

The Digital Transformation: Challenges for the Social Partners of the Construction Sector

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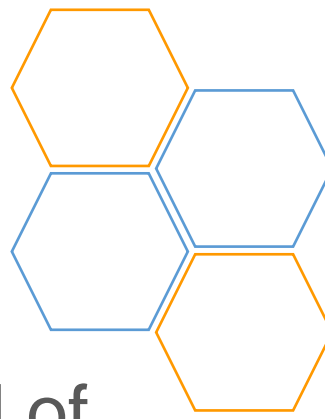
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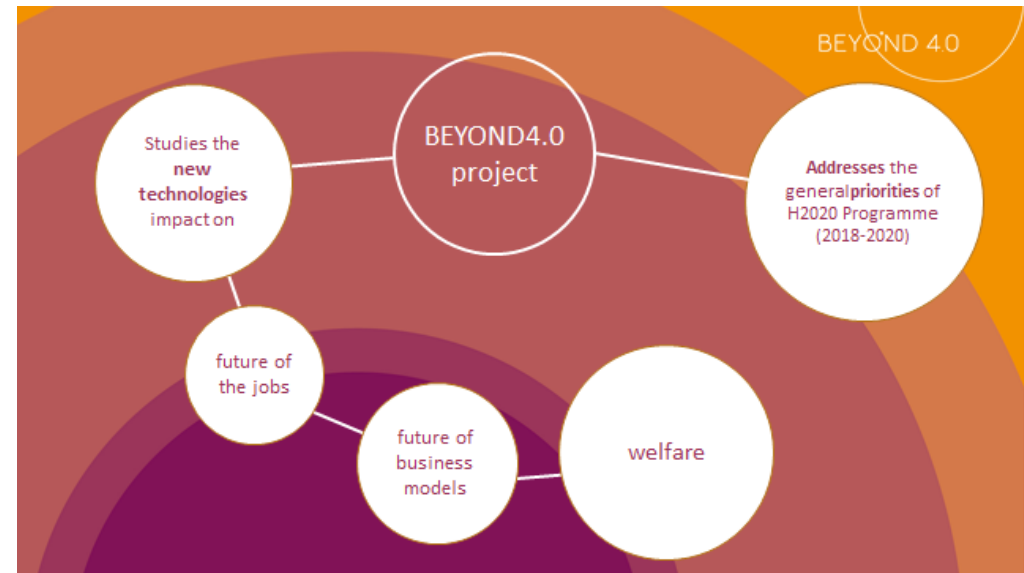
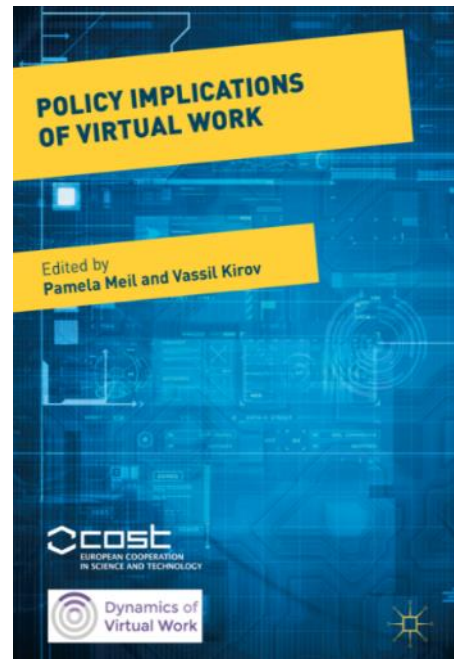
Seminar 28.06.2021



Objective

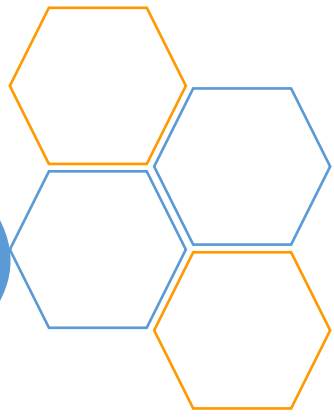


To examine the digital transformation challenges for the world of work in Europe and to discuss some implications for the social partners of the construction sector.



<http://beyond4-0.eu>

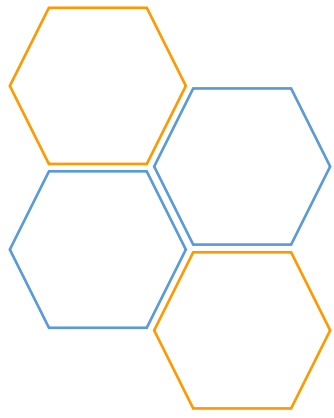
“5 things I’m telling my kids to prepare them for the future” (S. Kasriel)



- Robots (probably) aren’t taking over
- You’ll be in school the rest of your lives
- You can be your own boss
- Focus on social skills
- The future is up to you

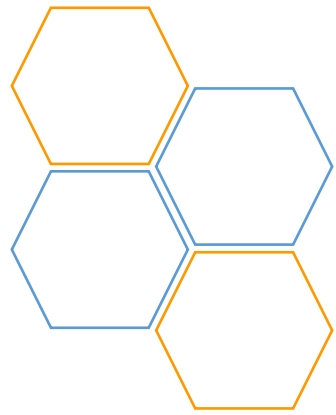
The article is available on [fastcompany.com](https://www.fastcompany.com)

Defining Digitalisation



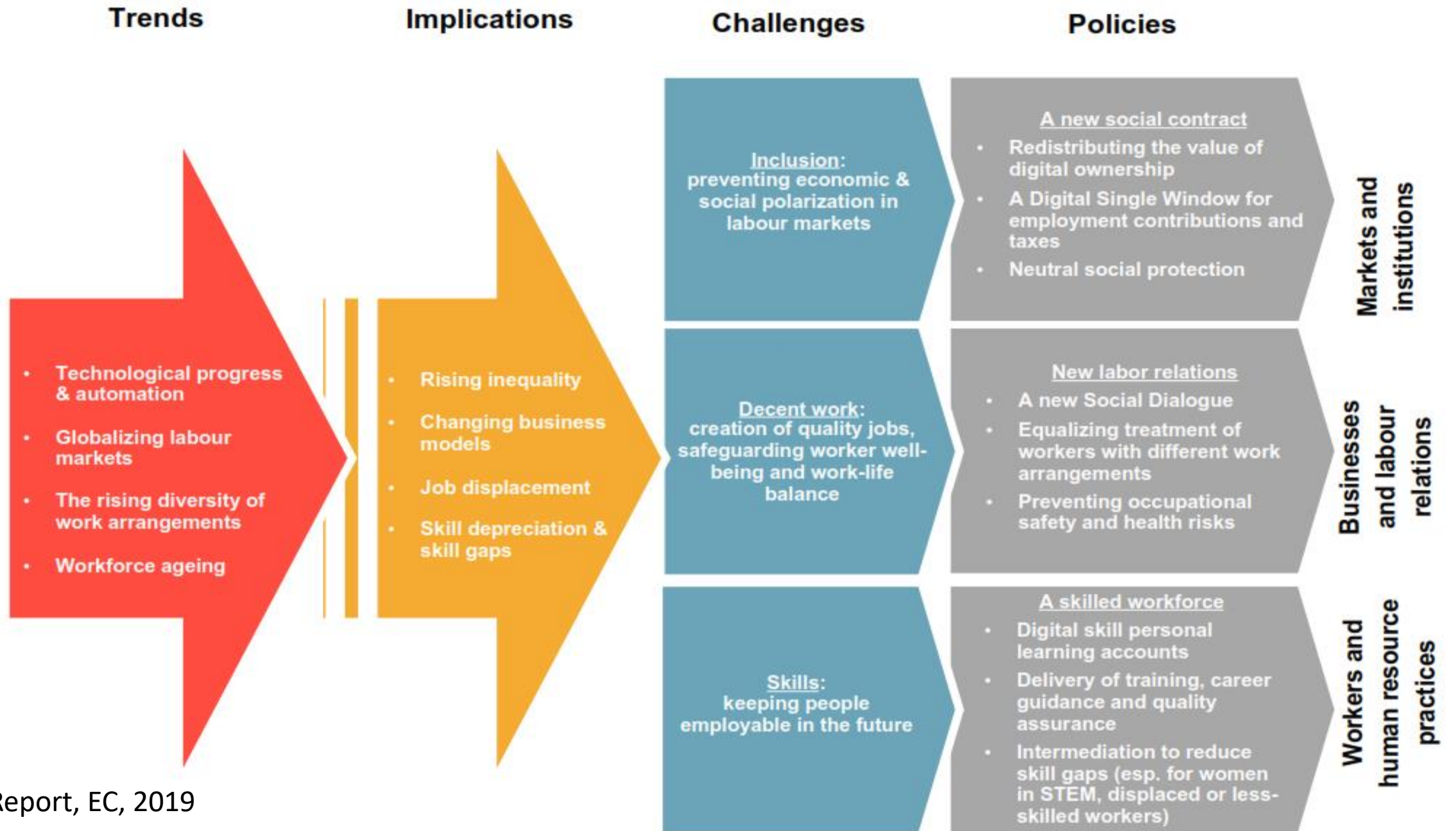
- Multiple and evolving definitions of digitalization. (Still) no consensus, in the academic or policy debate, what should be included and what not.
- Disruption versus incremental change (“Digitalisation is opening completely new and unknown technology application potentials with no less than disruptive social and economic consequences” (Avant 2014).
- Several drivers of change and the (still) unknown timeframe context...

Digitalization of Production vs. Digitalization of Work



- The academic literature puts a strong focus on two main technological transformations:
 - The digitalization of production through automation/robotics (also referred to as ‘Industrie 4.0’, as Germany was first to outline this strategy) and
 - The digitalization of work through the platform economy (also referred to as ‘Uberisation’).
- Both have the capacity to eradicate jobs: the first by substituting jobs with technology; the second by using technology to replace jobs with micro-tasks. Both can also **make existing skills** as well as tax and welfare systems **ineffective**.

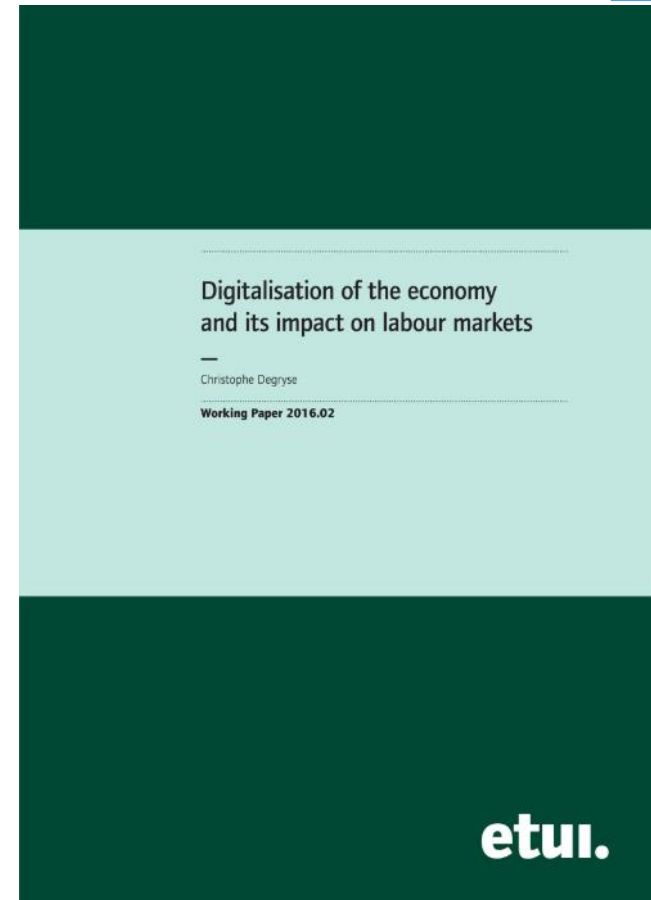
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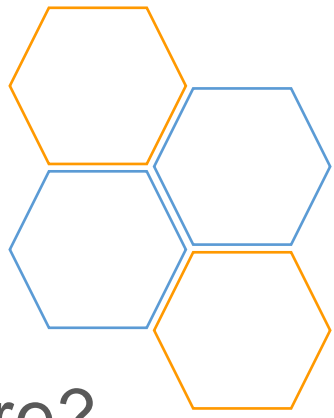
What Impacts Employment and Skills?



- The digital transformation makes the existing skills obsolete, for many sectors and occupations.
- The processes of job creation – job destruction – job change and job shifts (Degryse 2016), that could take place simultaneously, require a differentiated approach from policy makers and stakeholders



Job Creation

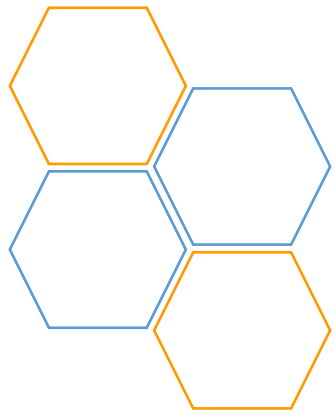


New sectors, new products, new services: what is needed here?

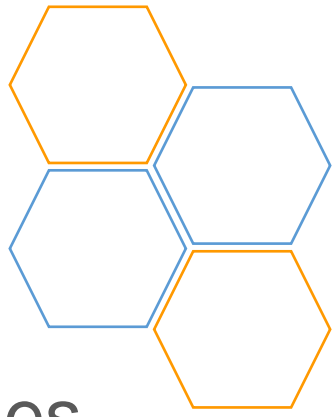
- Anticipation capacity;
- Providers of skills...
- Role of public authorities and EU, national and regional level to support the skilling for those new jobs;
- Relation to existing instruments of the EU – e.g. Skills for the future, EU funds for innovation, ESF, New skills for new jobs (e.g. scenarios...)

Job Change

Job change (digitalization, human/intelligent machine interface, new forms of management) the question is how the existing jobs are changing?



Job Destruction



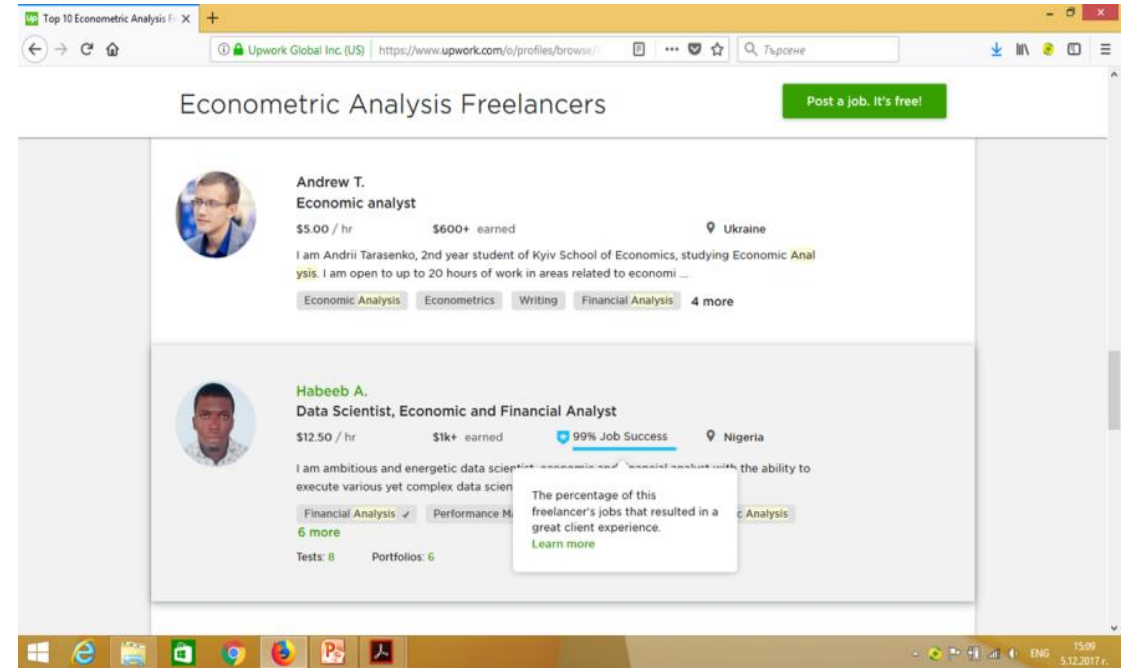
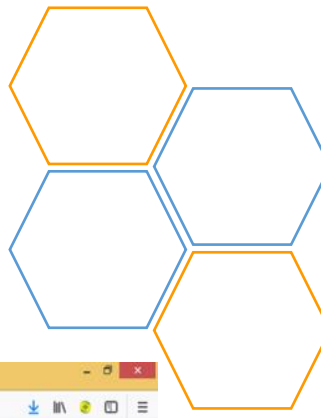
Which jobs will be destroyed and what to do with the employees

- Restructuring management... (EU social model traditions) - importance of exploring all possible alternatives to layoffs, such as training, re-skilling and start-up support (EESC - Opinion)
- Role of different stakeholders in the process – relation to the anticipation practices within the EU social model...
- SOCIAL dialogue to accompany changes and socially responsible restructuring

Job Shift

How this process, e.g. in the framework of platformization, will impact the need of skills:

- e.g. DIY – marketing,
- soft skills...- e.g. negotiation...
- Shifting responsibilities...



Example from Upwork

HR and Work Organization

Developments: Opportunities And Risks



- Dependence on the business models adopted by companies (e.g. new business platform models)
- The new management tools (algorithmic management) and the question of the surveillance
- Distributed work and 24/7 availability
- Changing public services (lean, e-government)...
- Role of the employees representatives
- Talent management and workforce analytics serving the companies' future-readiness plans (WEF, 2018)

The Digitalization of the Construction Sector: Trends And Challenges

- Early start with CAD practices
- Now CAD is progressively replaced by the so called Building Information Modelling (BIM)
- The sector is progressively adopting digitalised processes
- Buildings and infrastructure are becoming sources of data during their operational phase, but also earlier, if BIM is used in the construction phase
- Potentially exploited by AI



Still a Low Engagement With BIM

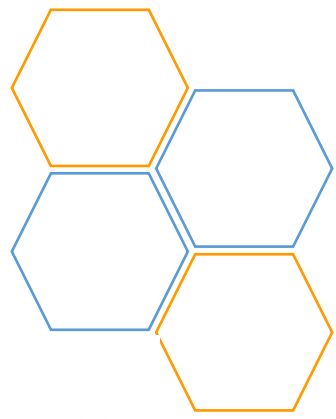
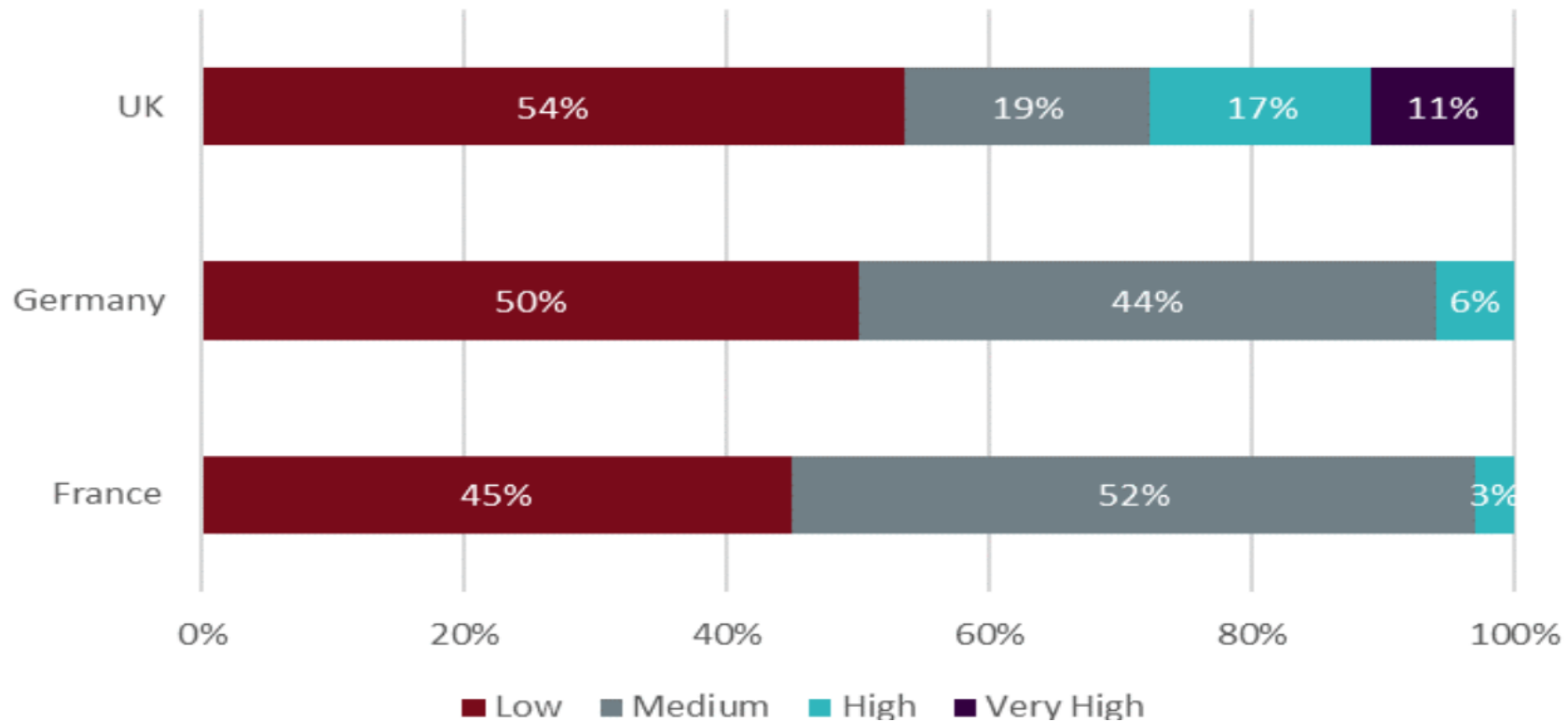
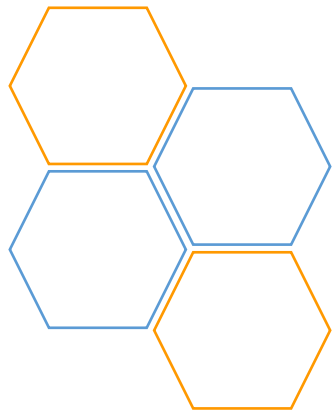


Figure 1: Share of companies based on the level of engagement in the use of BIM²⁶

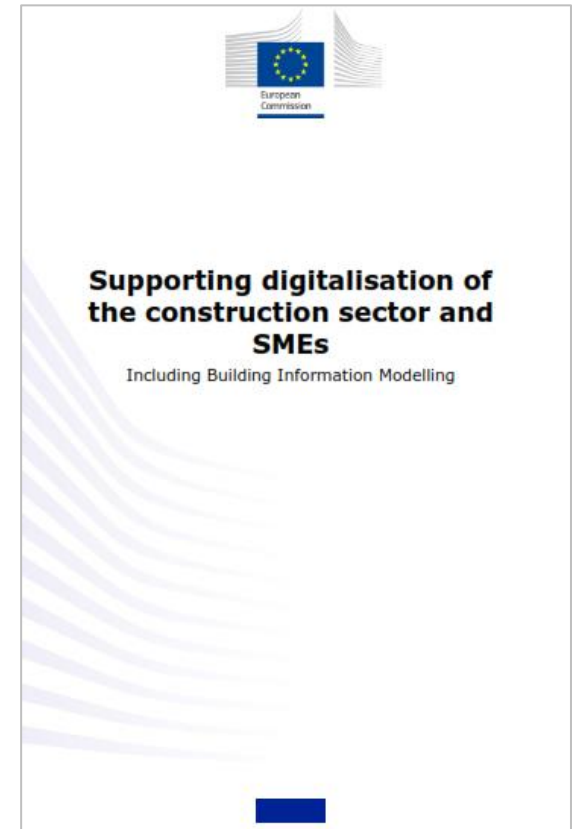


Key Technologies To Be Followed

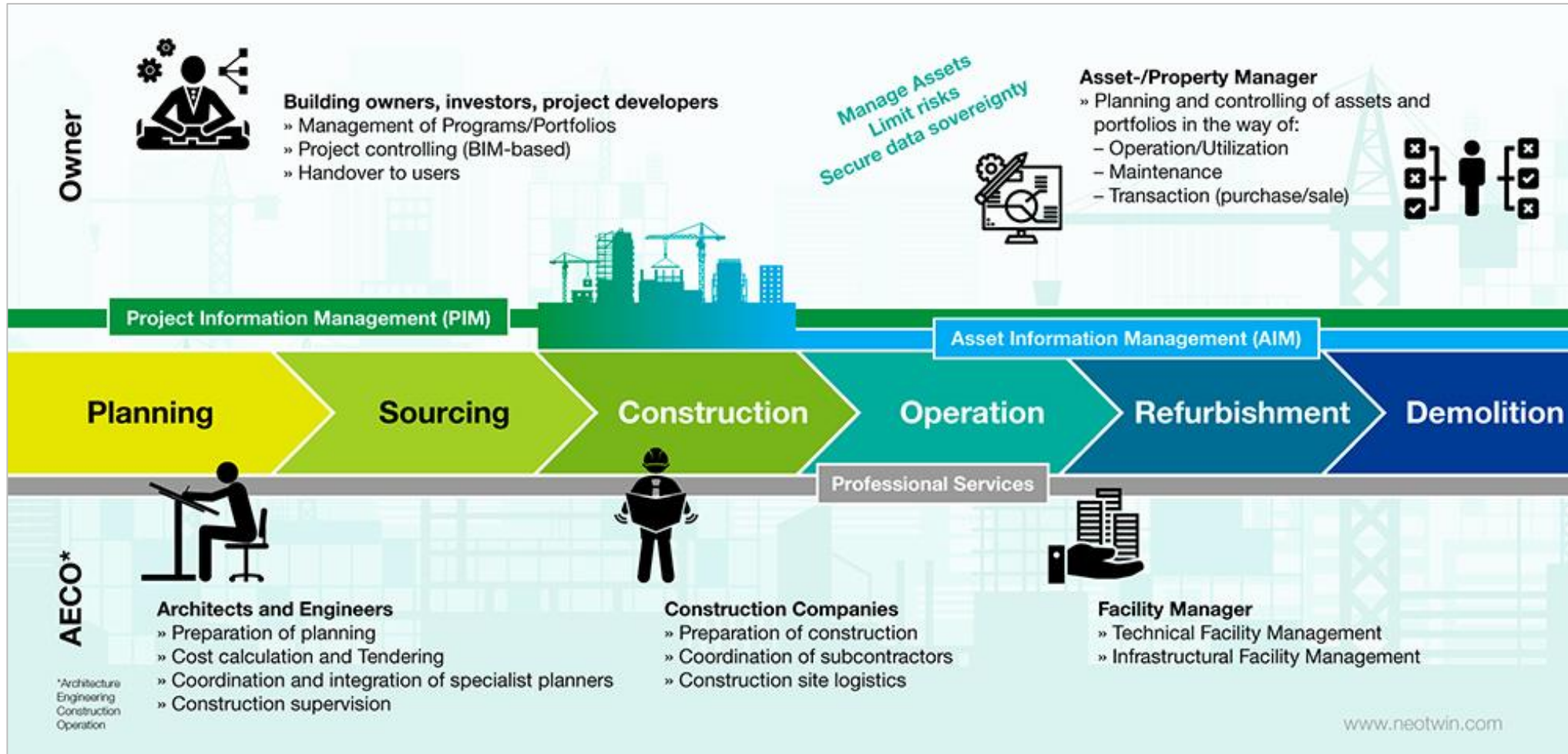
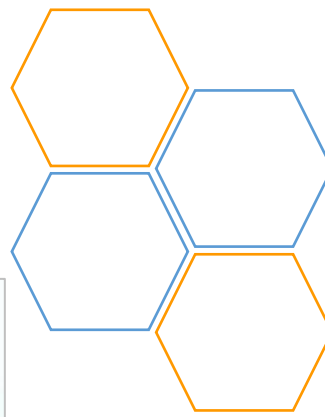


- **Additive manufacturing** (3D printing) - creating an object by solidifying a raw material (e.g. plastic, metal, wood or concrete)
- **Robotisation** – use of devices with robotic arms for repetitive movements
- **Drones**
- **3D Scanning**
- **IoT**

BIM is the binder which links the other six digitalisation technologies for an optimum use of each of them



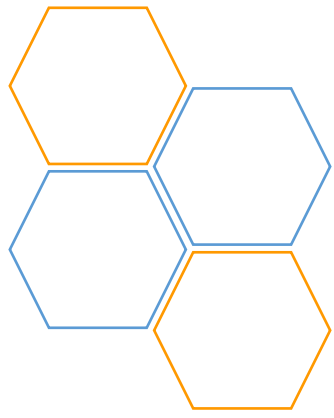
Platforms As a Business Process



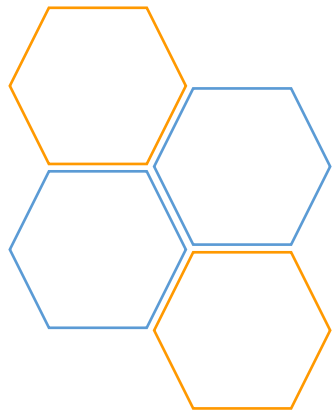
The Future of Digitization in Construction belongs to Platforms, www.umdachgroup-ventures.com

June 28, 2021

Implications for the Social Partners



- Understand the changes
- Evaluate the options
- Represent/protect in a new way
- Negotiate the classical topics in a new framework (working time, wages, working conditions, OHS and so on)
- Co-create adapted regulation and accompany the technological change



Thank You!



Chamber of Commerce and Industry of Slovenia

Chamber of Construction and Building Materials Industry of Slovenia



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КАМАРА НА СТРОИТЕЛИТЕ В БЪЛГАРИЯ
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June 26, 2022



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