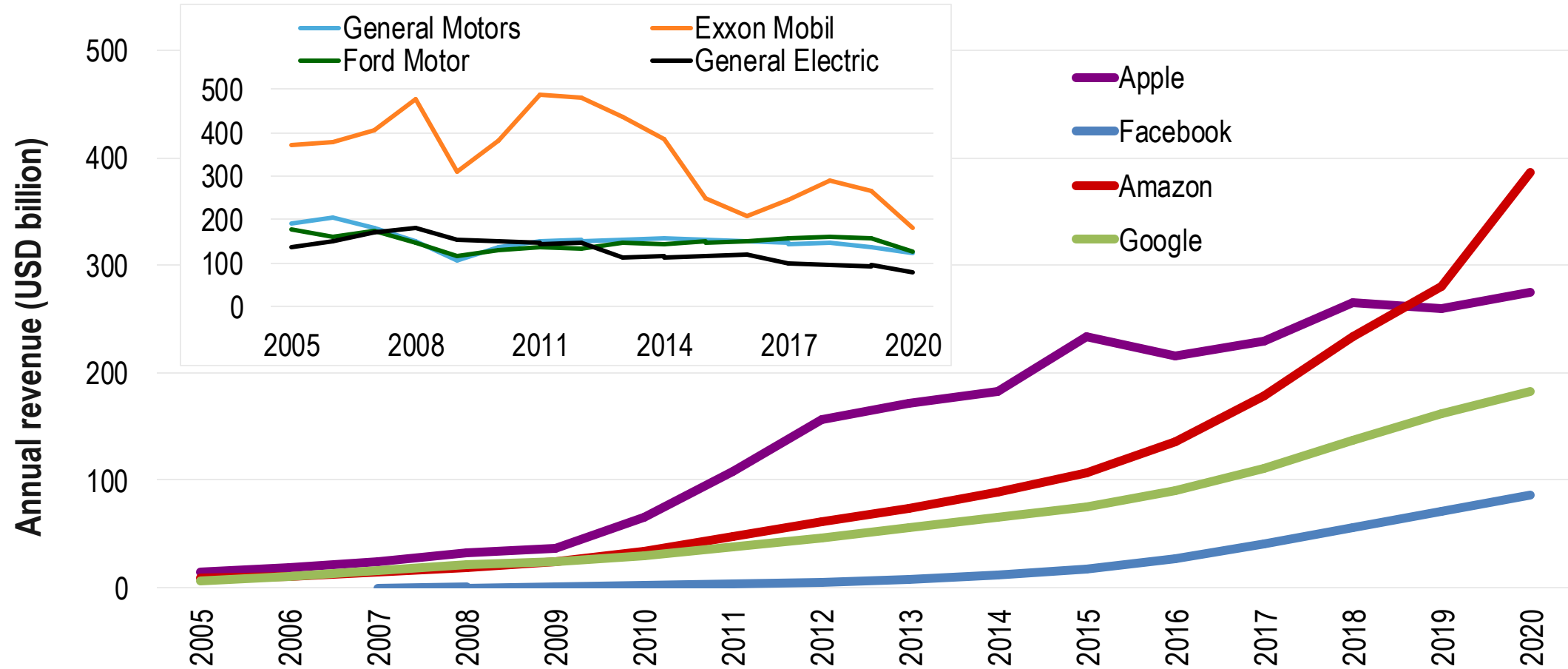


Growth



The rise of Big Tech

Annual revenue of top four companies from the Fortune 500 in 1960 vs “Big Four” tech companies, 2005-2020



Source: OECD(2019), *An Introduction to Online Platforms and Their Role in the Digital Transformation*, <https://doi.org/10.1787/53e5f593-en>; companies' annual reports; and <https://macro trends.net>

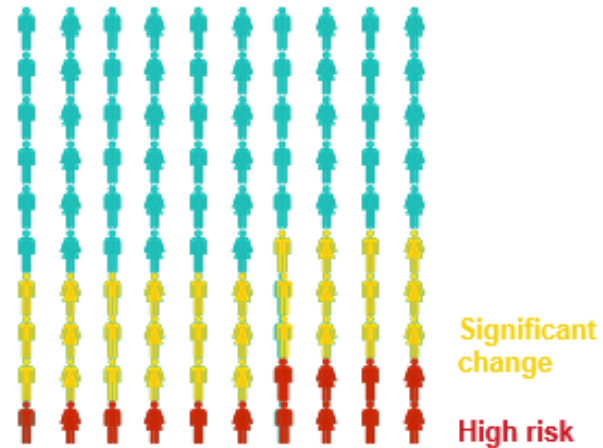
Work to live or live to work?



Working and living

Labour markets undergoing rapid, fundamental change

Jobs are at risk of automation

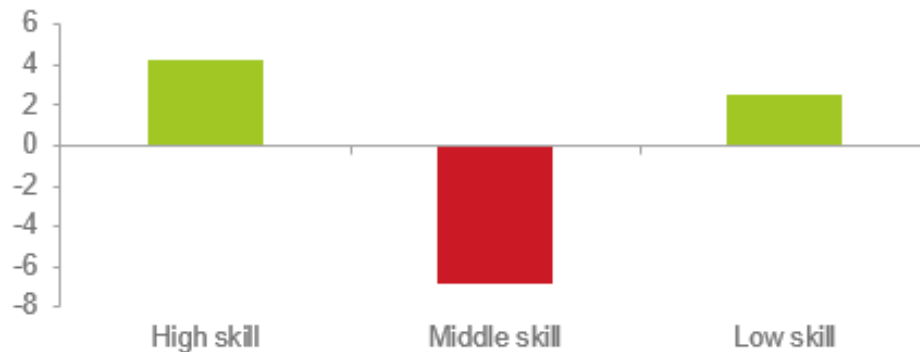


New forms of work are emerging



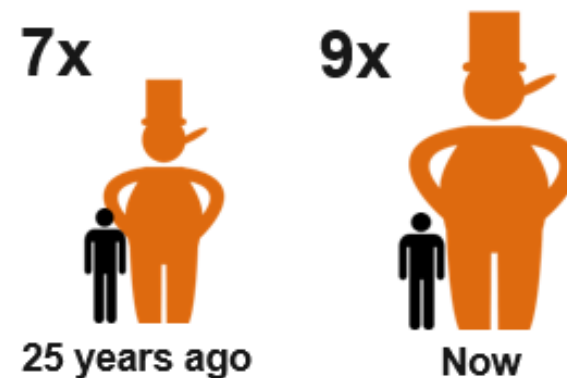
Labour markets are polarising

Percentage point change in share of total employment (OECD average), 1995 to 2015

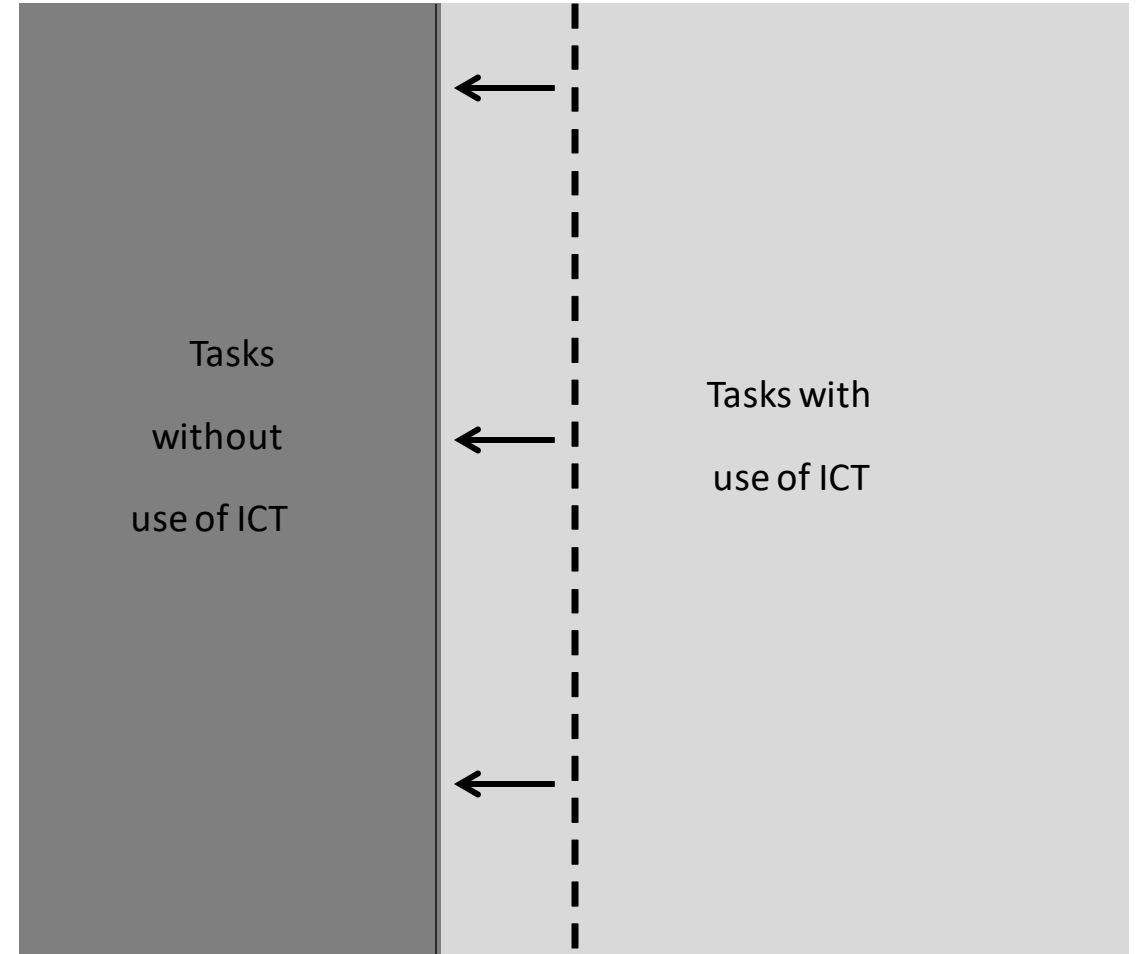
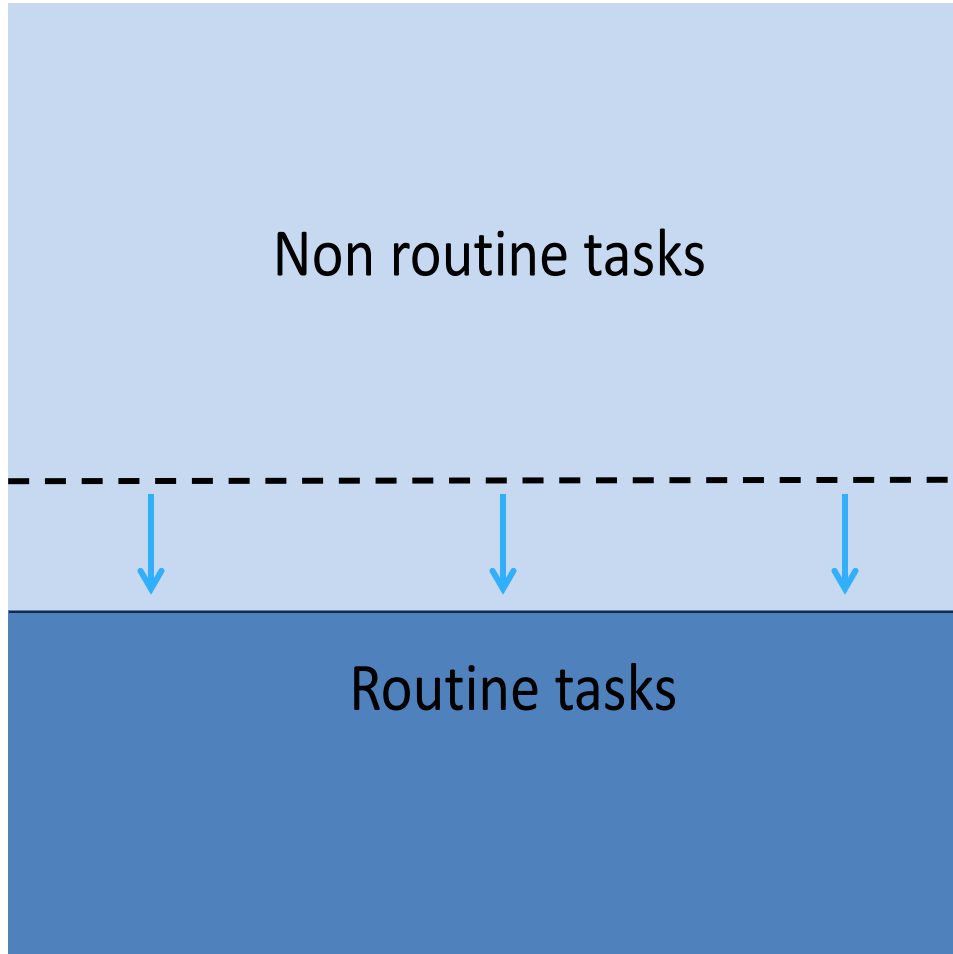


Inequality is rising

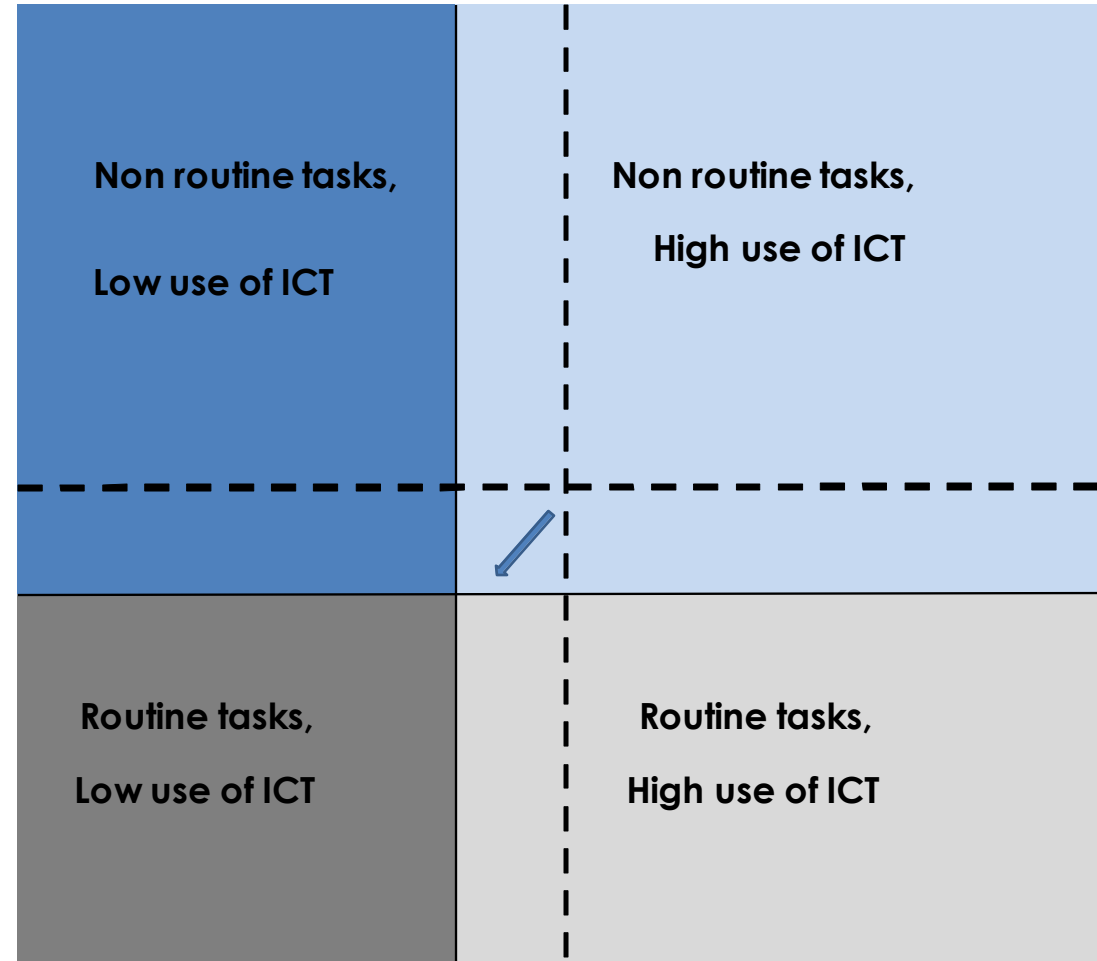
Richest 10% v. poorest 10%



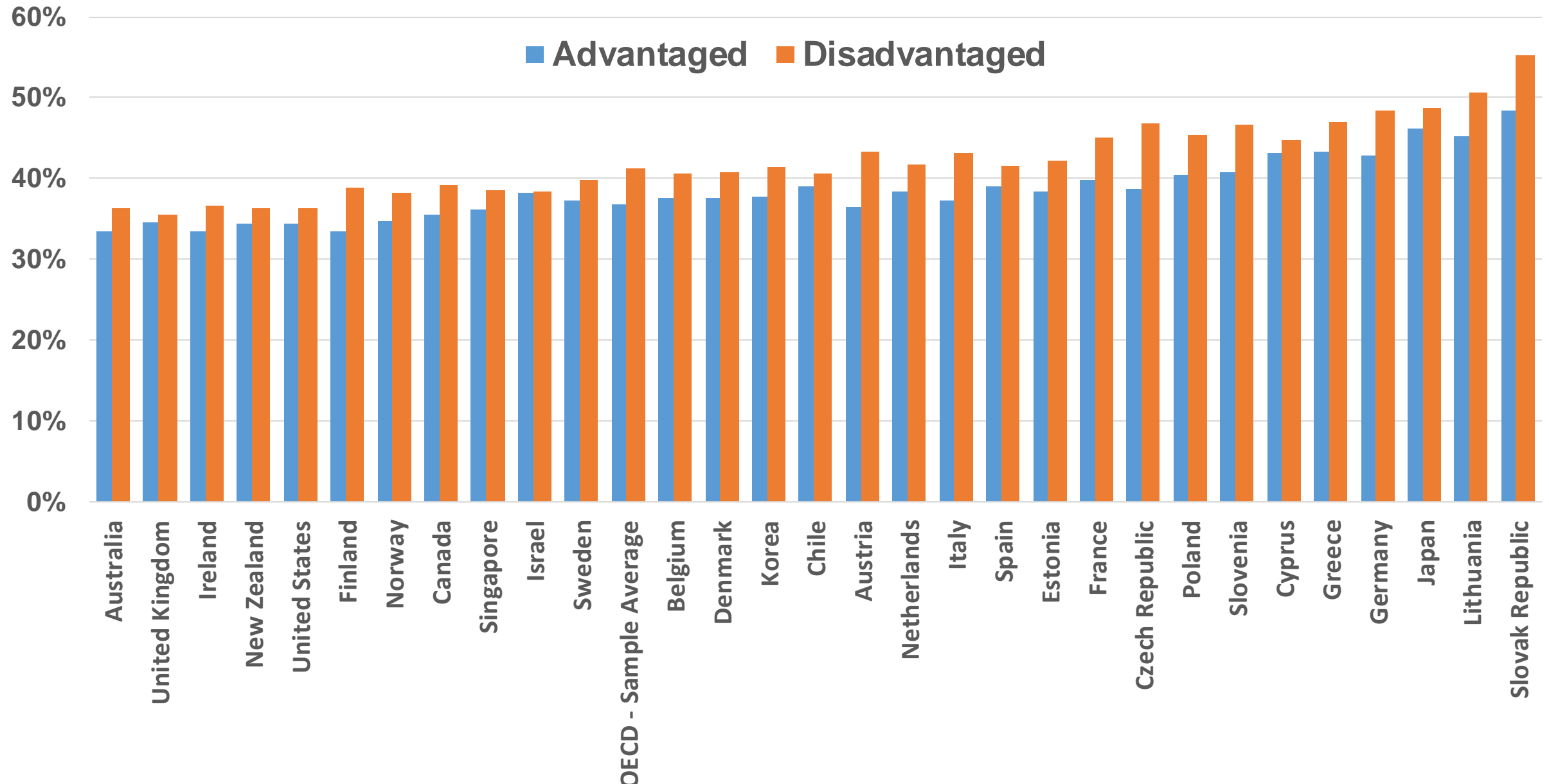
The kinds of things that are easy to teach...



... have also become easy to digitise and automate



Many teenagers aspire to jobs that are at high risk of automation (PISA)



Knowledge societies

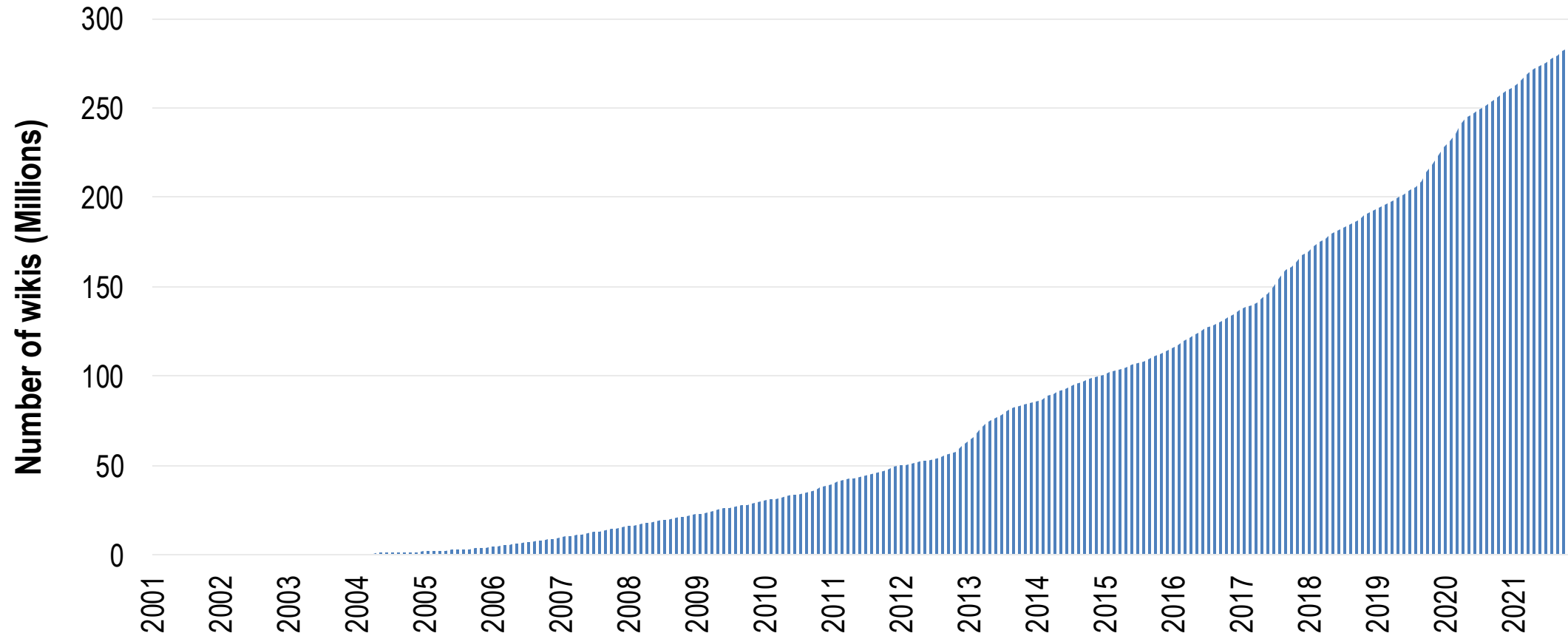


Knowledge and power



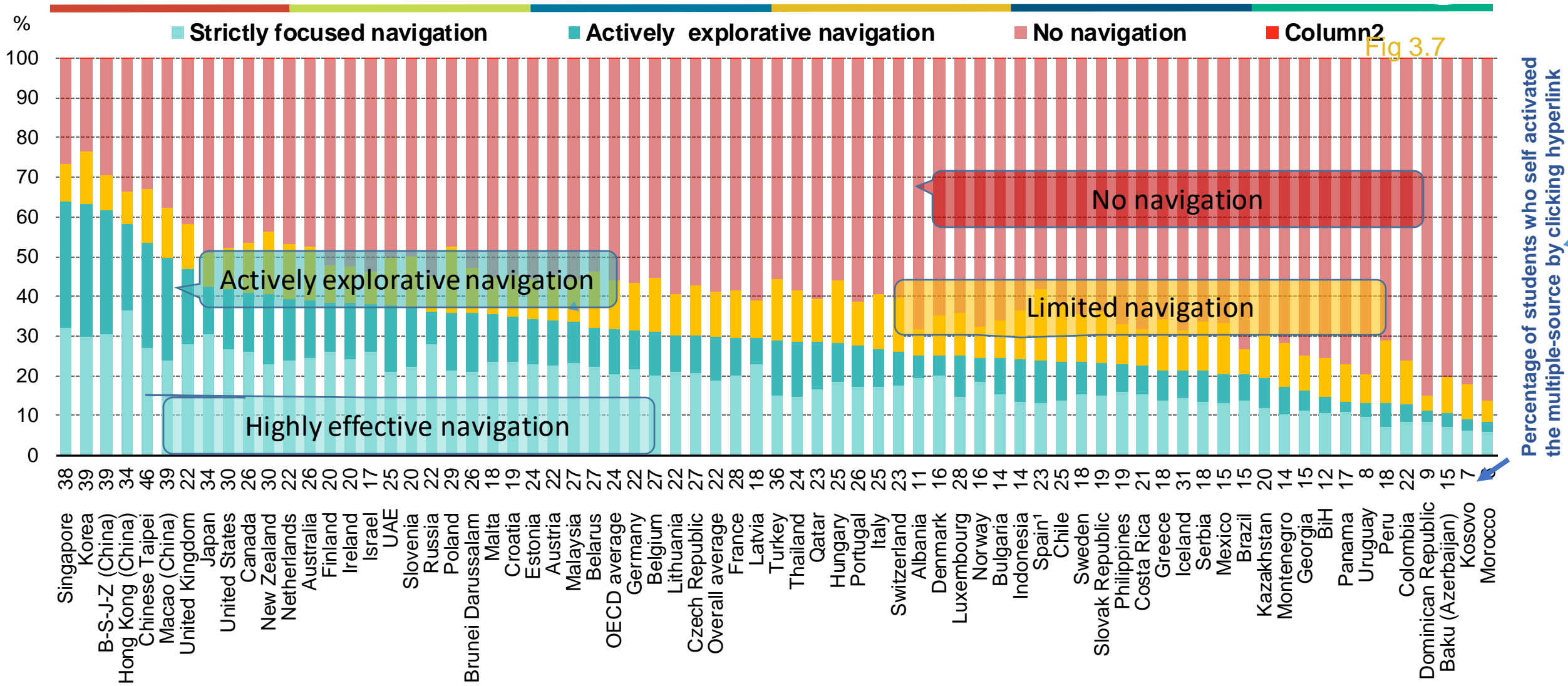
The wisdom of crowds

Number of pages in all wikis, 2001-2021



Source: Wikimedia (2021), Pages to Date, All Wikis, <https://stats.wikimedia.org/>

Digital navigation skills (PISA)



There is no Planet B

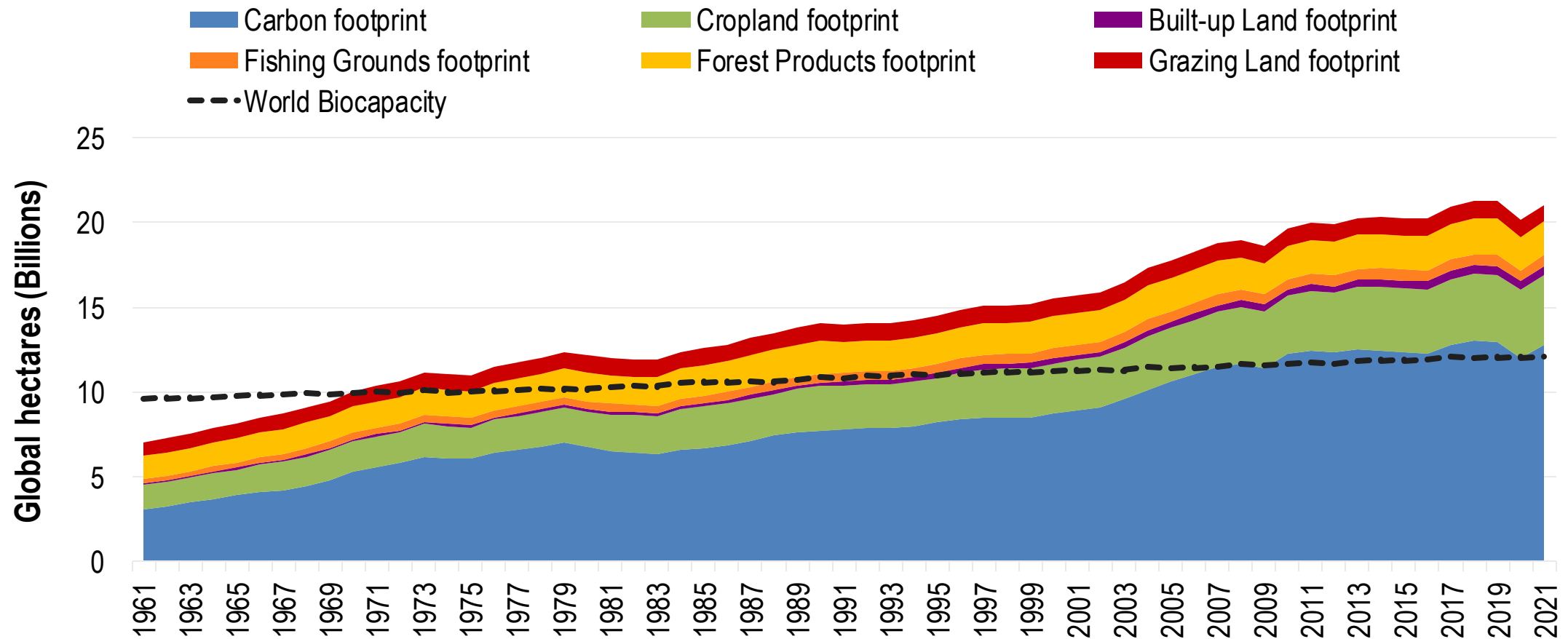


Our changing nature



An outsized ecological footprint

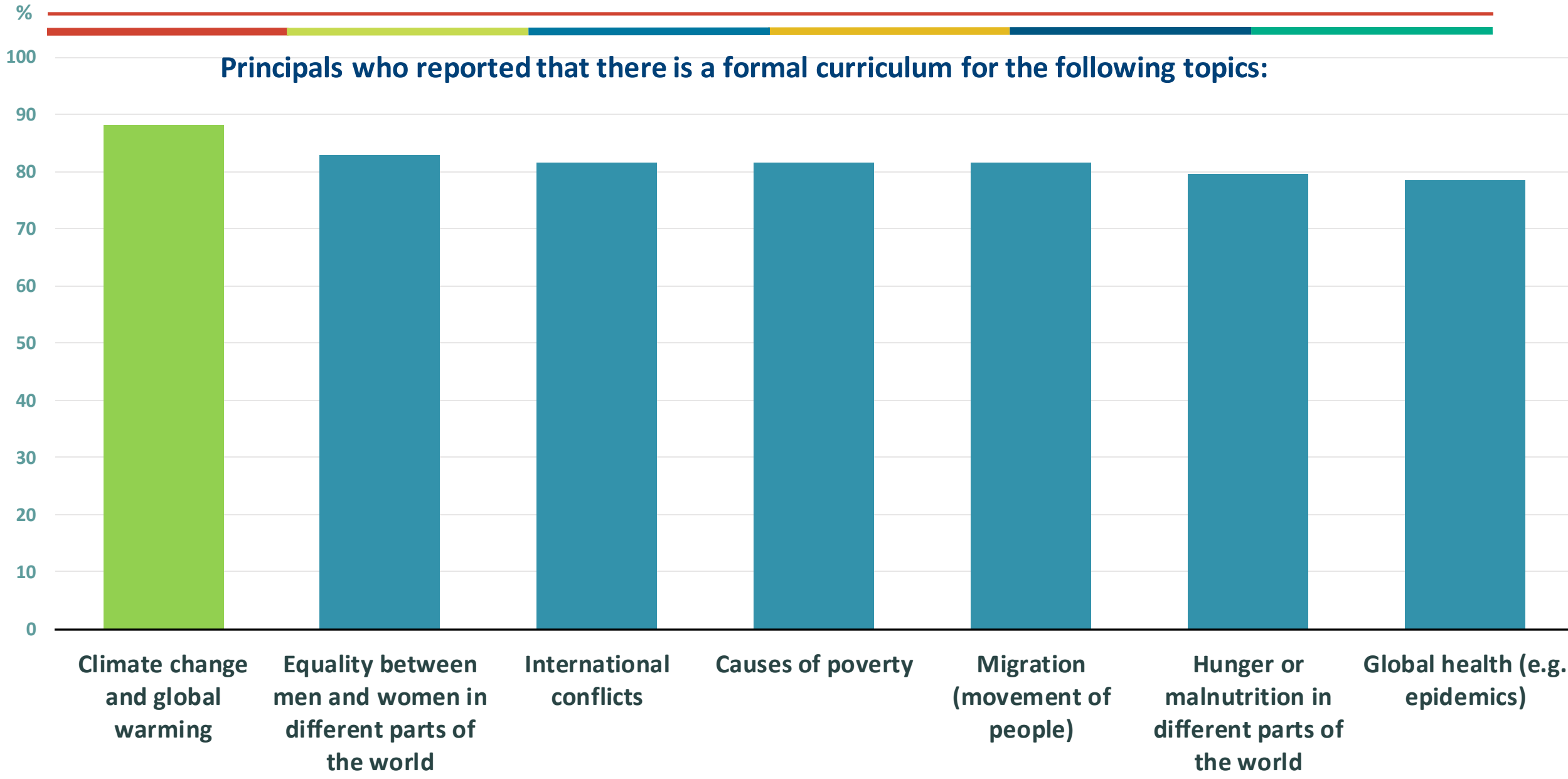
Humanity's ecological footprint by land type against Earth's biocapacity, global hectares (gha), 1961-2021



Source: Global Footprint Network (2021), *National Footprint and Biocapacity Accounts*, <https://data.footprintnetwork.org>;
Lin, Wambersie and Wackernagel (2021), "Estimating the Date of Earth Overshoot Day 2021", <https://www.overshootday.org/>

Figure 5.1

Global issues covered in the curriculum (PISA)

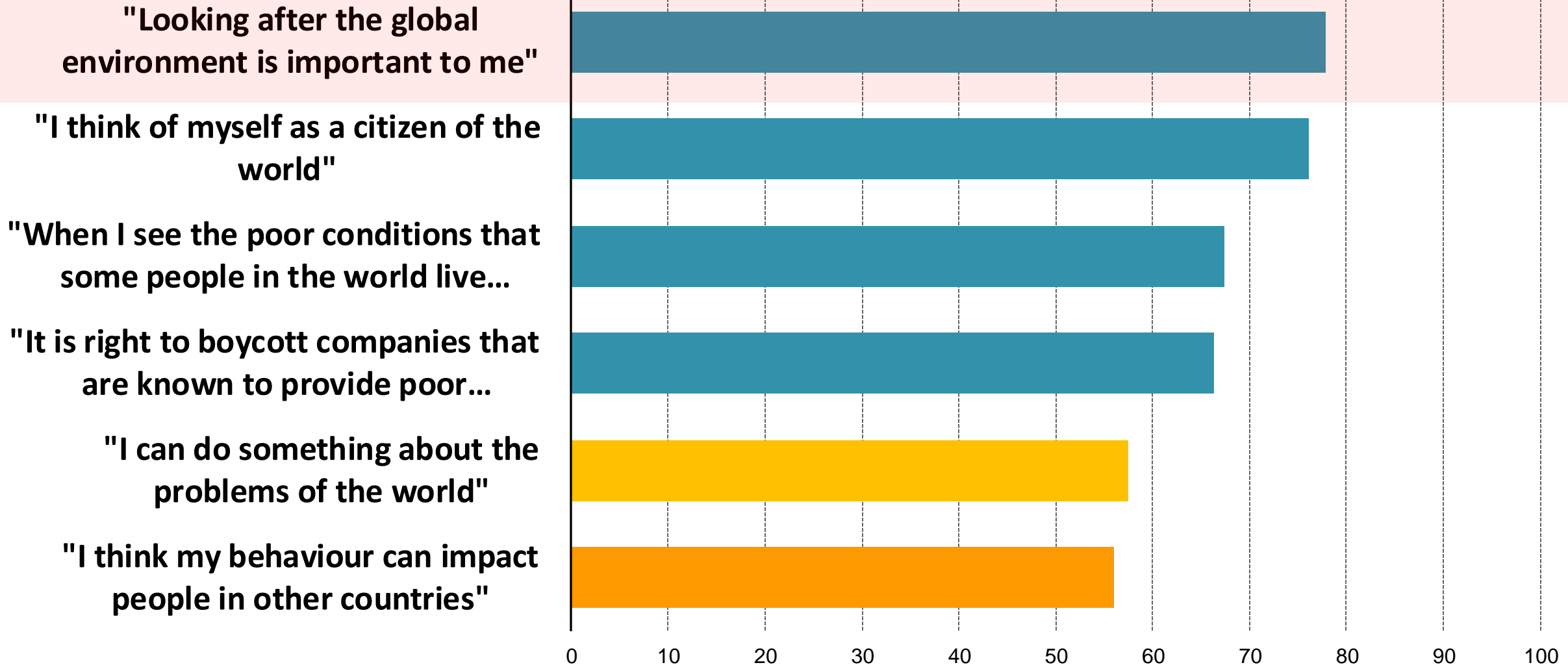




Students' agency regarding global issues (PISA, average)

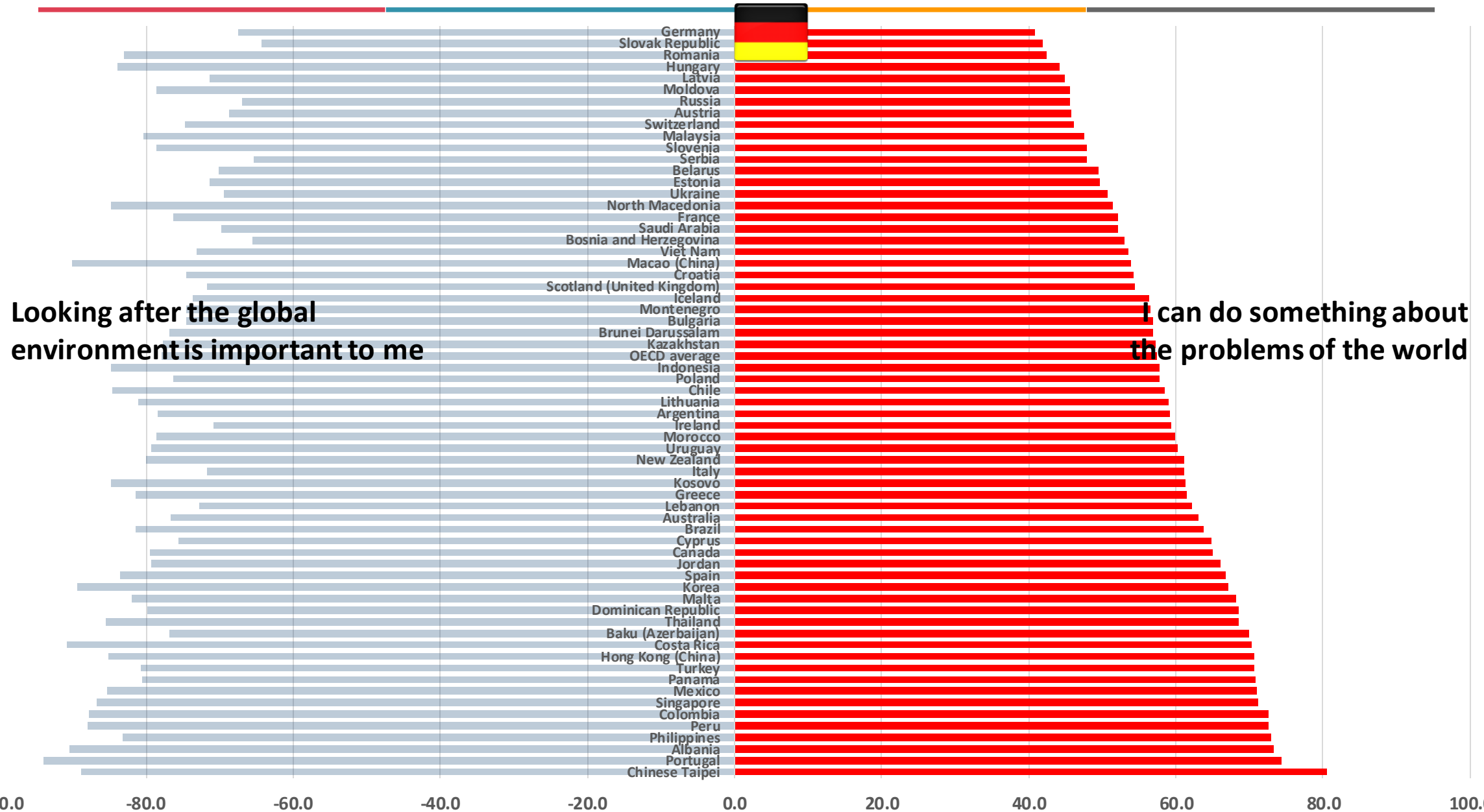
Fig VI.5.1a

Percentage of students who agreed or strongly agreed with the following statements:





15-year-olds agency regarding global issues (PISA)



Scenario 1: Schooling Extended

Participation in formal education continues to expand. International collaboration and technological advances support more individualised learning. The structures and processes of schooling remain.



Goals and functions



Governance and geopolitics



Organisation and structures



The teaching workforce



Educational monopolies remain: Schools are key actors in socialisation, qualification, care and credentialing.



International collaboration and digital technologies power more personalised teaching and learning practices.



Distinct teacher corps remain, although with new divisions of tasks and greater economies of scale.

Scenario 2: Education digitised



Traditional schooling systems break down as society becomes more directly involved in educating its citizens. Learning takes place through more diverse, possibly privatised and flexible arrangements, with digital technology a key driver.



Goals and functions



Governance and geopolitics



Organisation and structures



The teaching workforce



Fragmentation of demand with self-reliant “clients” looking for flexible services.



Schooling systems as players in a wider (local, national, global) education market. Diversification of structures: multiple organisational forms available to individuals.



Diversity of instructional roles and teaching status operating within and outside of schools.

New learning experiences

- Many online and distance learning and other innovative approaches such as AR, VR and AI were created, adapted and expanded.

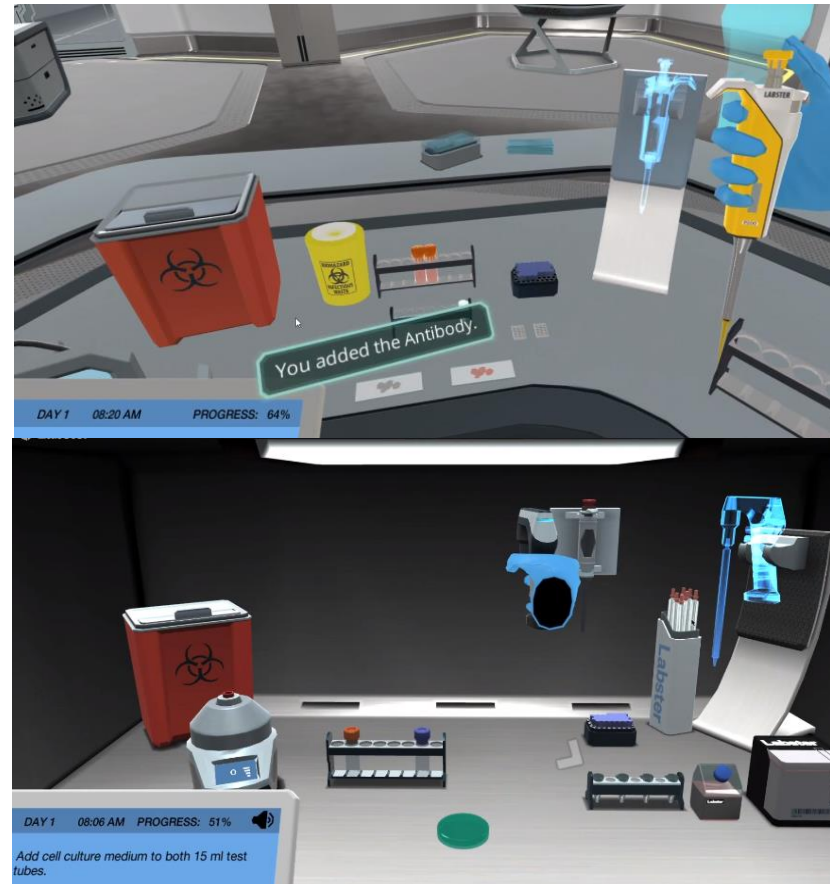


Image sources: Electude Classroom and Labster Labs' virtual labs; Oxford University's LIFE project, a smartphone-based virtual learning platform

Learning analytics

- Learning analytics helps educators personalise learning
 - in real time
 - as a reflective tool
- Data come from sensors, learning management systems and digital activities of learners
 - When should you shift to a new activity?
 - Are you losing the attention of learners?
 - How do you structure instruction time (lecture, small group, discussion, assessment, practice, etc.)?
 - Which students do you talk to and support the most?



Assessments and exams



New types of assessments through simulations and games

Adaptive assessments

Hands-on assessment in vocational settings

Increasing reliability of machine rating for essays

Predictive models may disrupt the exam model



Scenario 3: Schools as Learning Hubs

Schools remain, but diversity and experimentation have become the norm. Opening the “school walls” connects schools to their communities, favouring ever-changing forms of learning, civic engagement and social innovation.

3



Goals and functions



Governance and geopolitics



Organisation and structures



The teaching workforce



Strong focus on local decisions; self-organising units in diverse partnerships. Schools as hubs function to organise multiple configurations of local-global resources.



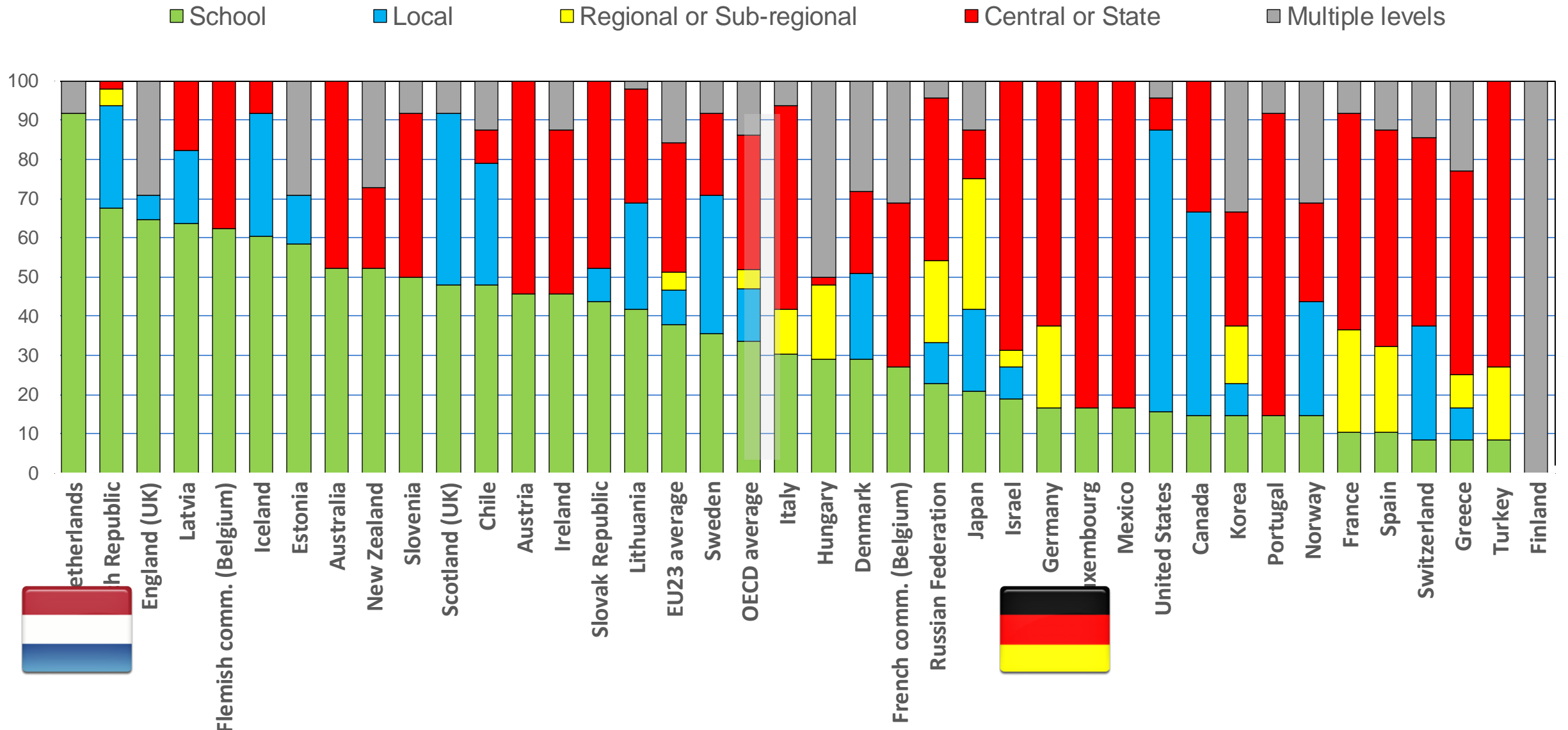
Flexible schooling arrangements permit greater personalisation and community involvement.



Professional teachers as nodes of wider networks of flexible expertise.

Who decides?

Percentage of decisions taken at each level of government in public lower secondary education (2017)



Assessing risks, leveraging opportunities

Tensions and paradoxes require smart responses



Thank you

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Twitter: [SchleicherOECD](https://twitter.com/SchleicherOECD)

Wechat: [AndreasSchleicher](https://wechat.com/qrcode/AndreasSchleicher)

and remember:

Without data, you are just another person with an opinion