The New Student: Flexible Learning Paths and Future Learning Environments

Higher Education Expert Conference 20-21 September 2018, Vienna

Missing opportunities of digitalisation for teaching and learning.

Picture credits: europeana.eu, id: lnb-zl-12542, 1980, National Library of Latvia: Elektroniskās skaitļošanas tehnika Rīgas Politehniskajā institūtā | Salcēvičs, Romvalds, 1949-

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Digitalisation is everywhere!

Political poster in Bavaria, 2018 – “Blockchain and brass bands”

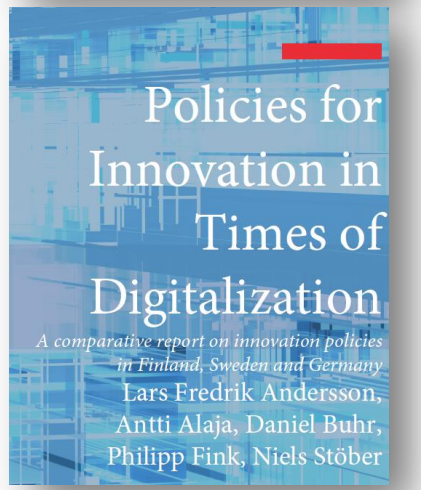
With technology-first approaches we are missing ~~chances~~

Technology-first:

- "Innovation (is) … designed asymmetrically. The focus is primarily on technological innovation. Social innovations are understood mainly in their functional relationship to this or positioned as a 'compensatory counterpart'."

Social innovation:

- New combinations or configurations of social practices.
- **Looking at innovation from the user perspective**



Howaldt, J., & Jacobsen, H. (Eds.). (2010). Soziale Innovation: Auf dem Weg zu einem postindustriellen Innovationsparadigma. VS Verlag für Sozialwissenschaften.

Rüede, D., & Lurtz, K. (2012). Mapping the various meanings of social innovation: Towards a differentiated understanding of an emerging concept. EBS Business School Research Paper Series, 12, 1–51. https://doi.org/10.2139/ssrn.2091039

Andersson, L. F., Alaja, A., Buhr, D., & Stiftung, F. E. (2016). *Policies for Innovation in Times of Digitalization*. Arena idé , Friedrich Ebert Stiftung, Kalevi Sorsa Foundation. Retrieved from http://arenaide.se/wp-content/uploads/sites/2/2016/09/policies-for-innovation-in-times-of-digitalization-160929.pdf

Demand-side vs. supply-side thinking …or why I don't have an ebike

It would be great because…

It is easier to travel distances and reach heights, even for less athletic people

- ✓ *efficiency*
- ✓ *access to different terrains*
- ✓ *access to mountainbiking*

I don't use one because…

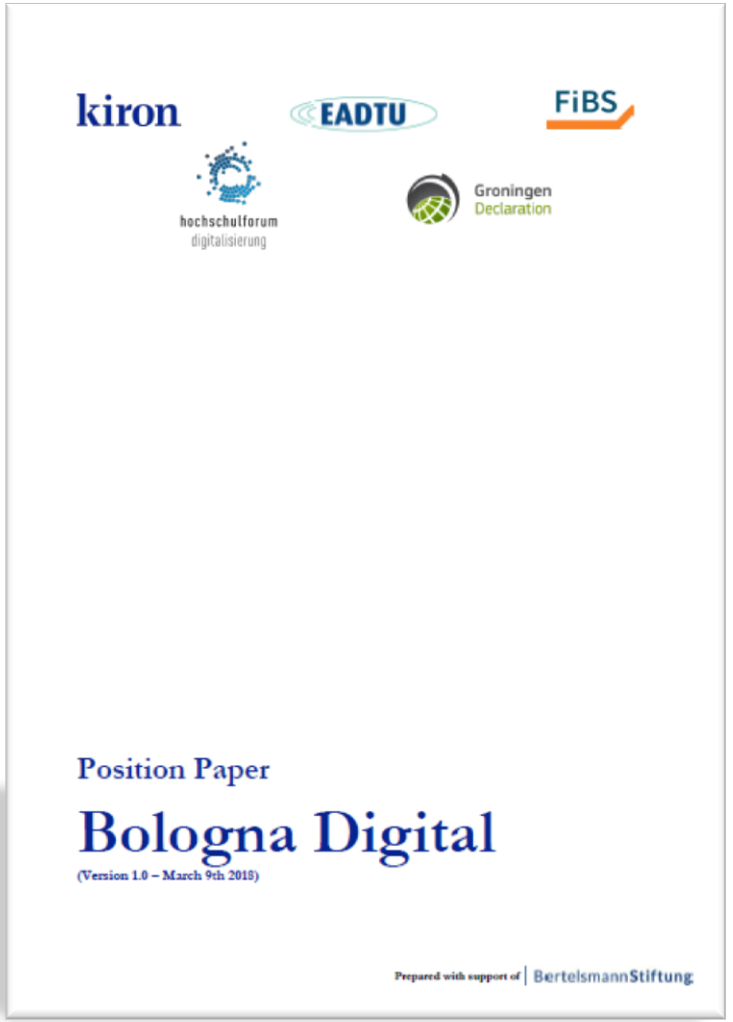
It doesn't fulfil my needs

- × *expensive / unaffordable*
- × *not easy to repair (especially in the woods)*
- × *heavy*
- × *different riding experience*

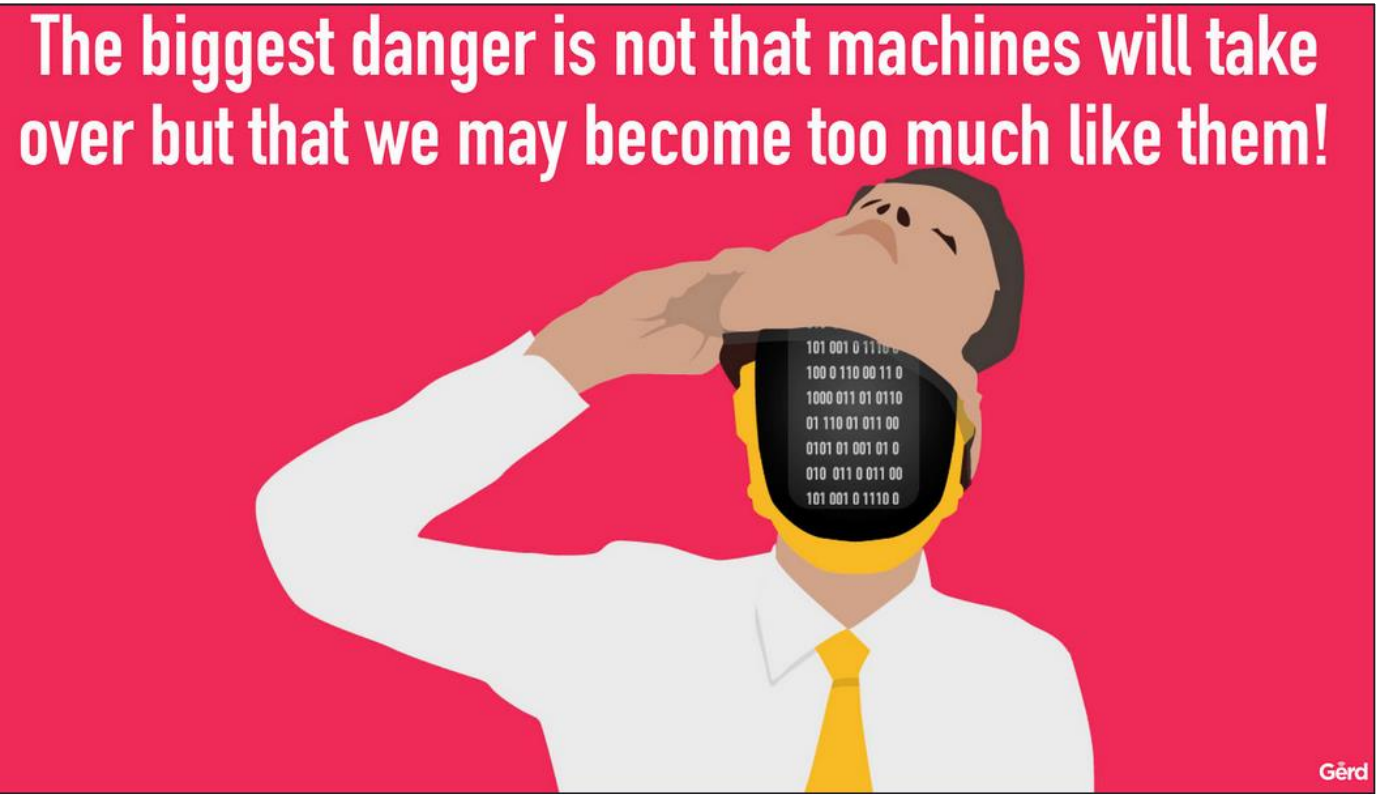
Digitalisation in higher education – as social innovation

“Digitalisation should not be viewed as an additional challenge, but as a powerful means to meet existing challenges for higher education.”

(https://bolognadigital.blog/)



The debate on skills in the context of automation / digitalisation



CC BY: Gerd Leonard, author of Technology vs. Humanity: The coming clash between man and machine

Three key attributes based on 'engineering bottlenecks' Osborne & Frey

Social intelligence - the ability to effectively negotiate complex social relationships, to collaborate, to empathize, to recognize cultural sensitivities, to care for others

Cognitive intelligence – the ability to problem-solve, complex-reasoning and the ability to be creative, work outside or redefine the 'rules'

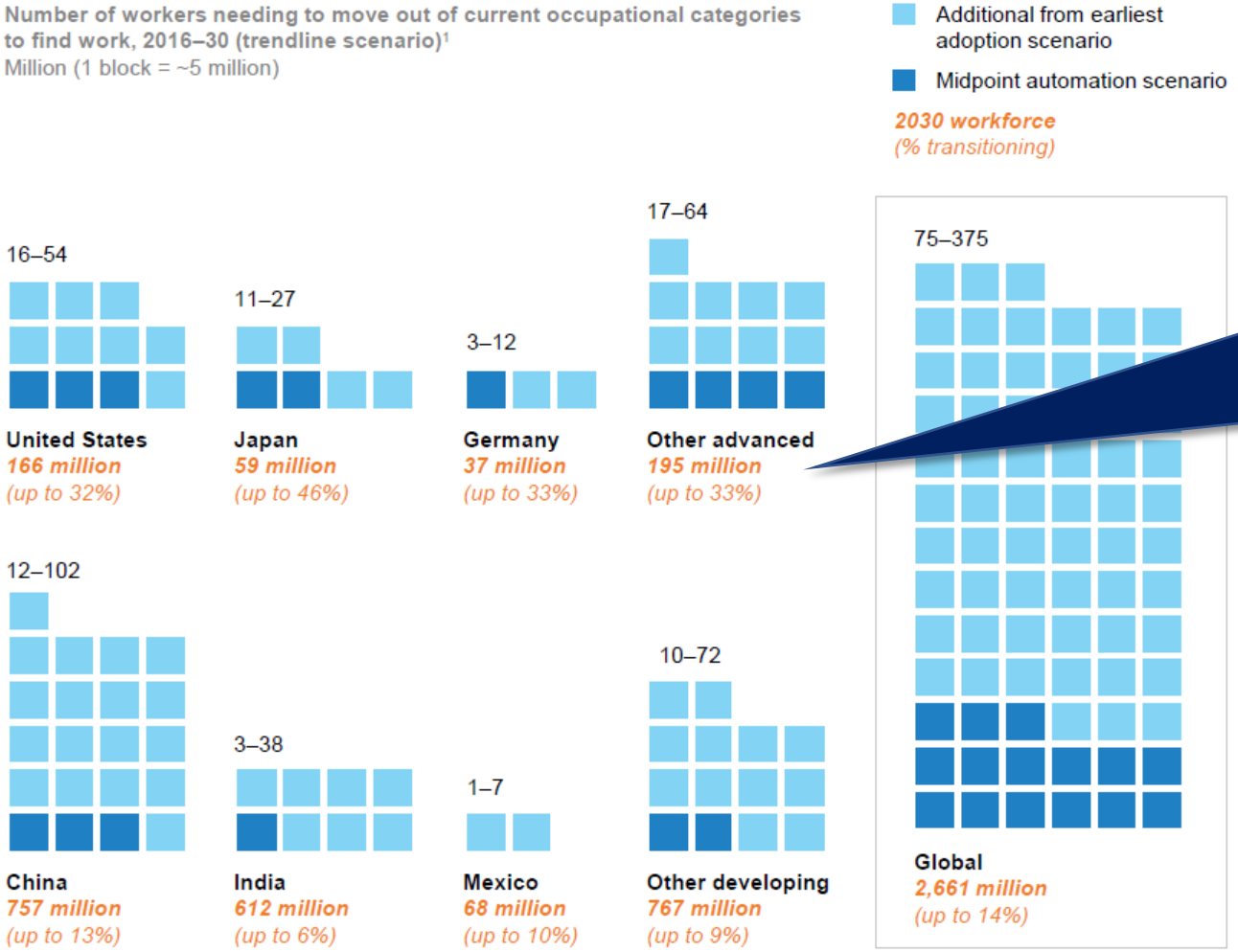
Perception and manipulation – the ability to carry out physical tasks in an unstructured work environment

Nedelkoska, L. & Quintini, G. (2018), Automation, skills use and training (OECD Social, Employment and Migration Working Papers). https://doi.org/10.1787/2e2f4eea-en

Need to switch occupations based on future scenarios

Globally, up to 375 million workers may need to switch occupational categories

Number of workers needing to move out of current occupational categories to find work, 2016–30 (trendline scenario)[1]
Million (1 block = ~5 million)

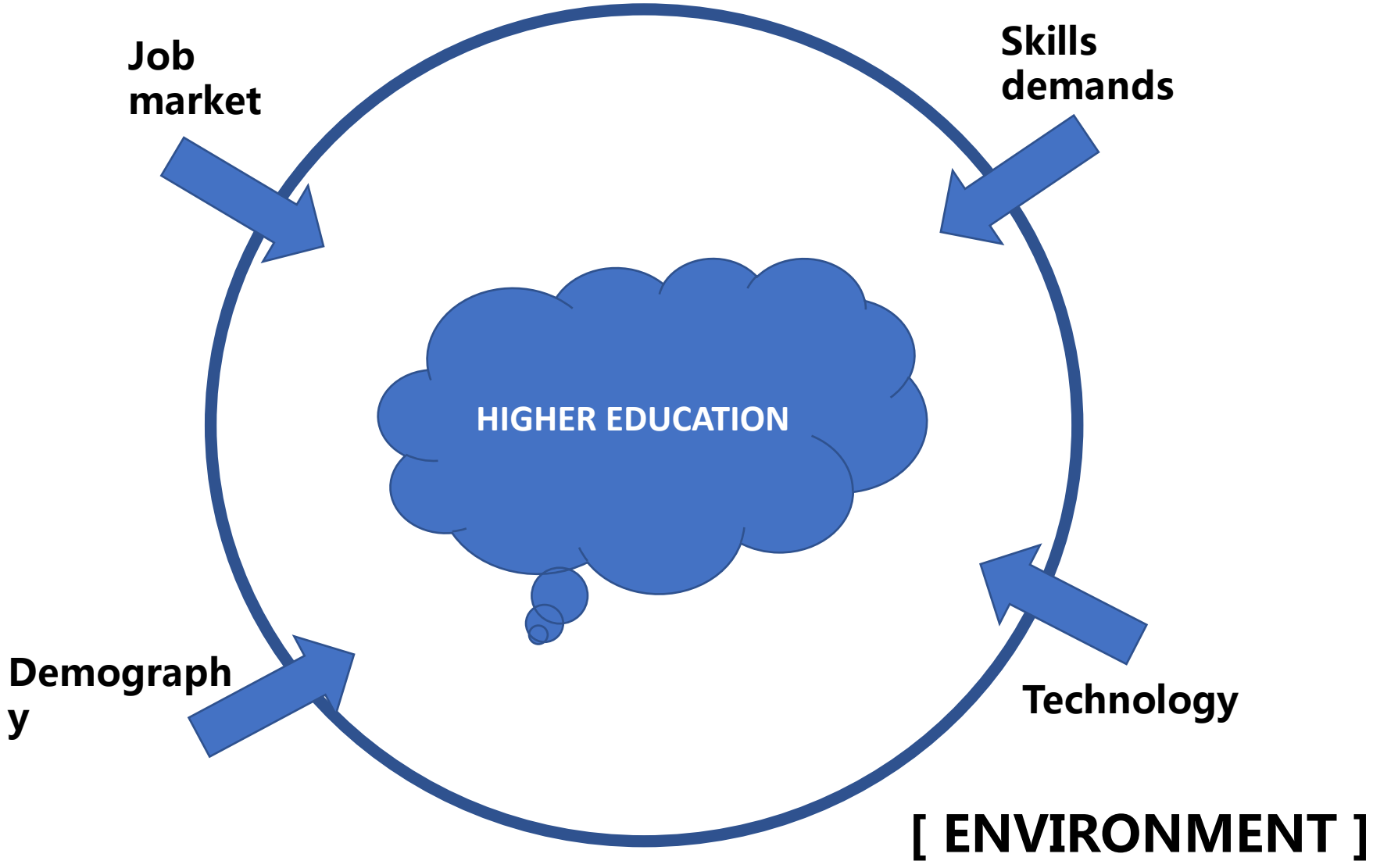


1 Some occupational data projected into 2016 baseline from latest available 2014 data.

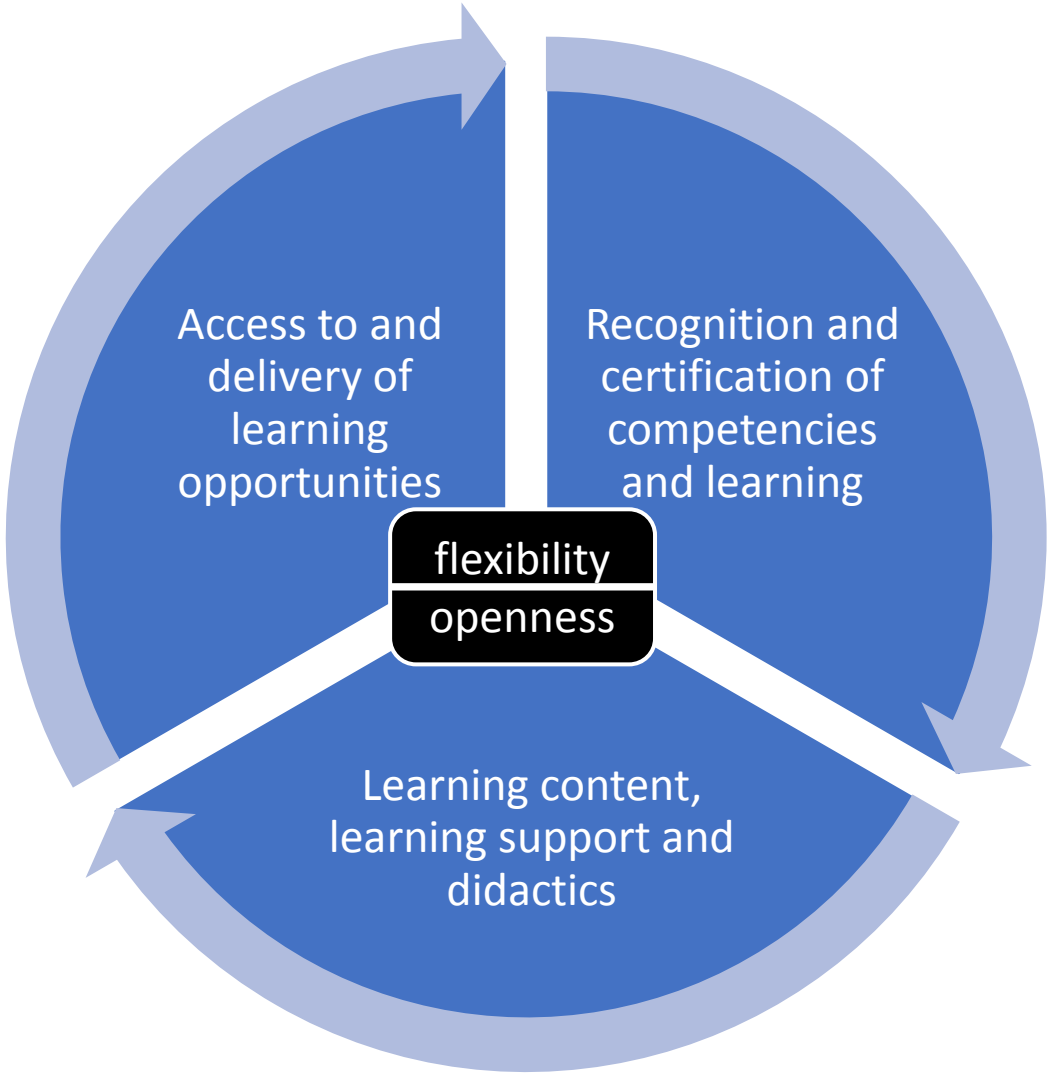
- In advanced economies, **one third of workers projected to need to change occupation by 2030**

McKinsey Global Institute (2017): Jobs lost, jobs gained: Workforce transitions in a time of automation

Higher education's challenges from outside



Digitalisation as facilitator...



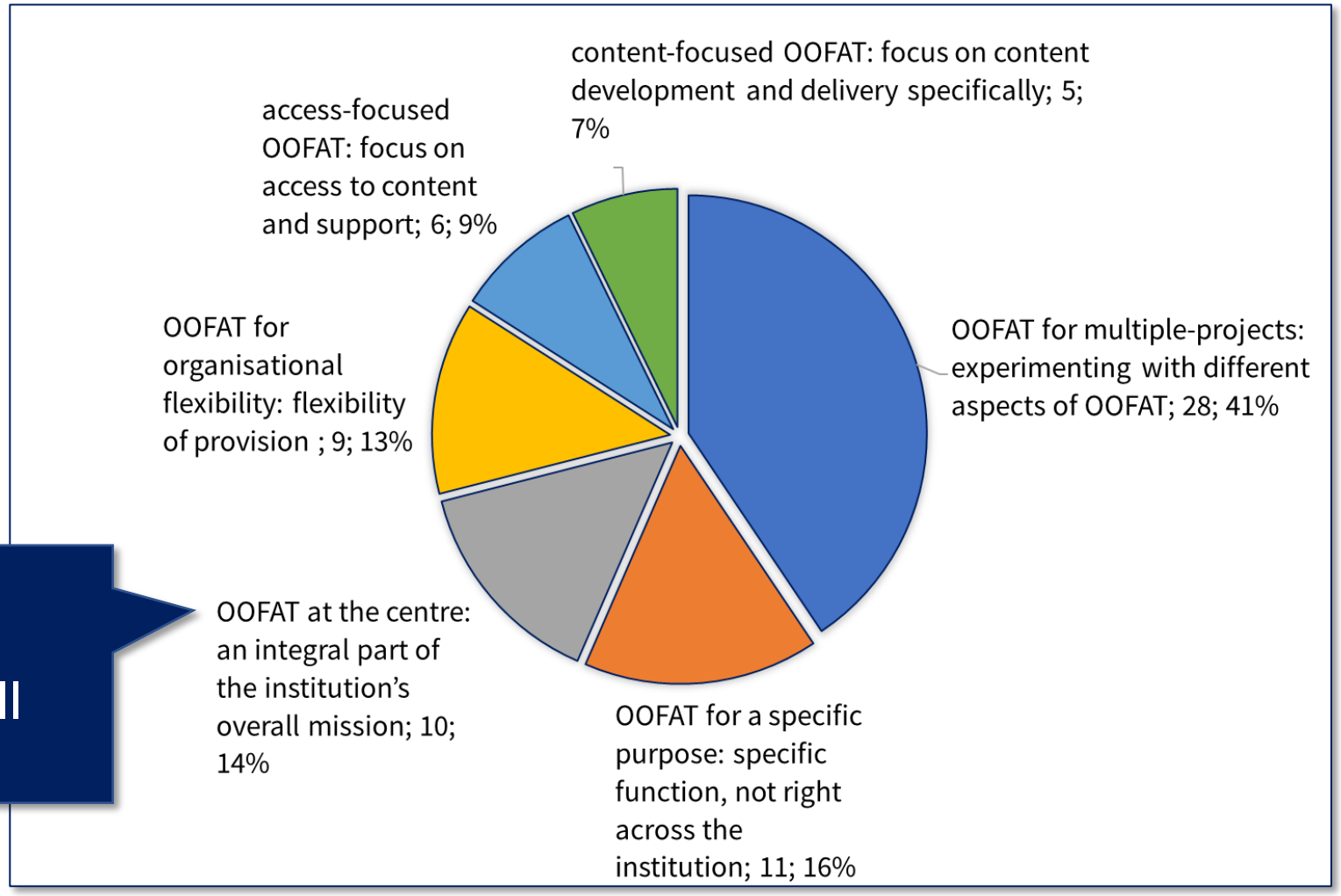
Higher education provision made up of 3 core processes

Digitalisation as facilitator for

2 dimensions

- flexibility *(organizational openness)*
- inclusion *(social openness of processes)*

Using this model (OOFAT), we found 6 strategy types



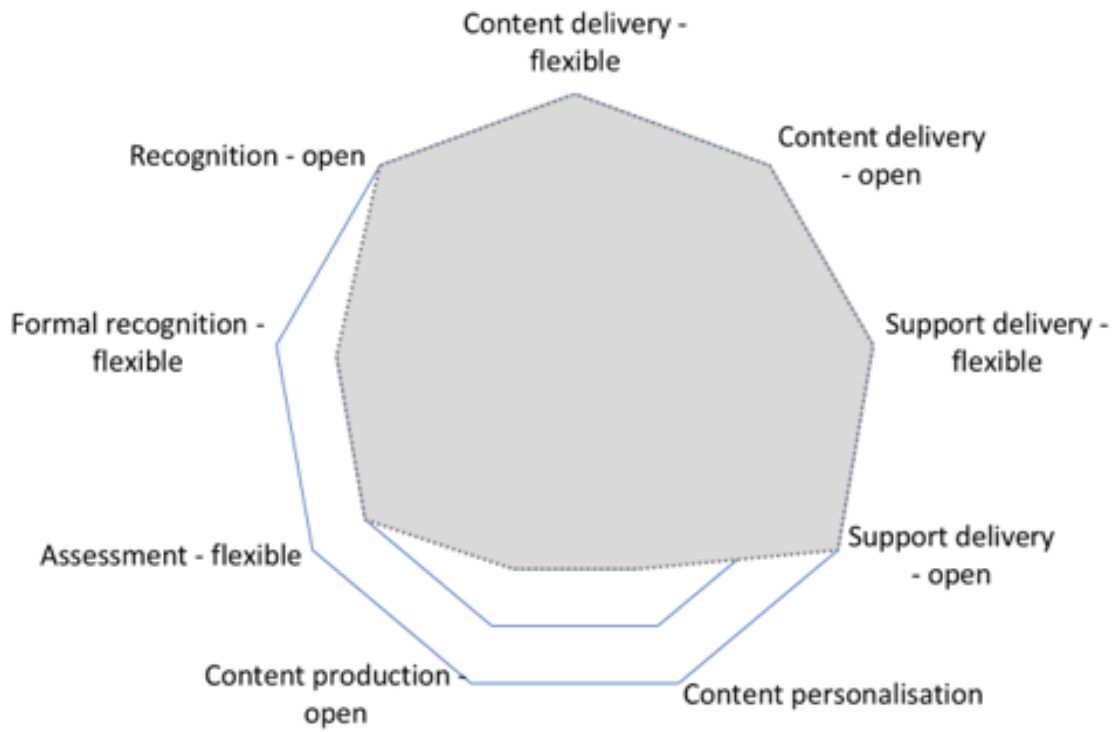
Only few (14%) innovate through digitalisation in all areas

Note: n=69 HEIs providing complete responses on OOFAT model.

Orr, D., Weller, M., & Farrow, R. (2018). *Models for online, open, flexible and technology enhanced higher education across the globe – a comparative analysis.* International Council for Open and Distance Education. Retrieved from https://oofat.oerhub.net/OOFAT/wp-content/uploads/2018/04/Models-report-April-2018_final.pdf

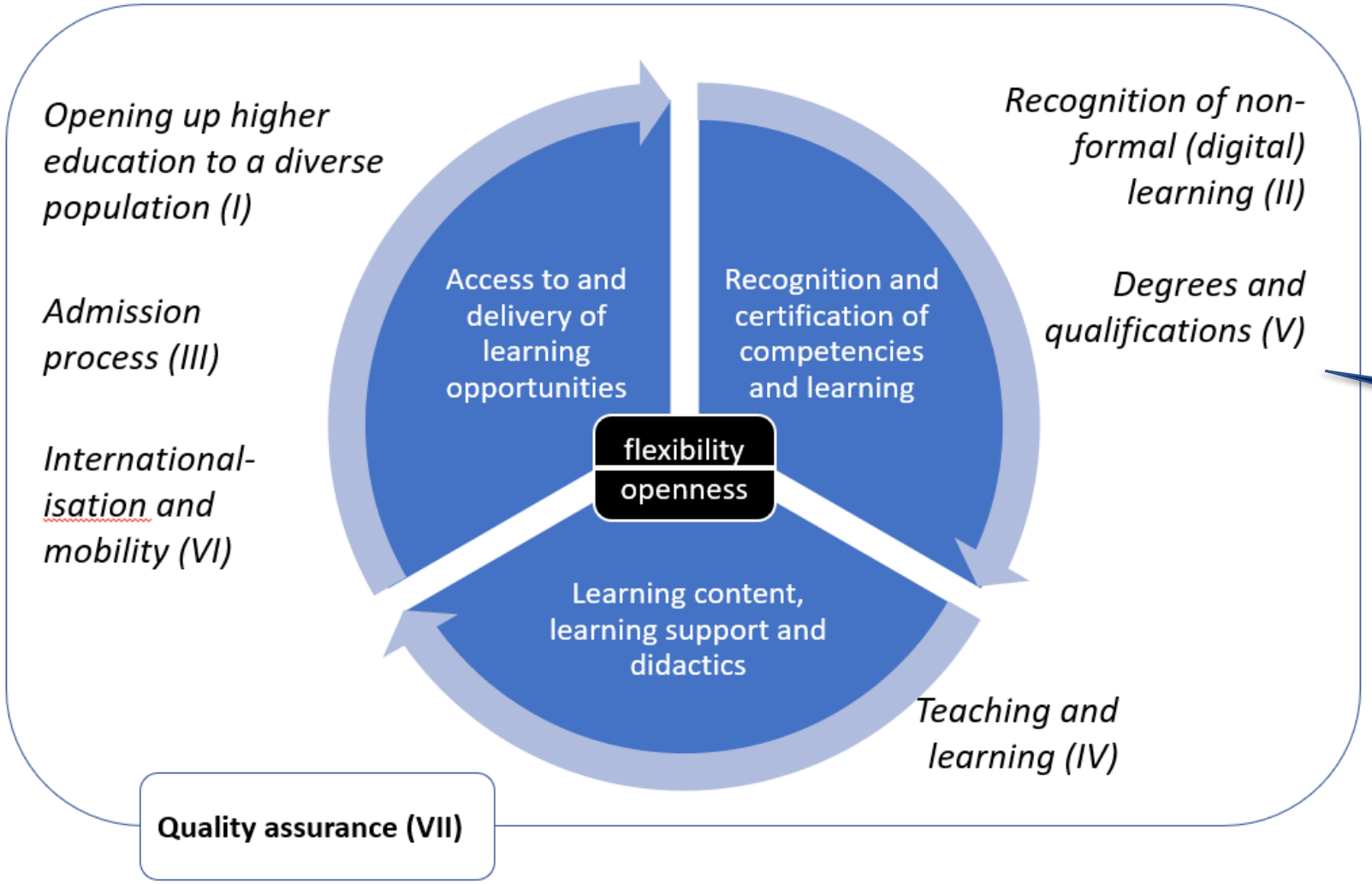
Example – case OERu as cooperation network

Example of OOFAT at the centre - OERu, New Zealand



The OERu network of institutions offers free online courses for students worldwide. OERu partners also provide affordable ways for learners to gain academic credit towards qualifications from recognised institutions. The OERu uses open source software, makes all its content available as OER, and allows some pathways where students can study their first year of an undergraduate course for free, and this will then be formally recognised, allowing transfer into the formal education system. Open

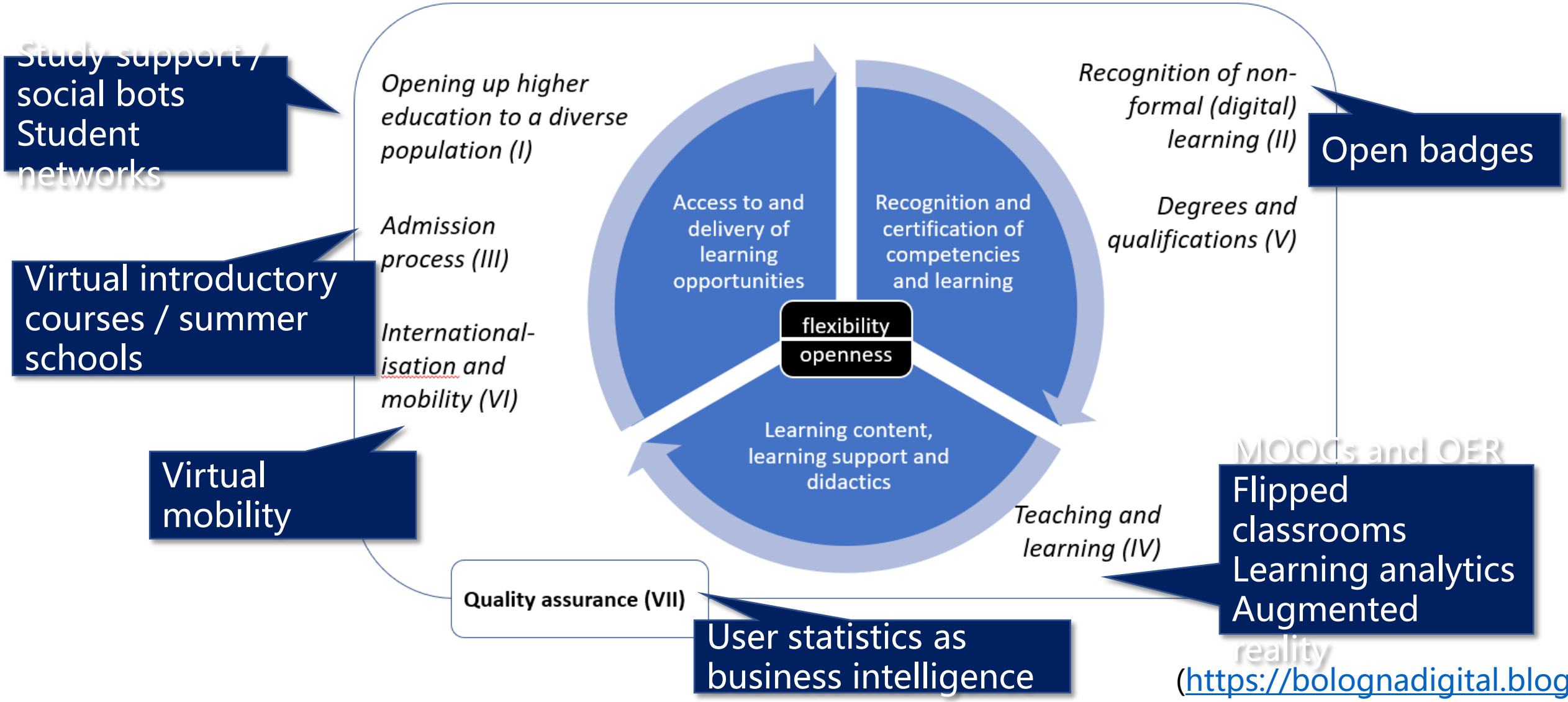
Alignment of model to key Bologna challenges



Digitalisation should focus on these 7 issues related to these 3 core processes

(https://bolognadigital.blog/

Alignment of model to key Bologna challenges



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