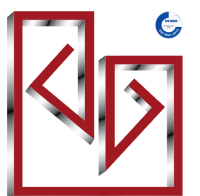


DIG-IN-KPI: Project 3rd phase report

CAMPAIGN FOR DISSEMINATION AND UTILIZATION OF PROJECT RESULTS



Co-funded by
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DIG – IN - KPI

**Digital transformation is making its way into
businesses
- developing key performance indicators to boost
sector productivity**

PHASE NO. 3

Result no.: R7 -

CAMPAIGN FOR DISSEMINATION AND UTILIZATION OF PROJECT RESULTS

March 2024, modified in May 2024

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INTRODUCTION

The [DIG-IN-KPI](#) project, funded under the Erasmus+ KA210-VET program, aimed to boost digital transformation in the construction sector by developing and implementing key performance indicators (KPIs). The project involved partners from Slovenia, Croatia, and North Macedonia. As we conclude the project, we focus on the dissemination of results and the promotion of further sectoral digital transformation.

PROJECT PRIORITIES

The project addressed several key priorities:

- **Horizontal Priority:** Addressing digital transformation through the development of digital readiness, resilience, and capacity.
- **VET Priority:** Adapting vocational education and training to labor market needs.
- **VET Priority:** Contributing to innovation in vocational education and training.

The project topics selected in the application were strictly followed, focusing on:

- Information and Communication Technologies (ICT)
- Digital Content, Technologies, and Practices
- Entrepreneurial Learning - Entrepreneurship Education

OBJECTIVES

Our primary objective was to enhance digital maturity in the construction sector by developing KPIs and promoting the adoption of digital tools and practices. This included:

- Developing a comprehensive KPI framework for construction companies and educational institutions.
- Creating and deploying the DIG-IN-KPI AAT tool for self-assessment of digital maturity.
- Facilitating stakeholder collaboration and knowledge exchange among transnational partners.

We aimed also at following:

- Addressing Digital Transformation:
 - Enhancing digital readiness, resilience, and capacity within the construction sector.
 - Promoting digital skills and adapting training systems to technological developments.
- Adapting VET to Labor Market Needs:
 - Developing new curricula and training programs that reflect the realities of modern construction sites.
 - Fostering partnerships between educational institutions and the construction industry.
- Contributing to Innovation in VET:
 - Introducing innovative tools and practices to improve productivity and efficiency.
- Supporting the digital transition of economic activities in the construction sector.

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RECOMMENDED ACTIONS AND MEASURES FOR THE CONSTRUCTION SECTOR IN THE BALKANS AND BEYOND

Amendments to Construction Regulations - Legislation and Policy Changes

- **Mandate Electronic Construction Logbooks:** Advocate for legislative modifications to mandate the maintenance of an electronic construction logbook for all construction and building permits. This logbook should be integrated as a module in the national platforms of "eConstruction" countries, capturing daily data on construction site activities. Croatia's implementation of the eConstruction logbook in the "Construction 4.0" project demonstrates its effectiveness in enhancing digital business practices.
- **Digital Transformation Criteria in Public Procurement:** Propose the inclusion of digital transformation criteria in public procurement processes.
- **Incentivize Digital Investment:** Award additional points in tender evaluations to companies investing in digital tools and technologies
Suggest to public-state administration special sectoral financial incentives such as national vouchers for digital transformation costs reimbursement.
- **Mandate BIM Standards:** Encourage the adoption of Building Information Modelling (BIM) standards across all EU countries, following the example of ISO 19650-1:2018. This helps improve collaboration, reduce errors, and streamline project management through shared data models ([EU Business](#), [Discus Project](#)).
- **Data Interoperability and Sharing:** developing standards for data interoperability ensures seamless integration and communication between different systems. Promote the collection, interoperability, and sharing of data to facilitate better decision-making and collaboration across the construction ecosystem ([EU Business](#), [Discus Project](#)).

Financial Incentives and Grants - Sustainable Funding

- **Request Mandatory Digital Maturity Assessments for SMEs registered under NACE activity construction:** Provide for a mandatory activity for SMEs before applying for public funding, namely carrying out company digital maturity assessments (via dig-in-kpi.aat4.eu, digital-construction.ec.europa.eu, or new under development tools e.g. [DIHCUBE](#)). This can help to identify their current digital capabilities and areas for improvement, providing a self-assessment and guidance for action and the implementation of a digital strategy for the organization ([Discus Project](#), [Digital Construction EU](#)).
- **Financial Incentives for Digital Solutions:** Establish financial incentives and grants for companies adopting digital solutions, including electronic construction logbooks for all construction projects, following Croatia's successful practice.
- **Subsidies for Digital Training Programs and Digital Tools:** Introduce subsidies for purchasing digital tools, software, and training programs for employees. Ireland's grant initiative for digital innovation in construction serves as a successful model. These grants could be linked to achieving specific digital maturity levels as assessed by tools like DIG-IN-KPI AAT ([EU Business](#)).

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Introducing Mandatory Electronic Construction Logbooks

- **Obligatory Digital Logbooks for Building Permits:** Make the maintenance of an electronic construction logbook obligatory for all building permits, using Croatia's model as a benchmark, proven effective in the "Construction 4.0" project ([Development of a harmonised EU model for a Digital Building Logbook | Digitalisation of Construction SMEs \(europa.eu\)](#), [Definition of the digital building logbook](#))

Upskilling VET Staff

- **Regular Digital Competences Updates:** Emphasize continuous professional development for VET staff and improve equipment for PC rooms in construction schools and VET centers. Address issues with software licenses and access to the latest tools, ensuring that VET staff are equipped to teach the latest digital practices, preparing students for the evolving construction industry demands.

Ongoing National Evaluation and Support

- **Regular Evaluations:** Implement regular evaluations of digital transformation initiatives to assess impact and identify areas for improvement. This should include feedback mechanisms for companies and educational institutions using the DIG-IN-KPI AAT tool. Continued support from organizations like GZS ZGIGM and FIEC is crucial for maintaining momentum and ensuring the sustainability of digital transformation efforts.
- **Digital Transformation Workshops:** Organize national and European-level workshops to facilitate knowledge exchange and mutual learning on digital transformation practices. These workshops can help disseminate best practices and innovative solutions across different countries ([Discus Project](#)).
- **Support from Industry Bodies:** Maintain ongoing support from social partners and chambers organizations to sustain digital transformation efforts ([Digital Construction EU](#)) ([EU Business](#)).
- **Public-Private Partnerships:** Encouraging collaboration between government, private sector, and academic institutions to drive innovation.

Improving IT Infrastructure in VET Schools

- **Comprehensive IT Upgrades:** Address the poor state of IT equipment in VET schools and centers by investing in modern PCs, software licenses, and access to the latest digital tools and technologies. Invest in modern IT infrastructure for VET schools, including the latest PCs, software licenses, and access to cutting-edge digital tools ([Digital Construction EU](#)).

Continuous Professional Development – Life Long Learning:

- **Regular Training on Digital Tools:** Regular updates and training for construction professionals on new digital tools and technologies (Professional Development in Construction, Construction Training Programs)

BEST PRACTICES AND EXAMPLES

1. **Croatia's Digital Logbook:**
Croatia's implementation of digital logbook tool “eGrađevinski Dnevnik” by public administration:
 - The centralised system for managing construction diaries in Croatia has shown considerable success in increasing transparency and efficiency.
 - The system integrates various modules for managing permits, energy certificates, property transactions and spatial planning. [More >>>](#)
2. **Ireland's Digital Transformation Project:**
Ireland's national project on digital transformation of the construction sector:
 - Ireland's national project to digitally transform the sector, presented by Ray Blewitt of John Paul Construction, highlighted the importance of BIM (Building Information Modelling).
 - The project demonstrated the benefits of digitisation, including improved project delivery, cost management and collaboration with stakeholders. [More >>](#)
3. **Slovenia's Construction 4.0 Project:**
Slovenian pilot project by consortium of companies “Gradbeništvo 4.0” (engl. Construction 4.0):
 - The "Gradbeništvo 4.0 project," which was completed in March 2024, demonstrated how digital transformation can improve competitiveness and sustainability in the construction sector.
 - The key components included the automation of concrete production processes (Betonarna 2.0), digital construction site management (Gradbišče 4.0), a comprehensive digital construction platform and the introduction of digital tools for workforce management (Digitalni delavec). [More >>](#)

FUTURE DIRECTIONS

Sustained Support and Funding:

- Maintain the DIG-IN-KPI tool on the FIEC website (www.fiec.eu) for two more years.
- CCIS will cover hosting and support fees for the next three years to ensure the tool's availability.

Ongoing Collaboration:

- Continue fostering transnational partnerships to share best practices and drive digital innovation.
- Engage with policymakers to support the digital transformation agenda at local, regional, and EU levels.

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CONCLUSIONS

The DIG-IN-KPI project has laid a strong foundation for digital transformation within the construction sector in Slovenia, Croatia, and North Macedonia. By implementing the proposed measures, leveraging best practices from other EU countries, and addressing the needs of VET schools, the region can achieve significant progress in digital adoption. Continuous dissemination of project findings through GZS, partner websites, and various communication channels will ensure sustained impact and engagement with stakeholders. Furthermore, ongoing networking and collaboration will drive further innovation and efficiency in the construction industry, ultimately contributing to a more competitive and resilient sector.

Prepared by DIG IN KPI consortium