



Training on Building Information Models integrated with Geographical Information



Welcome to the last newsletter of the BIRGIT project!

This issue provides an overview of the **main activities and results achieved** in the last months of the project implementation period, and an intention to look into the future of the developed learning materials and further outcomes of BIRGIT.

For this issue, an interview was conducted with **Matteo Sgarzi**, co-leader of UNESCO-UNEVOC BILT Expert Group on Building and Construction, who talks about the relevance of BIRGIT results to the work carried out by this Group, such as the importance of having a better connection between VET and Industry for the sake of the quality of education and training and for companies' uptake of the technologies available, including BIM-GIS integration.

The BIRGIT learning materials

Transforming VET in BIM-GIS Integration

The BIRGIT project introduces an innovative approach to Vocational Education and Training in the field of Building Information Modelling (BIM) and Geographic Information System (GIS) integration. It provides cutting-edge learning materials designed to meet the needs of students, professionals seeking an introduction to the topic, and modern training providers delivering these contents.

Developed and tested in real training contexts by the project's partners, BIRGIT learning materials have become now integral to their educational offerings, ensuring the long-term sustainability of these resources.

The development of BIRGIT's learning materials followed a thorough, multi-phase process. In a first phase, existing resources were identified. Subsequently, new materials were developed in three comprehensive packages: **Introduction to BIM, 3D GIS, City Models and Digital Twins, and BIM-GIS Integration**. These packages address key aspects of Building Information Modelling and Geospatial technologies, offering both theoretical foundations and practical applications.

An adapted Scrum methodology played a pivotal role in the development process, fostering collaboration, flexibility, and quality assurance. This iterative approach resulted in high-quality, modular learning paths that can be used as standalone lectures or comprehensive courses.

Available for free on BIRGIT project website (<https://birgitproject.eu/learning-materials/>), these resources are now accessible to students, professionals, and training providers across Europe, supporting the future of VET in BIM-GIS Integration.



BIRGIT learning materials, available in the project website

BIRGIT pilot events

An opportunity to improve the project's learning materials

The last stage of BIRGIT focused on the testing the project's learning materials, piloting them in real-world training contexts in **Croatia, Italy, Spain, and Sweden**, and refining them to better meet end-users' needs.

Training actions were tailored to each context: in Croatia, University North tested localized materials in classroom sessions, while in Italy, FORMA.Azione organised live online lectures targeting professionals from the public and private sector, tackling specific legislative and technical challenges. In Spain, AIN offered asynchronous courses targeting a broad professional audience in a flexible and accessible format,

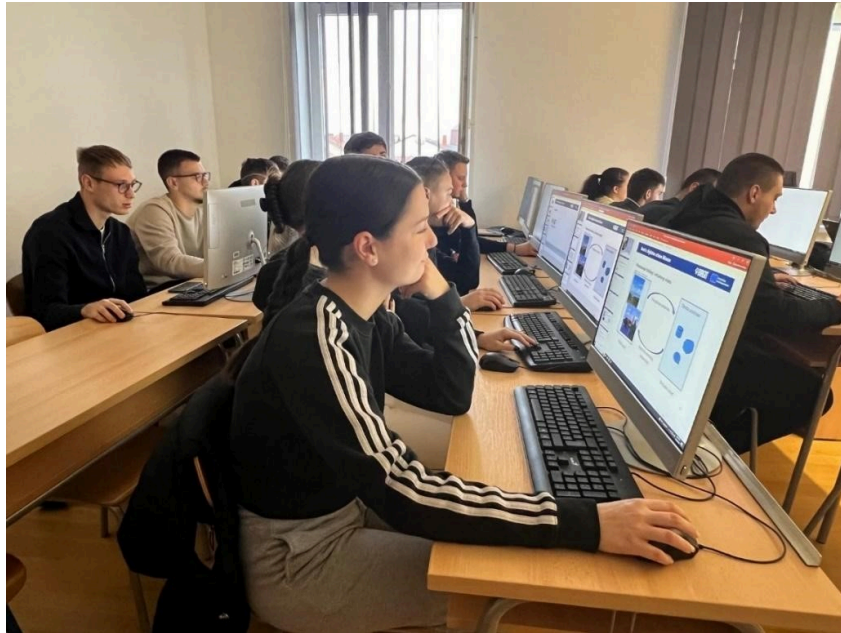
and in Sweden, Ocellus adapted and delivered a selection of training materials in a self-paced course, to align with participating trainees' needs and expectations.

All training actions shared a structured approach, using pre- and post-self-assessment questionnaires to measure knowledge improvement, and satisfaction surveys to gather feedback from both participants and trainers. In addition, trainers had the possibility to submit change requests, to allow traceability of all feedback in an orderly manner.

The participants reported improved understanding of BIM-GIS integration and appreciated the innovative and practical contents. Feedback called for more practical exercises, additional local examples, and improved clarity in some translations. Trainers emphasized the materials' adaptability to diverse teaching scenarios, though greater support for open-source tools was suggested.

Looking ahead, some of the change requests have been already accepted and the refined learning materials are available on the [BIRGIT website](#) as Open Educational Resources. Other change requests have been transmitted to the authors of the materials for future updates.

BIRGIT partners invite trainers and professionals to explore these resources, adapt them for their needs, leave feedback for future updates, and bring BIM-GIS integration into their teaching and work!



Testing the BIRGIT learning materials at the University North

BIRGIT Multiplier Events

A chance to discuss BIM/GIS integration with experts

BIRGIT Multiplier Events (MEs) are some of the foreseen dissemination activities in the project, aimed to discuss the challenges faced by the areas it addresses (including Architecture, Construction and Engineering), and how can BIRGIT training modules, materials and methodology meet these challenges when applied to Vocational Education and Training (VET).

This activity of BIRGIT was a success! All 6 MEs were conducted by partners between June and December 2024, in Croatia, Italy, Spain, Sweden and the

Netherlands, involving **more than 370 participants** from roughly 20 EU countries.

Among the participants were VET and Higher Education students, teachers and trainers, researchers in BIM and GIS, representatives of national and local authorities and public administration (some of which involved in the organisation of the MEs in Italy), and representatives of IT/Software companies and of companies operating in the different areas addressed by BIRGIT.

These events allowed participants to share experiences and practices, and to try out the training modules and learning materials produced in the project. According to them, the results of BIRGIT are an added value to the quality and relevance of the VET offer as they provide to young students the possibility of developing BIM-GIS integration skills, and to professionals the chance for upskilling and reskilling.

The following pictures were taken during the MEs carried out by AIN (Pamplona, ES), GISIG (Genova, IT), FORMA.Azione (Perugia, IT), and Ocellus (Stockholm, SE).



BIRGIT Multiplier Events (ES, IT and SE)

Interview with Matteo Sgarzi

UNESCO-UNEVOC / Céreq and BILT Expert Group



Matteo Sgarzi is the Coordinator of UNESCO-UNEVOC French Centre for Research on Qualifications (Céreq), a public body that provides advice and proposals for clarifying choices on the area of education and training policies at regional, national and international levels, supported by the Ministry of Education and the Ministry for Labour, Employment and Social Affairs.

Matteo Sgarzi is also the Co-Leader of UNESCO-UNEVOC Bridging Innovation and Learning in TVET (BILT) Expert Group, focused on Building and Construction. *

Q.: In your opinion, how is BIRGIT and its results aligned with UNESCO-UNEVOC's purpose of supporting quality Technical and Vocational Education

and Training (TVET) programmes that reply to Construction industry's skills needs?

A.: "If I well understand, BRIGIT project's purpose is to provide to practitioners of the VET sector ready-to-use material to implement in training courses and a [Open Educational Resource] OER form. This principle is particularly interesting for me since I strongly believe in OER as an effective channel for promoting awareness and widespread knowledge on a specific relevant topic.

Awareness on BIM technology intended here as a holistic approach to building projects perfectly fits with UNEVOC expert group purpose. We are striving to collect and inform about projects and practices aimed to reinforce VET quality over three continents, and for sure BIRGIT could find a place in this undertaking. What is very important for UNEVOC is to support VET to be in line with market and industry needs and there is no doubt that BIM is one of the major industry trends. What we observe is that BIM perhaps does not yet come to maturity in many industrial local contexts and countries and for this reason it is important to keep continuing promoting it, also combined with possible solutions it could bring forward to some environmental issues".

Q.: What are the challenges that VET schools face in adopting cutting-edge approaches like BIM and GIS integration into their curricula?

A.: "First of all it is not always clear the level of maturity of local building industries to implement and support BIM/GIS implementation and the actual skills demand coming from the labour market. On this respect, I'm ~~persuaded~~ convinced that one of the roles of a quality VET offer is to push industry to develop a forward-looking perspective, particularly in SMEs, and help them to increase the use of the available technologies. On the other way round, in many contexts VET training is not on the same page with industry technological (and environmental) developments; VET needs to be supported by cutting-edge companies in keeping training update, for instance by opening technical platforms and work-sites to students and teachers, by developing work-based learning initiatives, or by contributing to training design. In one sentence: VET and companies are in the same (local) ecosystem, and they should work tightly as a single entity, working jointly to labour force upskilling."

Q.: What role do Technical and Vocational Education and Training (TVET) Providers play in bridging the gap between industry needs and workforce readiness?

A.: "In the same vein of my second answer, it is true that VET institutes must address their social responsibility as educators to make the most for people in terms of preparedness of people for the active life and labour market. However, this goal cannot be achieved by VET institutes on their own. What makes the difference is the generation of links and partnerships at local level with companies, public authorities, funders, associations etc. Bridging gaps is not the sole responsibility of the training sector, it is a shared responsibility, and I would say that is a quintessential feature of an accomplished VET system, where all the actors of the economy should be committed to develop a skilled workforce."

**The BILT Expert Group on Building and Construction focuses on new qualifications and competencies for these areas in Europe and in the three BILT regions of Africa, Asia and the Pacific. This Expert Group explores digitalisation, greening, and migration to create innovative, future-focused TVET aligning with individual, market, and societal needs.*

More information at

<https://unevoc.unesco.org/bilt/BILT+Expert+Group+on+building+and+construction>

Looking ahead

BIRGIT implementations and future developments

BIRGIT learning materials are freely available in English, Italian, Croatian, Spanish and Swedish, under Creative Commons licenses. Anyone can use the material and modify it according to his or her preferences.

The BIRGIT partners are planning to use the material within their own daily activities. IBIMI (Institute for BIM Italy) intend, together with FORMA.Azione, to use the materials with its members and with other professionals working in the sector. University North is planning to use the materials in a new curriculum to be proposed in June 2025. AIN may provide new courses based on the BIRGIT materials when there is sufficient external interest for this training. Ocellus may open the BIRGIT courses to their VET students and external professional, as elective courses. Ocellus have also applied to the Swedish National Agency for Higher Vocational Education for a new study program, mainly based on the learning materials developed within the BIRGIT project.

The learning materials are planned to be maintained by the partnership for several years to come.

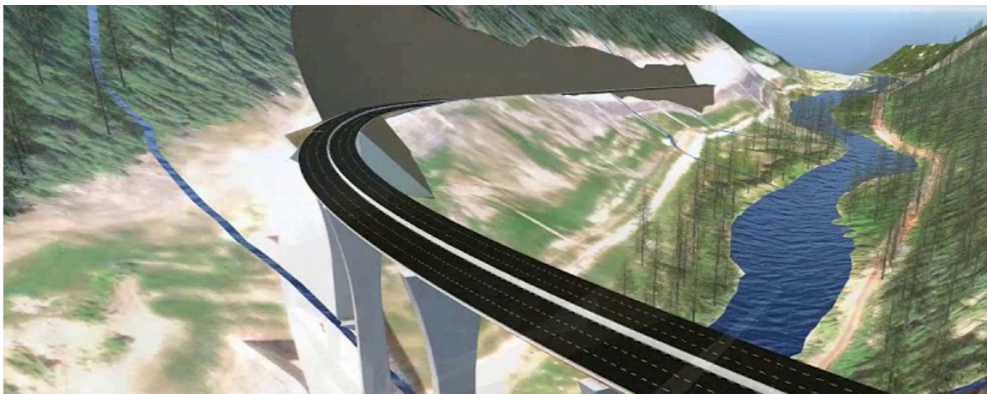
The network will continue to operate having meetings on a regular basis where the needs for updating will be discussed as well as possibilities for additional future collaborative efforts. If you would like to contribute, you are most heartily welcomed to contact us.



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Project nr. 2021-1-SE01-KA220-VET-000028000

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Co-funded by the
Erasmus+ Programme
of the European Union



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