National Institute of BUILDING SCIENCES™

BIM Webinar: Collaborative Digital Delivery in the Age of Information Privacy and Cyber Security
June 1, 2022 | Session Overview

Presenters

Robert "Bobby" Prostko, Deputy General Counsel, Intellectual Property and Cybersecurity, and Chief Privacy Officer, Allegion
Lynn Burns, ISSM & FSO, HDR Engineering
Horatio McDowney, Information Technology Applications Project Specialist, U.S. General Services Administration
Rahul Shah, Sector Development Director, BSI Group Inc.
Alexandra Luck, Fellow, the Institution of Civil Engineers

Key Contributors

Dr. Ivan Panushev, Principal Partner Solutions Architect for Engineering, Construction, and Real Estate, AWS
Johnny Fortune, BIM Manager, PRIME AE Group
Wanda Lenkewich, CEO, Chinook Systems Inc.
Dr. Carrie Sturts Dossick, P.E., Professor of Construction Management, Associate Dean of Research, College of Built Environments, UW

Moderators

Rachel Riopel, AIA, NCARB, Digital Practice Leader, HDR
Brok Howard, Product Manager, dRofus
Connor Christian, PE, Senior Product Manager, Procore Technologies
Nathan C. Wood, Executive Director, CPC

BIM Overview: People, Process and Technology

The National Institute of Building Sciences held a building information management (BIM) webinar on June 1, 2022, to discuss the current state of digital delivery in the built environment and lay the groundwork for future exploration. The webinar highlighted an increasing trend toward collaboration and the impacts of requirements related to information privacy and cyber security.

Webinar attendees learned about key impacts of information privacy and cyber security requirements to the collaborative digital delivery process, how technology has evolved in support of collaborative digital delivery, and areas impacted by requirements supporting information privacy and cyber security.

Presenters included Robert "Bobby" Prostko, Deputy General Counsel, Intellectual Property and Cybersecurity,

and Chief Privacy Officer, Allegion; Lynn Burns, ISSM & FSO, HDR Engineering; Horatio McDowney, Information Technology Applications Project Specialist, U.S. General Services Administration; Rahul Shah, Sector Development Director, BSI Group Inc.; and Alexandra Luck, Fellow, the Institution of Civil Engineers.

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Moderating the discussion was Rachel Riopel, AIA, NCARB, Digital Practice Leader, HDR; Brok Howard, Product Manager, dRofus; Connor Christian, PE, Senior Product Manager, Procore Technologies; and Nathan C. Wood, Executive Director, CPC. Roger Grant, fBSI, Executive Director BIM, NIBS, provided the opening remarks from NIBS.

The June 1 webinar was the first event of a three-part series around BIM. The series is being sponsored by the NIBS Building Information Management Council, BSI, Compass Datacenters, dRofus, Newforma, and Autodesk.

Construction is the Least Digitized Industry

When it comes to Industry 4.0, construction is the least digitized industry, said Nathan C. Wood, Executive Director, CPC.

Wood opened the BIM webinar with a history lesson, recounting Industry 1.0, when the beginning of the Industrial Revolution, and the mechanization of manufacturing with the introduction of steam and water power. Industry 2.0 involved mass production assembly lines using electrical power, and Industry 3.0 was marked by automated production using electronics, programmable logic controllers, IT systems and robotics.

According a McKinsey Global Institute industry digitization index (2015 or latest available data), the construction industry is among the least digitized.

"Data is the new oil," Wood said. "Construction is late to the game."

Some background: The former Facility Information Council began developing the National BIM Standard™ (NBIMS) in 2005 to improve the interoperability of BIMs. In early 2008, the FIC released NBIMS Version 1 – Part 1: Overview, Principles, and Methodologies for Public Use. That same year, in order to consolidate missions and streamline services, the buildingSMART alliance® began overseeing the standard after the sunset of the FIC. In 2020, NIBS changed the group's name to the Building Information Management (BIM) Council to better reflect its mission in the U.S.

NIBS is continuing the work to develop open standards and guidance for all aspects of building information modeling, starting with the U.S. National BIM Program: The Foundation for Digital Transformation of Capital Facilities and Infrastructure. An implementation plan that outlines a strategy to rapidly expand standardization efforts, including expanded roles in partnerships with organizations worldwide, currently is in development.

Site references:

* [NIBS BIM Council](#)
* [U.S. National BIM Program](#)

Who Owns this Data?

Robert "Bobby" Prostko, Deputy General Counsel, Intellectual Property and Cybersecurity, and Chief Privacy Officer, Allegion, said there are many things that need to be considered before data is shared.

First off, who owns it?

Prostko combed through foundational legal issues with preliminary intellectual property, privacy, and cyber security triage questions.

These include:

* Who owns or has rights in the designs and data? Derivatives? Reuse?

- Is personal data involved? If so, what privacy laws are applicable? Cross-border transfers?

- What cybersecurity framework and controls and/or laws apply? Is the project/information/data classified? Critical infrastructure? Covered by an NDA?

Details like personal data – anything that allows you to identify an individual – need not be as sensitive as social security numbers. Names and phone numbers qualify.

What's Inhibiting the Move to New Standards?

This comes down to a couple of things: Our tools and processes must be updated, and stakeholders need to be trained.

Brok Howard, Product Manager, dRofus, said he's been focused on BIM and collaboration through BIM for most of his career.

Understanding the perspective is critical. As an architect, Howard would be focused on clients. As a product manager, he was focused on customers.

"Those people haven't changed," he said. "What's changed is my perspective. A larger project team has shared goals and different players involved, and we're all collaborating. At the center of that is data."

When it comes to the federal security process, Horatio McDowney, Information Technology Applications Project Specialist, U.S. General Services Administration, likened it to a Formula 1 Pit Stop.

FedRAMP is the Federal Risk and Authorization Management Program. It's designed to ensure security for cloud services for the federal government. Whereas the process once was quite long (12 to 24 months), now it's six to 12 months.

"AEC would like to speed up the federal security process," he said. "Cloud security is a dangerous thing."

McDowney said FedRAMP places emphasis on security and protection of federal information and reduces duplicative efforts, inconsistencies and cost inefficiencies.

Driving Work Collaboration

In the United Kingdom, making information more readily available and widely sharing it is a big driver toward collaborative work.

Alexandra Luck, Fellow, the Institution of Civil Engineers, covered how the UK looked at the need for security. Traditionally, the UK looked at threats of espionage or terrorism. Today, it's seeing an increasing speed of threats, ranging from less-sophisticated hacker techniques to high-level criminal networks and terrorist organizations exploiting access.

Security governance requires top-level management buy-in, accountability, and responsibility.

Gold-plated security need not be applied to absolutely everything, Luck said.

"The amount of sensitive information is very limited," she said. "What is the information that could potentially compromise the safety, security and the service the asset is to provide?"

She emphasized the need for a robust security approach that is not cost prohibitive for the short- and long-term.

"Think about this in a holistic way," Luck said. "This isn't just about cyber security – it's about personnel, physical and cyber security."

What's Coming Up

The second part of the three-part BIM Event Series took place June 7, 2022. It involved a six-hour workshop in Washington, DC, that allowed U.S. National BIM Program leadership the opportunity to meet with industry stakeholders.

The conclusion of the BIM Event Series wraps at the NIBS annual meeting, Building Innovation 2022, at The Mayflower Hotel in Washington in September. There, information will be presented from the webinar and workshop. For more information, visit nibs.org/events/bim-event-series.