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# DISCUS

## Digital Transformation in the Construction Sector: Challenges and Opportunities

### PROJECT PRESENTATION

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# Why DISCUS Project?

## **Construction is one of the biggest industrial sectors of the EU economy**

- 9% of EU GDP
- Around 18 million workers
- Multiplying effect of the demand for building
- 40% of EU energy consumption
- 36% of total green-gas emissions
- 233 million residential and commercial buildings
- Circular economy

# Why DISCUS Project?

The **financial and economic crisis** had a major impact on the construction sector in nearly all EU Member States (MS): from July 2005 up to July 2015 the EU-28 index of production for construction fell down 26.2%.

According to ILO (2015) at present the **global construction output has recovered from the crisis** and it is expected to grow in the coming years.

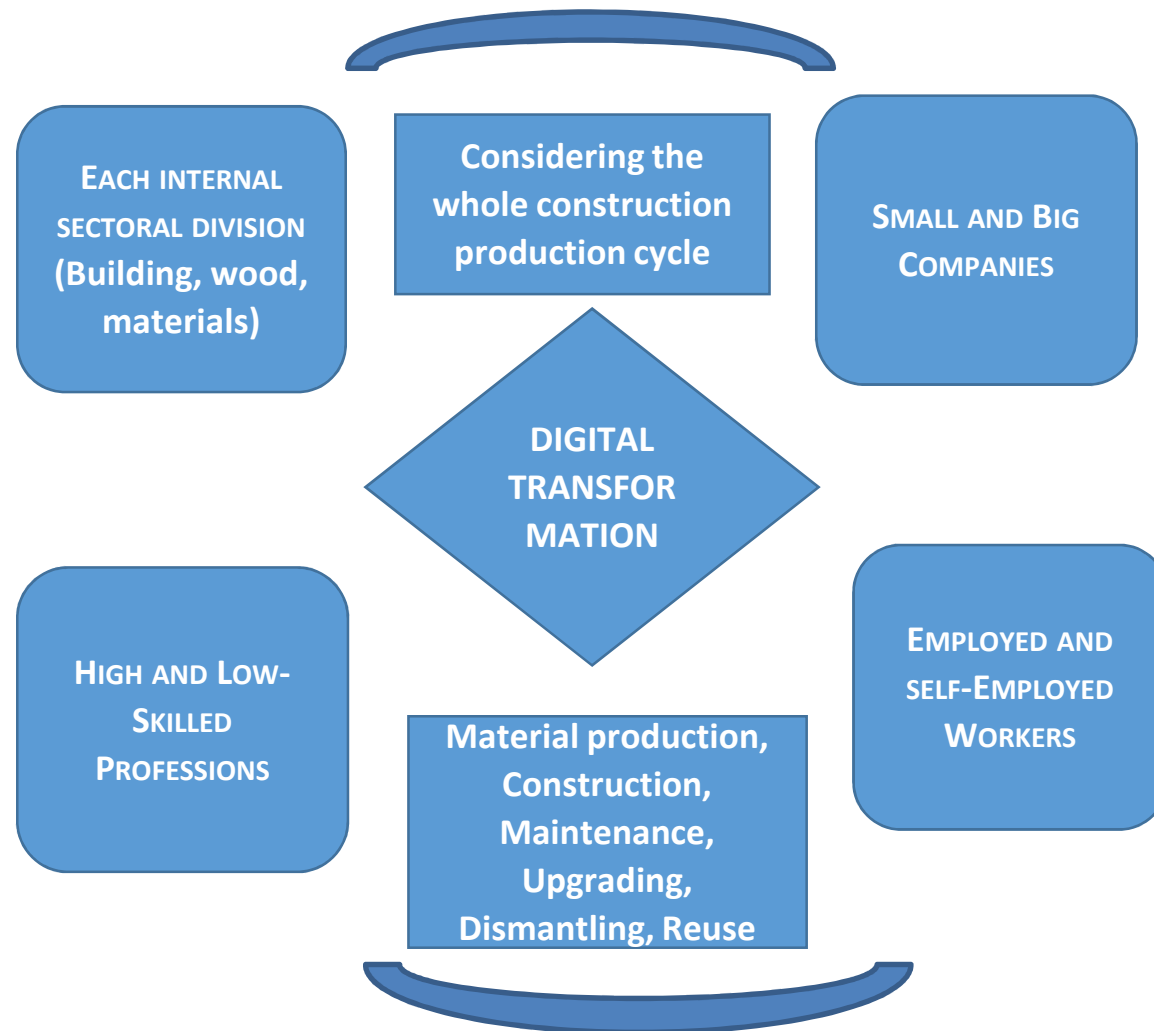
**Over the last few years the construction sector has been revolutionized by important drivers of change that are simultaneously at play:**

- The transition to a sustainable construction in a low carbon economy.
- The evolution of technologies and digitalisation that has an impact on all the construction processes.

**Digitalization and technological change, and their combining with social and environmental issues, are major challenges for industrial relations and social dialogue in Europe.**

# Why DISCUS Project?


Digitalization permeates every aspect of the construction sector:




# Why DISCUS Project?

- 93% of construction players agree that digitalization will affect every process
- < 6% of construction companies make full use of digital planning tools (Think acts, 2016).

The topic of digitalisation and technological innovation has been analysed in the manufacture sector in several studies but there is a lack of in-depth analysis and data collection for the construction sector especially as regards the role of industrial relations.

 Construction players need **a new role of industrial relations and social dialogue for the anticipation and implementation of digitalization and technological changes** so as to reduce the risk of unemployment and promoting jobs that are high skilled, green and good, respecting the dignity of the workers (“decent work”) and social inclusion.

 This project aims to analyse and to strengthen the role and contribution **of innovative industrial relations structures, including social dialogue**, in responding to the major challenges and opportunities brought by digitalisation and technological changes, **on multiple levels.**

# PROJECT OBJECTIVES

Digitization accelerates the flexible organization of work.

**There are critical points and positive impacts led** by the introduction of new digital technologies.

The most **critical points are:**

- Job replacement and destruction
- Polarization of the working conditions and wages
- Increasing of labour intensity vs. autonomy/cooperation
- Increasing of precarious work
- New risks for health and safety

The **potential of digitalization as benefits are:**

- Improved productivity and better quality
- Reduction in project costs
- Reduction in time to completion
- Increasing efficiency
- Decreasing in waste
- Enhancement of qualified professions
- New opportunity for cooperation

# PROJECT OBJECTIVES

- To address technological change and the digitisation of the economy it is necessary to orient change through a **Just Transition** in terms of **outcomes** (decent work for all in an inclusive society) and of **process** (managed transition) (ILO, 2018). In particular, social dialogue and collective bargaining are key tools for managing change (ITUC, 2017).
- Given the multi-dimensional and complex nature of digitalization and technological change which create highly diversified organizational forms, it needs a **multi-level governance** of the policies and measures in support of digital innovation.
- **Social dialogue** – at the European, national, sectoral, regional level – as a form of governance itself is a crucial factor in facing the challenges arising from the digital transition, identifying and checking the consequences (both expected and unforeseen) and the resulting risks (regarding employment, the health and safety of workers, inequality and social exclusion with respect to the territorial impact).
- From this point of view, it is therefore fundamental to increase the role of social dialogue, first and foremost by strengthening its inclusive nature, through the promotion of an enlarged (**multistakeholder**) **vision**, based on the involvement of a wide range of potential protagonists: first of all, the associations representing the world of work, businesses and public institutions, but also those of experts, environmental organisations and civil society.

# Research Questions

- **Discus identify five relevant fields of actions:**
  - a) Employment**, with an increasing polarisation between qualified and non-qualified professions; the emergence of new professional figures and, on the other hand, the risk of the substitution of competences and professions; the need for continuing education; a growing segmentation between craft and labour work which is typical of this sector (Build-Up Skills, 2014; ILO, 2011);
  - b) Organisation of work**, with the emergence of new risks as well as new opportunities for involving workers and protecting health and safety (EU-OSHA, 2014);
  - c) Sectoral**, with the blurring of business borders and the traditional distinctions between sectors, with a greater integration between the phases of the value chain (with new relations between research and develop, data management, functioning of machinery and instruments, the provision of services) (ILO, 2015);
  - d) Territorial**, with new relationships between the public players, the social partners, the scientific community and experts, the population and civil society in the direction of forms of multistakeholders in social dialogue to respond to the complex challenges of planning and territorial innovation (BROAD Project, 2017);
  - e) Socio-environmental**, with more opportunities for energy efficiency in housing and the quality of living and urban spaces (Eurofound, 2013; Laurent & Pochet, 2015).



# Research Methodology

Research report at national level and at European level related to:

- the transformations taking place in production cycles oriented towards digitalization and technological innovation in the construction sector and their impact on the labour market, work organisation and working conditions, sectoral level, territorial level and proper transition;
- the role of industrial relations and social dialogue for digitalisation and technological innovation to identify the most relevant practices and experiences at all levels: European, national, sectoral, regional levels as well as at company level.

The **desk research** for the **preliminary report and the national reports** was based on the consultation of documentary sources and an analysis of secondary data.

The national reports were based on a common methodology that includes **i) conducting in-depth interviews with “privileged witnesses”** – key players in industrial relations and social dialogue in the field of construction; **ii) case studies** to analyse concrete experiences of industrial relations coping with digital and technological changes in the construction industry **across different levels and territories (considering the whole value chain)**.

Workshops at national and European level that allowed an **exchange of knowledge, a comparison between different experiences** in the partner countries of the project and mutual learning.

# Action Implementation: project activities

**The project, divided into two years of activity, was articulated in the following phases corresponding to modular objectives:**

**Thanks**