



BIMcert News #04 April 2019

BIMcert - Developing BIM training and promoting energy efficiency for the European construction supply chain.

Macedonian Vice Prime Minister endorses the work of the BIMcert project

At the February BIMcert partner meeting in Macedonia, The Institute for Research in Environment, Civil Engineering and Energy – IECE, partner in the consortium of the BIMcert project, presented the goals and results of the BIMcert Project as well as the significance and benefits from the introduction of the modern BIM technology in the construction industry.

The event took place in the Chamber of Commerce in Skopje, Macedonia and it was attended by many Government officials. The Vice-Prime Minister for Economic Affairs of the Republic of North Macedonia, Prof. Dr Kocho Angjushev addressed the guests and

emphasised the importance of the projects of this type.

The Vice-Prime Minister for Economic Affairs of the Republic of North Macedonia stated: "I think that everyone who is here today, has to take this opportunity that our country has. Everyone has to be proactive in this project, to cooperate as much as possible with the implementer from the Republic of North Macedonia and the other partners in this project, and get benefit from the opportunity that the professional BIM software offers. I encourage you to actively participate in this project and I wish you success in the realisation."



The Vice Prime Minister for Economic Affairs of the Republic of North Macedonia, Prof. Dr Kocho Angjushev addresses the BIMcert partner meeting in Macedonia.



The event was organised as an open discussion with the guests in order to draw conclusions that will be initial pathways for digitalisation of the construction industry for economic and energy efficiency.



The BIMcert partners in Macedonia.

Prof. Dr Kocho Angjushev added: “Not only the part of technical design, but also the monitoring of construction during the implementation, which in my opinion is much more important, it is a weak side of the construction industry of many countries including our country. We know what kind of problems we faced during the implementation of some projects, especially if there is no solid, basic technical documentation. So practically one of the targets in this project is the digitisation of construction. The second target is to raise the level of energy efficiency,

which is an important component also and a great attention is paid to energy efficiency everywhere in the world, so we must join in that direction.” The title of the Vice Prime Ministers speech at the event was ‘Higher Standards in the Construction Sector by Modern Digital Technologies’.

Presentation of the training curriculum modules

The training curriculum modules were presented on February 5th, in the Education Centre of IECE. The training results will show the progress of the project and will contribute to the completion of the training curriculum and they will be part of the project evaluation by the European Commission.



*Paul Mc Cormack,
BIMcert Programme Manager*

More and more countries in the world have started to introduce BIM as a mandatory technique used in construction projects, putting special emphasis on the tendering and public procurement phase.

Stefani Prenkova, IECE

FAC Present on ‘New Approaches to Housing Delivery’ at the 5th National Construction Summit

Future Analytics Managing Director, Professor William Hynes, was one of the guest speakers at the 5th National Construction Summit, held on the 14th March in the Citywest Hotel, Dublin. The Summit brought together over 2,000 representatives from the construction sector in order to stimulate debate, connect and share their expertise. As such, Professor Hynes was delighted to have an opportunity to present on the “New Approaches to Housing Delivery in Ireland”.

Professor Hynes said “It was a real pleasure to present again at the National Construction Summit and give the seminar on ‘New Approaches to Housing Delivery in Ireland’. Ireland is at a crucial stage in redevelopment and FAC’s expertise in data-led, evidence-based research is well positioned to advise policy makers and developers on the best approach for Ireland’s Future. It was important to mention BIMCert and the work being carried out by the consortium as BIM is going to be at the forefront of building a smarter, more efficient Europe.”

The delivery of housing in Ireland is a fraught topic of discussion in contemporary discourse, with a complex series of challenges creating the current situation being experienced. In this respect, it is imperative that we, as a society, take new and innovative approaches to the delivery of housing. FAC’s expertise in data analytics and detailed knowledge of Ireland’s demographic composition, coupled with our extensive experience in the planning and development sectors mean we are ideally placed to offer insights into the future approaches to housing delivery.

William’s presentation focussed on some of the many layers that exist around this topic, such as: Ireland’s current population dynamics; the existing and future situation of the housing market; the regulatory framework that dictates the trajectory of development; and, the key considerations required to determine models of delivery. He also highlighted BIMCert (www.energybimcert.eu/), the H2020 project that FAC are involved in, which aims to provide a curriculum in BIM, promote energy-efficient construction, and encourage a greener built environment particularly within the housing sector, across the supply chain.

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Robert Farrell, Future Analytics



William Hynes, Future Analytics MD

Almost 150,000 Construction workers required across the UK and Ireland alone by 2021

The Irish Construction industry needs an additional 112,000 Construction Workers up to 2020, the UK needs an additional 35,740 across the industry up to 2021. A skilled workforce is necessary to support the current growth in the European construction sector. More school leavers are currently choosing to enter the sector, with approximately 13,000 taking up apprenticeships in 2017. However, school leavers alone will not be enough to fulfil the appetite of a rapidly growing industry. There are several strategies needed to fill the gap.

- A structured process (BIM)
- Attract newcomers
- Increase diversity
- Retention

BIM allows us to do more with less, spending less time doing repetitive tasks which can often be automated. This means that our time is spent adding real value to the projects we are involved with. This cannot be achieved without training, BIM and Digital Construction is constantly evolving and it is only by keeping up to date that we can achieve the biggest benefits. BIM allows visual sequencing and planning on projects which ensures that the right materials and tools are available at the right time. The new standard ISO19650; Organisation and digitisation of information about buildings and civil engineering works, including building information modelling (BIM) provides clarity about BIM in a global sense, by having guidance at an international level it allows for a greater understanding and transfer of skills across Europe and the world. Attracting newcomers to the construction industry exacerbates the requirement for the provision of

training. The work that the BIM Cert project is doing is vital to allow those who are either upskilling from within their current roles or wishing to transition from other industries to undertake training in a method that is flexible, achievable and valuable. It also provides a route for re-entry to the workplace, a relatively untapped resource.



Louise Kelly , ACB Group

The importance of the increase of diversity in Construction and the effect of this cannot be underestimated. To take an example, Women comprise 46% of the total workforce in the U.K. However, this figure drops to 12% of the total construction industry workforce, professionals make up 5% and 1% in skilled trades. This indicates a difference of 34% potential workers who may be available to the construction industry. By increasing these numbers, we should be able to support the level of workers needed. In my work with Women in BIM we have identified that attraction and retention are the main barriers to increasing those figures. The hope is that by increasing the visibility of women and minority groups in construction, we can help to resolve those issues, but it is also worth noting that without adequate training solutions it will be impossible to attract or retain people within the construction industry.

Louise Kelly,
ACB Group,
Global Vice Chair of Women in BIM

Instituto Superior Técnico visits the Centre for Professional Training in Construction

IST is doing important work at a national level in Portugal to support the introduction of BIM into the existing training programs for professionals. The objective is to create new and updated certifications for the industry, which should be aligned with the BIMcert framework. In this sense, IST is working to establish several partnerships with centres for professional training and the National Institute of Employment and Professional Training. In our photograph you can see an image from our last visit to the Centre for Professional Training in Construction (CENFIC), which wants to upgrade the existing certifications to include BIM. Antonio Aguiar Costa, from BIMcert partner IST, said: "It was fantastic to see the motivation of CENFIC's Director and his team towards the modernisation of the training and certification programs. Digital competencies are increasingly important and a major concern for the industry. Human resources must be updated and be prepared for the new paradigm as soon as possible."



The Centre for Professional Training In Construction in Portugal

Antonio Aguiar Costa
IST, Lisboa

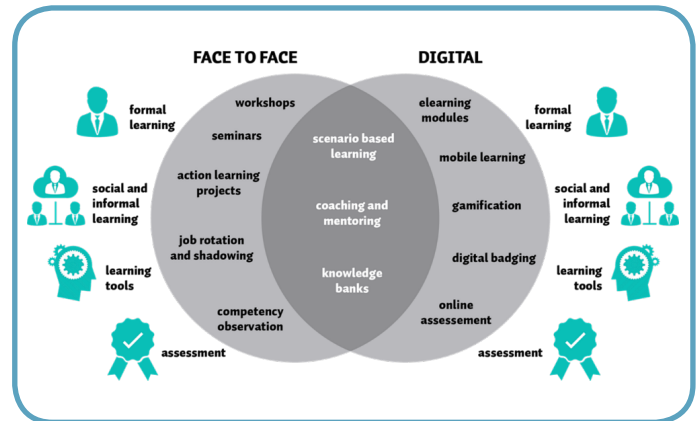
CITB Presentation at BSi BIM Belfast Conference (February 2019)

The British Standards Institute (BSi) hosted a conference in Belfast bringing together experts from industry, practice and academia to debate key topics, to develop innovative solutions, and predict future trends. The conference included a range of presentations from Norman Foster & Partners, Copenhagen Airport, Schiphol Airport and Crossrail. Barry Neilson (CITB NI's Chief Executive and BIMCert Project member) also presented on the findings and work being developed within the BIMCert project.

While the other presentations focussed on how technology and digital construction is being used to develop "models" of buildings and infrastructure, CITB's presentation focussed on people and how digital construction needs to bring people on the journey, and in particular those who have to translate design into reality. Using data from the BIMCert survey I highlighted that across the countries within the BIMCert partnership, most engagement remains within the professions in general and the designers in particular. Only in the UK and RoI are we seeing contracting organisations engaging with BIM / Digital Construction to the same extent as the design professions. The reasons for this are not explored within the survey but there is a correlation with Government intervention and incentives and the integration of BIM within the delivery side of the industry.

However, even where the delivery side are adopting BIM, it is still, in the main, restricted to the relatively short term design and build phase. The longer term benefits of BIM in managing our built environment in terms of energy efficiency and maintenance are not yet embedded in the industry. Outside of BIM, much of the sector is working digitally in the form of communication and sharing of files / information through common environment media like "Dropbox". But the transition to BIM still appears to have a degree of resistance. For BIM and Digital Construction to yield all the benefits it can deliver, I contend, the industry has to focus as much on educating the entire workforce in using BIM as it does in developing the "clever technology" that allows it to happen. This is the focus of BIMCert, to allow everyone involved in the sector to take their first, or next, step in working within a BIM environment.

BIMCert has provided some insight into how this can be done. The perceived barriers to developing digital skills was explored within the survey element across 5 countries and the results were fairly consistent. The usual reasons of "time and money" scored high but after these the main reasons were finding training relevant to individual needs and lack of training materials / courses.



BIMCert 'Beyond Blended' training approach

This has informed the development of the BIMCert curriculum. The aim is to devise a system whereby individuals, irrespective of their prior knowledge and skill, can access and gain knowledge and competence which is directly relevant to their area of work and appropriate for their level of expertise. The intention is to create a series of "bite sized" learning modules that can be selected and combined to provide the learner with the mix of skills and knowledge they require now, and to advance that in the future when their needs and ambitions grow.

In addition, a "blended" method of delivery will allow access to a variety of learning styles in the world of BIM. As the conference was told, "only when site operatives and the craft trades can access the BIM models and information that our designers and specifiers create will we achieve the energy efficiency and quality that will drive the built environment in the future." We need BIM / Digital Construction to move away from being the plaything of technologists and designers to becoming the tool that it can be.



Barry Neilson CITB

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