

Accelerating Digital Transformation with the U.S. National BIM Program

November 9, 2023 | Session Overview

Speaker

Johnny Fortune, Executive Director, U.S. National BIM Program,
National Institute of Building Sciences

Moderator

Jennifer Hitzke, Director, Governance and Special Programs,
National Institute of Building Sciences

Accelerating Digital Transformation Overview

The U.S. built environment has yet to realize the full benefits of digital transformation.

The National Institute of Building Sciences initiated the U.S. National BIM Program to bring together industry stakeholders to achieve critical digital transformation throughout the entire lifecycle of designing, constructing, and operating in the built environment.

The program concept has evolved through conversations and collaborations with leading organizations and communities, involving the public and private sectors and spanning a diverse cross-section of asset/project types. It will provide a step-change in capacity, creating a platform and community to support the next phase of digital innovation.

On November 9, 2023, National BIM Program Executive Director Johnny Fortune led a webinar, covering the

framework of the U.S. National BIM Program, its core values and goals, and the industry workgroups who have been working hard to achieve success. Fortune also explored the program's five-year plan.

Jennifer Hitzke, Director of Governance and Special Programs with NIBS, moderated the session. The webinar received more than 1,000 registrants.

The Need for a National BIM Program

There are many reasons the U.S. construction industry could benefit from a national building information management (BIM) program.

Chief among them: the fragmented data that exists. The industry is not standardized.

There are varied approaches to all architecture, engineering, construction, and operations (AECO) practices and processes, said Johnny Fortune, Executive

Director, U.S. National BIM Program with NIBS.

“This produces a lot of waste and rework and keeps the construction industry from improving at a rate than if these processes were standardized,” he said.

The impact of broad digital transformation would be huge.

Sixty percent of construction productivity would increase through digital transformation, according to research from global management consulting firm McKinsey & Company.

Additionally, in light of a retiring workforce – 41 percent of the U.S. construction labor force is expected to retire by 2031 – the industry must find ways to innovate and be productive.

A Data Strategy

So what’s needed to support digital transformation? A community of industry stakeholders to focus on the entire lifecycle of designing, constructing, and operating in the built environment.

The U.S. National BIM Program concept ties together a myriad of things, including industry organizations, the public and private sectors, buildings, infrastructure, BIM and digital twins, cybersecurity, and national and international standards.

The idea for the program was hatched in February 2021, with an initial roundtable of about 40 business and government leaders meeting to discuss a strategy for digital transformation.

The United Kingdom’s program was used as a guide to adapt aspects specific to a collaborative public-private partnership approach in the United States.

Six core values were identified:

- Inclusive – involve a broad range of key stakeholders
- Open – require open digital standards
- Collaborative – share experience and expertise
- Aligned – limit rework through coordination with stakeholders

- Practice-oriented – focus on ability to implement now and in the future
- Reliable – standards provide the foundation for commitments and contracts

Program Critical Outcomes and Workstreams

NIBS and industry stakeholders identified several critical outcomes for the program. They include:

- Allowing owners to build and renovate more buildings, bridges, and roads with less money by enhancing the efficiency of design, construction, and asset operation.
- Accelerating delivery, managing costs, and increasing sustainability through information standards and protocols shared across the supply chain.
- Building on U.S. leadership in AECO technology development to enable the next generation of building technology.
- Strengthening U.S. industry access to global markets with U.S. standards compatible with worldwide programs.
- Integrating buildings, lifelines, and infrastructure for seamless management of the built environment to improve safety, security, resilience, and sustainability.

Fortune outlined the needs, solutions, and deliverables for each of the workstreams that were developed. The workstreams include Owner Leadership, Project Delivery, Standards and Guidelines, Stakeholder Engagement, Education and Training, and Legal and Insurance.

NBIMS-US Version 4 Modules

Fortune provided an update to the National BIM Standard – United States Version 4, which was softly launched at Building Innovation 2023 in September.

The next few weeks will be critical, as industry partners finalize work on several modules, including Project BIM Requirements, BIM Execution Planning, BIM Use Definitions, Information Exchange Guidelines, and COBie

Version 3.0. Additional content areas will be developed in future versions of NBIMS.

How You Can Get Involved

To find more information about the program, Fortune pointed to the 60-page implementation plan that can be found on the [U.S. National BIM Program website](#).

Other ways to get involved include adopting benefits from the program and resources, advocating for the program, engaging as a member of NIBS and subject matter expert, and sponsoring the program to help fund the initiatives.

Feedback always is welcome, and Fortune pointed to the email, usbimprogram@nibs.org.

Building Innovation: The Webinar Series

Accelerating Digital Transformation is one of several webinars to be offered as part of the [Building Innovation: Webinar Series](#).

Every year, the National Institute of Building Sciences hosts the Building Innovation conference, reaching hundreds of building professionals from across the country. As part of our mission to continue education from the conference, NIBS has launched the webinar series to allow built environment professionals the opportunity to virtually learn from subject matter experts on a variety of topics.

The next two webinars are:

- November 28, 2023 – [Cyber-Physical Impact Modeling](#)
- January 16, 2024 – [Unlocking the Metaverse: The Cyber-Physical Relationship](#)