

The future of work in the construction industry. Digitalization of the construction sector and the role of the social partners

Werner Buelen



SuSodCo 1st Virtual Capacity Building Event
Seminar 9.12.2020

Introduction

- It is part of the natural development of the construction industry to constantly adapt working processes, introduce **new technologies, processes, materials and techniques**. Although many still seem to consider the construction industry as rather “traditional”, innovation takes place at a rapid speed.
- To keep this PP accessible, the focus will be on:
 - **privacy**
 - **technological developments;**
 - **technological enforcement opportunities;**
 - **the changes in the process;**
 - some aspects related to **the greening**
- Some recommendations for the social partner
- A bonus discussion

Privacy questions

- Which personnel data does the company collect? What are the sources? Think of cameras, access control, location data, data from use of digital devices, etc .;
- Does the sector of the individual company have privacy regulations, in which agreements have been made about the use of personnel data? Have agreements been made about the use of algorithms and is it clear how these algorithms work?
- Has the company appointed an independent privacy officer who not only monitors the use of customer data, but also personnel data?
- Are privacy impact assessments made during the implementation of new sources?

Technological developments

- **The digital construction site**
- **Building Information Modeling (BIM)**
- **Robotization and 3D printing**
- **Use of drones**
- **Artificial Intelligence in construction**
- **Product innovation**
 - 5G cellular technology*
 - Nanomaterials*
 - Intelligent products and materials*

Technological opportunities to improve the controls and enforcement at the workplaces

- **Social Identity Cards**
- **Other smart digital enforcement tools**
 1. *Working time controlling tools*
 2. *Prior notification of building sites*
 3. *Tools to facilitate the monitoring of (temporary) domestic and cross border work in the construction industry*
 - a) *Labour supply only companies*
 - b) *Foreign (construction) companies*
 4. *Data collection and data matching*

Changes in the process of the construction industry

1. Towards Lean Construction

- A. Lean construction as a means to increase worker involvement*
- B. Principles*
- C. Toolboxes*
- D. Last Planner System*

2. Collaborative economy and platform work

3. Prefabrication and modular construction

4. Digital supply chains

Impact of greening of the construction industry

- 1. Towards a circular economy**
- 2. Waste management**
- 3. Energy efficiency**
- 4. Building smart**

The role of the social partners of the construction industry

1. **Importance of industrial relations**
2. **national enforceable framework collective labour agreement on the introduction, application and evaluation of new technologies in the construction sector**
3. **highly desirable to keep a close eye on the storage and use of digital employee data**
4. **advisable to monitor closely developments and ensure that all new construction-related activities (including pre-fabrication) remain within the scope of the construction sector**
5. **The psychosocial hazards and pressures on workers in the construction sector, who are in charge or responsible for planning and organizing work, and the technological processing of digital data, ... are currently an often neglected topic**
6. **closely monitor externalization of work**
7. **limit the maximum number of subcontractors in the construction industry to maximum three levels**
8. **enforceable system of chain liability for the main contractors**
9. **platform economy can also lead to an erosion of the areas of application of the construction sector, but also to new forms of undeclared work and social exploitation / fraud**
10. **develop powerful digital tools to better organize the control and enforcement with applicable rules**
11. **acknowledge that there are groups of workers, who will be pushed out of the labour market due to the fact that they will not be able to acquire the needed digital skills and competences**
12. **Workers must be involved from the design phase to the final application of a BIM construction project**

The increased importance of risk-assessments and the danger of emerging risks

- 1. Occupational health and safety precautionary" is of paramount importance**
- 2. New hazards, defects and product limitations are shared by all companies, all employees involved, all authorities and all manufacturers**



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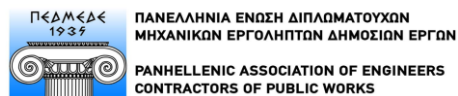
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