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General Assembly Report

GLOBAL BIM NETWORK

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The Global BIM Network's General Assembly – building a digital built environment that brings benefits to people and places

The Global BIM Network hosted its inaugural General Assembly on 2 December 2021, bringing together representatives from public sector organisations to hear how the growing global digital construction sector is bringing benefits to people and places across the world – helping to build back better from COVID-19 and meet net-zero targets.

The General Assembly's audience heard from members of the Global BIM Network in three knowledge exchange panel sessions, where the experience of regional and national digital construction initiatives was shared providing lessons learned, best practice and valuable insights for implementing BIM-based digital transformation strategies in public sector-funded projects.

Introduction

The event marked the first time the Global BIM Network has officially convened and saw the launch of the Global BIM Network's Roadmap for the Global Built Environment 2021-2025. This has been co-created by representatives from the international public sector and multi-lateral organisations, and public infrastructure funders connected and collaborating through the Global BIM Network. The Roadmap is strategically designed to support public sector leadership efforts to collaborate with industry on the critical opportunity of digitalisation in response to the pandemic – and to drive inclusive growth through capacity building and knowledge transfer.

The General Assembly was opened by Alanna Gluck, Policy and Public Affairs Manager, Centre for Digital Built Britain, who brought focus to the benefits of participating in the growing Global BIM Network; a valuable source of information and access to leading international experts collaborating to support public sector's digital transformation. The Network's Information Collection contains a range of knowledge resources relating to local, regional, national and global digital transformation initiatives from across the public sector. The Call for Knowledge, issued in August 2021, invites ongoing contributions to grow the Information Collection. Alanna Gluck said: "Our panel discussions today provide a living example of the knowledge artefacts that the Network is seeking to include in its free open-access Information Collection, available for all members at www.globalbim.org."

Adam Matthews, Head of International, Centre for Digital Built Britain and Chair of the Global BIM Network's Steering Committee, welcomed more than 300 public sector and multilateral representatives from 71 countries who joined the online event and set out the value proposition of digital transformation: "Digitalisation of the construction sector is estimated to create savings of around $250bn a year. Clearly, this is an important topic for the entire industry. As well as the target of generating these savings, we also have highly significant national and global goals including net zero and climate resilience."

"The Global BIM Network has a vision to collaborate primarily as a public sector community and, together with the private sector, advance digital transformation across our global sector. Collaboration will be crucial to driving this agenda so that benefits can be shared. There have been and will be challenges along the way and the Global BIM Network brings together all stakeholders to accelerate and support this process and collaborate on solutions."

The Network: activities and achievements

The past few years have witnessed tremendous growth in government and industry activity to drive the digital agenda across the world. This global activity led to the launch of the Global BIM Network in March 2021 at the online Global BIM Summit, which saw 2000 attendees from 90 countries across the world.

An Advisory Board has been formed for the Global BIM Network, comprising multilateral organisations including the Inter-American Development Bank, Asian Development Bank, and the United Nations Office for Project Services (UNOPS).

The Global BIM Network's Steering Committee has now been formed comprising primarily country and national-level representatives from Europe, Latin America, Asia and North America, and most recently Australia.

The Global BIM Network's Call for Knowledge has been launched to collect and collate the different approaches to introducing BIM and information management processes to public policy, public procurement practices and public projects, boosting the Information Collection. The Information Collection is structured at national, procurement and project levels, and contains knowledge artefacts grouped into four collections: public leadership; collaborative framework; documentation, communication and communities; and capability and capacity building.

Global BIM Network Progress

The Global BIM Network is a public sector community to advance the digitalization of the construction sector.

Over **2,000 attendees from 90 countries** at the Global BIM Network launch in March 2021

The Advisory Board includes:

- Inter-American development bank
- Asian Development Bank
- UNOPS

Steering Committee: 12 country and regional representatives & 2 new members

Roadmap 2025: Agreed & Published

Global BIM.org

Action

Following the launch of the Call for Knowledge, the Network is calling for members and all public sector representatives to share publicly available and useful information that can contribute and grow the Information Collection for the benefit of all members. You can submit a resource to the Call for Knowledge at: globalbim.org/information-collection/call-for-knowledge.

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The Global BIM Network Roadmap for the Global Built Environment 2021-2025

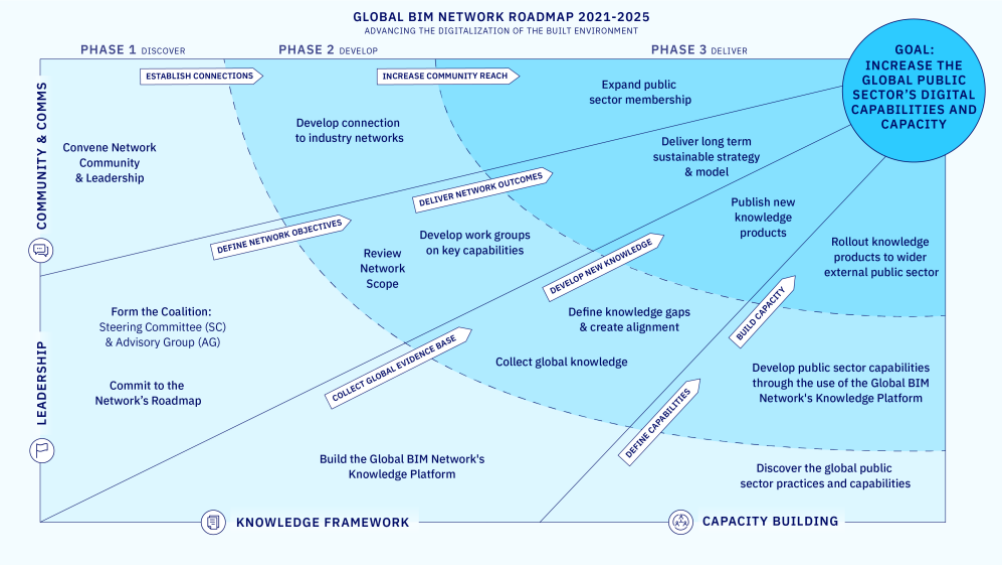
The Roadmap defines how Network members are going to collaborate together towards a shared vision as a global community of public sector and multilateral organisations. It provides a useful reference to realising the Network's ambition – to increase the global public sector's digital capabilities and capacity and be a strong ally and partner to the global construction industry – and identifies the activities that the Network will collectively work on. The Roadmap has been co-created by representatives from the international public sector and multi-lateral organisations and public infrastructure funders connected and collaborating through the Global BIM Network.

There are three phases to the Roadmap - Discovery, Development and Delivery - across four areas of activity:

1. **Leadership:** brings focus to building a public sector's coalition through the Steering Committee of the Global BIM Network to identify actions to support wider industry transformation.
2. **Community & Communications:** putting people at the heart of digital transformation and encouraging engagement.
3. **Knowledge Framework:** documenting the guidance for how BIM and information management is introduced into public policy and procurement organisations and projects.
4. **Capacity Building:** driving the skills and expertise primarily in the public sector to enable it to be a strong partner with industry.

Over the coming years, as the Network enters the Development phase of the Roadmap, there will be opportunities for members to participate in working groups and events that will contribute to shaping the scope of the Roadmap before it enters the final Delivery phase.

Adam Mathews said: "Our ultimate goal is to increase the skills and experience in the public sector when introducing BIM into public infrastructure projects and programmes. To create scale and impact in this digital landscape, we as a leadership network will need to reach a wider audience. The Delivery phase is about developing a long-term strategy for the Network, expanding the reach of the public sector membership, developing new knowledge products to address any gaps, and roll out the collective knowledge to a much wider public sector audience."



Action

The Global BIM Network welcomes comments and thoughts on the Roadmap. Anyone interested in finding out more or who would like to engage or comment is invited to email international@cdbb.ac.uk

Steering Committee's Conversation

Adam Matthews was joined by two members of the Global BIM Network's Steering Committee to discuss the value of collaboration and being part of the Network.

Ngoc-Binh TA, Head of BIM Team, Institute of Construction Economics Ministry of Construction, Vietnam, said:
"BIM was quite new in Vietnam when we began our journey. We did not know what direction to take so being part of a wider network helped us a lot as it enabled us to consider approaches taken by other countries. We had access to representatives from other places who could offer us insights. It also helped our private sector to work internationally as we had the advantage of a young labour force who had been focussing on new digital technologies.

"We all know that from the public sector point of view, investing in BIM is a commitment and they need to know how this technology is developing across the globe and what is happening in the private sector in order to have confidence in making that investment. Public sector organisations working with the Network will gain this insight."

Jaroslav Nechyba, Director of BIM Strategy Department Czech Agency for Standardization, Czech Republic, said:
"The Network has been a valuable source for building self-confidence for myself and my colleagues. Other countries have different strategies and approaches, and are all at different stages. We can be inspired by those who are further ahead of us, and we can give back to those who are slightly behind us by sharing our own experience. I can feel more assured about priorities and our action plan, and when there are challenges it is good to know that we are not alone and we can share solutions to move forward.

"It is good to see so many public sector organisations involved with the Network. When we talk about information management, there needs to be cooperation between the public and private sectors in developing the digital processes and communications required. There needs to be trust and cooperation between the two sectors – it will be key to the future success of BIM."

Action

Calling for more organisations across the public sector, private sector, academia, standards bodies and built environment professional bodies to join the Network on the global journey to progress digital transformation at https://cam.us18.list-manage.com/subscribe?u=d0403dc9c4c52a87a902c4769&id=072c594dd8

Knowledge Exchange Panel Sessions

Three knowledge exchange panel discussions considered topics key to digital built environment initiatives across the world, including national policies, programmes and people who are driving digital transformation in their countries, regions and organisations. Members of the audience participated through Slido polls and chat discussions.

Each session featured short, pre-recorded presentations from the speakers, available at www.globalbim.org. The presentations were followed by discussion between the presenters and moderator with questions and comments from the audience.

Session 1: The cost-benefits of Information Management: a global perspective

Milena Feustel, Co-Chair, EU BIM Task Group, EU presented an overview of the cost-benefit analysis (CBA) for the use of BIM in public projects. This comprised a nine-month exercise and included: the development of a methodology and creation of a tool to measure the costs and benefits of using BIM in public construction projects, taking into account expenditures, revenues and non-monetary benefits; the validation of the CBA tool demonstrating relevance and applicability through six case studies representing various types of projects; and writing an easy-to-use handbook for EU public entities who want to use the tool and learn more about the methodology.

Claudia Suaznabar, Lead Specialist, Inter-American Development Bank, presented an overview of an evaluation methodology of BIM results in public construction projects, which is expected to be completed in early 2022. While the use of BIM by the construction sector in Latin American Countries is incipient, there is increasing interest from governments to implement BIM in public works and develop public national strategies to support BIM adoption in different countries. The evaluation methodology is expected to help accelerate BIM adoption throughout the region, provide use cases of BIM, and also accelerate the learning process around what and how BIM works at the project level.

Discussion panel and points

Alanna Gluck, Policy and Public Affairs Manager, Centre for Digital Built Britain (Moderator).
Milena Feustel, Co-Chair, EU BIM Task Group, EU (Speaker)
Claudia Suaznabar, Lead Specialist, Inter-American Development Bank (Speaker)

Supporting the net-zero agenda

Milena Feustel: The CBA tool will support the transition to a green economy in Europe, supporting the Green Deal's ambitious plans to secure clean energy, increase recycling and take more actions to protect the environment. The CBA tool currently

includes CO_2 emissions and health and safety indicators, and it could be beneficial to use additional indicators such as adaptation and resilience to climate change.

Drivers for investing in BIM

Claudia Suaznabar: In Latin America cost efficiency is the main driving force for the current interest in BIM from governments, as well as securing transparency in public works projects. The evaluation methodology will give governments more precise information to aid public-purse investment decision-making.

Session 2: From BIM policy to BIM implementation: procurement practices around the world

Luke Belfield, Acting Chief Engineer, Office of Projects Victoria, Department of Treasury and Finance, Australia, presented an overview of Australia's Digital Build Program and recently released Digital Asset Policy. Victoria currently has a planned infrastructure project spend of Au$144bn (£77.4bn GBP) but the operational cost over the 50 to 100-year life of these infrastructure assets will vastly exceed this. However, the construction sector building this pipeline has a very low level of digitisation. The Program aims to build a smarter major projects pipeline and deliver better outcomes for people in Victoria through better information management and improving infrastructure productivity through data. The project team acknowledges that decisions made at the front-end of a project (an asset's life) have profound impacts on the influence it has on the service delivered for people.

Discussion panel and points

Roger Grant, Executive Director, Building Information Management at the National Institute of Building Sciences, USA (Moderator)
Matthew Kehoe, Director, Digital Build Program, Office of Projects Victoria, Australia (Speaker)
Jaroslav Nechyba, Director of BIM Strategy, Department Czech Agency for Standardization, Czech Republic (Speaker)

Strategy for supply chain uptake

Matthew Kehoe: The Digital Build Program's combination of digital assets, digital build and offsite construction is a strategic way to connect to procurement. The Digital Build Program's use of offsite construction, prefabrication and modularisation leverages a lot of BIM processes using asset libraries and regular kit-of-parts processes. Because these processes are so integrated, the effect is amplified. If we can get digital in practice through offsite construction, it becomes normalised and we get supply chain uptake.

Language of BIM

Matthew Kehoe: Our choice of language for the Program, which uses the term digital engineering information management, is deliberate. This topic has invited many comments in the chat, and I think the range of languages in this field all have their place as it is an evolving landscape. We chose to go towards information management language as it resonates with our project, where the people are not technicians, they are construction engineers. We must make the effort as experts to present the program in their language. Many BIM efforts have failed because the language is too technical and it doesn't then get strategic support at executive level.

Jaroslav Nechyba: It is important to speak with one language and terminology so that people can understand one another. There needs to be common understanding between the public sector, supply chain and manufacturers. All of the industry needs to be involved in finding a common solution for digital transformation. All organisations need to have their own digital strategy and to be able to share data so that data is not created again and again, and then there can be greater efficiency

Private sector

Matthew Kehoe: Private sector involvement is key to the success of the program and being able to identify the pinch points for the private sector is important and will inform our strategy.

Digital upskilling

Matthew Kehoe: The private sector is ahead of the public sector in digital capability. Even in government project agencies, the project space is more advanced than the operation and maintenance space. It's an enormous challenge. We provide incentives on future contracts to improve that practice, but it's not an area for short-term wins. It's a long-term strategy that will bring long-term benefits.

Roger Grant: Upskilling the public sector is very important, but it takes hard work. Aligning the data collected with the systems used internally is important so that the data can actually be used.

Archiving data

Jaroslav Nechyba: Archiving digital data sustainably for the long term is very important. We are not far off from paperless projects. Careful consideration must be given to listing why specific data are required for purposes and use cases by the public procurers.

Session 3: Government and Industry: Working together to drive benefits for people and places

Fergus Harradence, Deputy Director, Department for Business, Energy and Industrial Strategy, UK, presented an overview of the UK Government's strategy for BIM, setting out the UK's BIM journey of the past decade and looking to the future. BIM has transformed the design and delivery of construction in the UK, saving money and reducing carbon emissions and waste to deliver better and safer built assets. The next decade will mark how BIM and other digital technologies inform the way we think about and manage our built environment, driving a systems-based approach enabling better delivery of public services and greener and more sustainable towns and cities. The UK's BIM programme has been embedded into a wider technology programme to improve the built environment, developing a range of digital and manufacturing technologies for the construction sector and supporting the National Digital Twin programme. The CReDO (climate resilience demonstrator) brings together the energy, water and telecoms sectors to explore how connected data, information sharing and interoperability can improve the climate adaptability and resilience of infrastructure.

Daniel Gómez, Deputy Director, National Planning Department, Colombia, presented an overview of the BIM journey in Colombia, which saw the formation of a BIM working group to unify all strategic efforts, including the private sector, academia and national government. In 2020 a memorandum of understanding was signed with the UK Government, marking an important accelerator in moving forward Colombia's national BIM strategy. It enabled knowledge exchange through working with UK consultants as well as academics and industry, which further accelerated the strategy. Colombia accessed courses and workshops to strengthen public

sector skills, and increase awareness of benefits in terms of savings, timings, productivity and costs. All of the national departments contributed to creating the national strategy, which supported adoption across the country. BIM is a key tool for competitiveness, productivity and sustainability in the digital transformation of Colombia. Its strategic Roadmap, which takes Colombia to 2026 at the point of implementation, connects all of the players in the national territory and they continue to develop and implement this. There are four fundamental pillars: communication dissemination; public leadership; development of capacities; and collaborative framework. The Global BIM Network provides a fundamental space to share experiences and lessons learned.

Sebastián Manriquez, Subdirector, PlanBIM of CORFO, Chile, presented the history of how Chile's PlanBIM strategy was developed using the state's purchasing power to modernise the entire construction industry, with the main aim of increasing productivity and sustainability. Transparency in public projects was also a key objective, as was the promotion of common standards. PlanBIM identifies five lines of action: institutionality and strategy; standardisation; human capital; enabling technologies; and communication and dissemination to support digital transformation and overcome resistance to change within the construction industry. The state and the private sector came together in 2016 to define a vision of a public policy, PlanBIM, and to enable implementation of BIM in the state of Chile in a standardised and organised way (developing Exchange Information Requirements). A roadmap of dates and goals was identified and included: by 2020 BIM was required in public projects in a standardised way; by 2025 BIM will be integrated on the Ministry of Housing's online platform, which allows building permits in private projects to be requested online. It was important for the government to collaborate with the private sector and PlanBIM works with government, academia and the private sector to achieve its objectives. Adopting a number of international standards has helped to progress PlanBIM. More than 30 companies involved with pilot projects have received training in BIM processes and free e-learning has been made available to a wider audience – more than 16,000 people from 32 countries signed up. PlanBIM has been extended for a further year to September 2022.

Discussion panel and points

Valentina Sarmiento Buitrago (Moderator), Head of the Productivity Team, Ministry of Housing, City and Territory, Colombia (Moderator)
Jonathan Bernal, Director of Infrastructure and Sustainable Energy, Colombia (Speaker)
Fergus Harradence, Deputy Director, Department for Business, Energy and Industrial Strategy, UK (Speaker)
Sebastián Manriquez, Subdirector, PlanBIM of CORFO, Chile (Speaker)

BIM and reactivating the economy

Jonathan Bernal: Our growth rate is 12.83% and only three economies in the world are above that level. This is due to key decisions we made during the pandemic to reactivate the economy. First, an ambitious infrastructure public works project was

planned in tandem with connecting territories and also completing unfinished projects which, when combined, created many new jobs. BIM is crucial because it generates transparency and has been key to the reactivation of our economy across sectors. BIM also enables us to be more efficient in terms of resources.

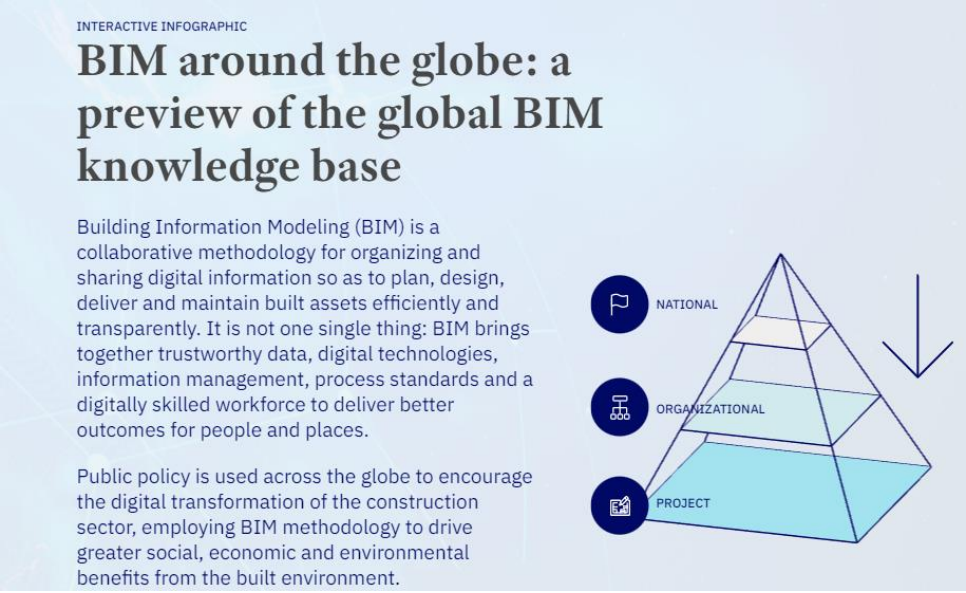
Cultural change

Fergus Harradence: The way we see BIM is that it is not fundamentally a technology but a business-change process enabling organisations to collaborate more effectively to deliver better outcomes for everyone. It only works as a technology if you have the right framework for that collaboration and part of that is the legal framework (contracts) including payment practices, dispute resolution, and requirements for information sharing. It is also about the way the project is managed and the delivery model. All of these factors have a powerful influence on how effectively that project is governed and how well BIM is used.

Valentina Sarmiento Buitrago: We need a roadmap, to strengthen training, policy, harmonisation and standardisation. The process has to work like a gearbox, with all the gears working together.

Resistance to change

Sebastián Manriquez: This is a people-centric programme. There has to be teamwork and top-down leadership from the government. This cannot work in silos. We needed a multidisciplinary team to work together and get all the different stakeholders on board. When there is resistance to change, you cannot send these people away; you need to bring these people on board as they may have important contributions to the project.



The interactive infographic at www.globalbim.org

Wrap-up and next steps

Adam Matthews closed the inaugural Global BIM Network's General Assembly with a summary of the event and a call to action. "There has been a tremendous amount of information shared by our speakers. What we are working together to achieve is a long-term effort and there is no panacea or one single recipe for success. However, there are common ingredients we can share. Confidence is important – the public sector needs confidence that digital transformation will help to address policy goals. We need to share best practice about how to get there and the Network is a significant source of information and support for the public sector on its journey towards the digital transformation of the built environment. The more information we can build as part of the Network's Information Collection the better – and I urge everyone to participate in contributing to this important resource.

"Confidence to invest is important to the private sector. This is clearly a significant undertaking, a social and technological change involving skills and expertise training and development. Providing confidence to the private sector that this change is going to be welcomed by the public sector is a signal that the Global BIM Network can provide.

"As a Network we are moving forward. Interest in digital transformation is growing and change is happening. That is why we need the Roadmap now. Surely it is better to make this global change in a consistent way that is helpful to all countries and meets shared objectives.

"There are still questions to be answered and challenges to overcome. One is around working with the private sector. The construction sector is worth 13% of global GDP and it is pivotal to the economic and social development of all countries. We need to think about how both the private and public sectors, as well as academia and the built environment standard and professional bodies, can hold a meaningful conversation. It can't happen just once or twice a year – and we are open to ideas.

"We want to grow our Network's community, so I urge you to sign up if you are a public sector representative and want to be a part of the conversation. If you are in the private sector, we would also like to hear from you. We are an inclusive group with a broad set of languages, cultures and levels of BIM maturity. By working together, we can advance the digital transformation of the global built environment for the public good. I thank everyone for attending today and look forward to seeing you all at our next Global BIM Network event."

Actions

- Register to keep in touch about the work of the Global BIM Network at: https://cam.us18.list-manage.com/subscribe?u=d0403dc9c4c52a87a902c4769&id=072c594dd8
- Contribute to the Call for Knowledge at globalbim.org/information-collection/call-for-knowledge