National Institute of BUILDING SCIENCES™
Building American Innovation

July 2025

Quarterly Connection

A NIBS Member Newsletter

Topics Inside

Message from George K. Guszcza, D.Eng, CPEM, CCM, President and Chief Executive Officer

On this Fourth of July, we stand at the cusp of a profound moment one that evokes not just celebration, but reflection. Two hundred and forty-nine years ago, our nation declared that America would stand for liberty, equality, and the unyielding spirit of innovation. Our nation has held to our promise and shaped a story uniquely tied to our built environment. We have moved from wattle and daub to soaring steel, from cobblestones to interstates to internet, and now we enter the promise of AI powered smart cities. Along the way, America has built communities, supply chains, and connections. But more than shelter or commerce, we have advanced resilience, ingenuity, and leadership.

Just as our founding patriots embarked on a journey of courage, NIBS has blazed a path over the past 50 years. What began as a coalition of architects, engineers, and policy advocates has grown into an essential catalyst: translating cutting-edge research into building codes, standards, and practices that shape every aspect of our economy and everyday lives. We have supported seismic-safe schools, energy-efficient public housing, coast-resiliency along our shorelines, and data-driven design

in the largest government campuses. Each project is a milestone in a larger journey—from vision to verification to implementation.

Our built world is more than brick and mortar—it is the ground upon which every innovation evolves. It is the space where telehealth happens, where supply chains flow, where resilience is tested, and where communities flourish. As global competition intensifies, America's competitive edge will depend on how quickly we turn innovation into policies and projects that protect public safety, accelerate performance, and empower growth.

That is where NIBS plays its vital role. For over 50 years, we've served as the bridge between visionary R&D and real-world standards, between pilot projects and national implementation. By guiding federal agencies, state governments, architects, engineers, contractors, and product manufacturers, NIBS ensures innovation gets built correctly, built safely, and built at scale. NIBS is not just a collective of experts—it is America's institutional enabler of building innovation.

The next 50 years hold tremendous promise: mass-timber construction in every region, digital twins for every critical building, grid-interactive design, resilient infrastructure under increasing climate stress. Yet none of it will translate into benefits for every American without the purposeful alignment of policy, standards and support.

By committing to NIBS, we're choosing a future where every American—whether in high-rise offices, suburban schools, rural hospitals, or coastal homes—lives and works in buildings that are safer, more efficient, more resilient. We're choosing to strengthen our nation's global competitiveness by leveraging American building innovation. We're choosing to protect taxpayers and communities by embedding performance into every stage of design and construction.

So today, as we watch fireworks across our landscapes—from small towns to city skylines—we reflect on a journey that began with a Declaration and continues through every tower and tunnel, every transit facility and transmission line. America has always innovated through building. NIBS ensures that innovation reaches into every structure, every street, every sector. With your partnership and support, we can ensure the next 50 years bring a new renaissance of American prosperity—powered by innovation in the built environment.

Happy Independence Day. May we continue to build a stronger, safer, more competitive America together.

George Guszcza, President and CEO, National Institute of Building Sciences

Beyond Green: How the Sustainable Facilities Tool is Shaping the Future of Resilient, High-Performance Federal Buildings

Sustainability in the built environment can't stop at energy efficiency—it must address long-term durability, resilience, and value.

That's why the National Institute of Building Sciences (NIBS) is proud to now lead the management of the Sustainable Facilities Tool (SFTool), a dynamic digital platform originally developed by the U.S. General Services Administration.

SFTool offers practical, data-informed guidance across a wide range of topics, including indoor environmental quality, materials selection, and cost-effective operations. It helps federal agencies,

contractors, and facility managers make smarter choices earlier, where impact and savings are most significant.

Now under NIBS leadership, SFTool will evolve to serve more users with greater depth. We're enhancing its capabilities, aligning it with our other trusted tools, such as the Whole Building Design Guide (WBDG) and ProjNet, and forging new partnerships with institutions leading research in resilient design and sustainable procurement.

At NIBS, we believe sustainability is about delivering performance, not promises. From critical infrastructure to everyday public buildings, performance means systems that last, adapt, and protect. SFTool supports those outcomes by empowering stakeholders to plan, design, and operate with confidence.

We're excited to share that the new SFTool is coming soon. Join us in shaping a stronger built environment, one decision at a time.

Congressional Briefing Stresses Urgent Need for Resilient Infrastructure Investment

The National Institute of Building Sciences (NIBS) convened a Congressional Briefing on June 26th in partnership with The High-Performance Building Coalition, spotlighting the nation's critical need to invest in resilient infrastructure.

The event, titled Retrofitting for Resilience, unveiled the NIBS Consultative Council's 2025 Moving Forward report, a data-driven blueprint for safeguarding communities against increasingly frequent and costly disasters. Among its compelling findings: every dollar spent on resilience can yield up to $13 in savings by preventing losses from future disasters.

Key Briefing Highlights

The expert panel focused on aligning public and private sector strategies to strengthen infrastructure, improve policy coordination, and bolster community safety. Specific topics included:

- Proven strategies for retrofitting buildings and public systems to withstand natural disasters
- Policy solutions that enhance community resilience and economic stability
- A spotlight on bipartisan bill S. 1323, the FIREWALL Act, introduced by Senators **Adam Schiff** (D-CA) and **Tim Sheehy** (R-MT), which proposes a new federal tax credit to incentivize resilience investments

The panel brought together a diverse mix of national leaders and technical experts, including: **George Guszcza**, President and CEO, National Institute of Building Sciences, **Tom Smith**, Executive Director, American Society of Civil Engineers, **Lisa Washington**, Executive Director, Design Build Institute of America, **Aaron Davis**, Deputy Executive Director, BuildStrong America, **Aaron Levy**, Vice President, International Code Council, and **Christina Beros**, Legislative Aide to Senator Adam Schiff Responding to a Growing Crisis With 27 billion-dollar disasters recorded in 2024 alone, panelists emphasized the economic and human cost of inaction. The event highlighted how proactive, forward looking policies—like the FIREWALL Act—offer a strategic path toward safer, stronger, and more cost-effective communities. "Investments in resilience are not just common sense—they're smart economics," said **George Guszcza,** NIBS President and CEO.

Moving Forward Report - Retrofitting Resilience

The National Institute of Building Sciences (NIBS) Consultative Council's 2025 Moving Forward Report spotlights the escalating financial and human toll of extreme weather events such as hurricanes, wildfires, and severe storms that have devastated communities across the United States. Since 1980, these disasters have inflicted nearly $3 trillion in cumulative damage, with 27 separate billion-dollar disasters occurring in 2024 alone. The report issues a clarion call for urgent, coordinated action through public-private partnerships, investments in resilient infrastructure, modernized building codes, targeted tax incentives, and expanded education and training programs. These measures are critical to safeguarding lives, property, and local economies against the intensifying effects of climate-driven natural disasters.

"Everyone benefits from mitigation or outright prevention of damage from a wildfire, earthquake, or storm. Insurance companies face fewer claims, government agencies avoid massive emergency aid payouts, property owners benefit from less damage, and families across the nation are safer," said **George Guszcza**, President and CEO of NIBS. "To protect communities from worsening natural disasters, we must take the all-of-the-above approach recommended by this report to support the retrofitting of buildings and infrastructure to enhance resilience."

This year's report from the NIBS Consultative Council, "Retrofitting for Resilience," outlines the urgent need for proactive investment in disaster mitigation strategies. The report highlights that every $1 spent on resilience can yield up to $13 in savings from avoided losses, according to the 2019 NIBS Mitigation Saves Study. The report urges policymakers, industry leaders, and communities to take immediate action to support the retrofitting of buildings and infrastructure for enhanced resilience in the face of increasingly frequent and severe natural disasters.

Key Recommendations Include:

- **Shared Costs**: Encourage public-private partnerships to distribute the cost of retrofitting among all beneficiaries, including insurers, lenders, and government agencies.
- **Invest in Innovation and Technology:** Invest in R&D for advanced building materials and construction methods through agencies like the Department of Energy and NIST.
- **Tax Incentives, Grants, Private Sector Incentives, and Tax-advantaged Savings Accounts:** Implement federal, state, and local tax credits, deductions, and direct grants to support property owners in making resilience upgrades.
- **Certifications and Education:** Expand training programs for contractors and implement public awareness campaigns to promote resilient construction practices.
- **Updated Building Codes:** Advocate for adopting modern, resilience-focused building codes to reduce long-term disaster recovery costs.

Download the Report Here

NIBS and Dodge releasing new Smart Market Report on Owners use of Datan and Technology

The Data-Centric Owner SmartMarket Report: How Owners Are Driving Digital Transformation in Design and Construction, published by Dodge Construction Network in partnership with the National Institute of Building Sciences (NIBS), and funded by Autodesk, Esri and Trimble, surveyed nearly 200 U.S. owners managing $5M or more in annual construction projects.

The findings show a clear correlation: the more data-focused the organization, the more value they extract from technologies. To fully leverage the potential of digital tools, owners must implement consistent data practices –such as using industry standards for data, formalizing policies, training staff, and many other deliberate strategies. The study explored seven categories of these approaches and found that **over 70%** of owners engage in at least one strategic approach in all seven categories. While this result shows widespread adoption, the study also finds that there is a lot of room for continued growth in use of data and adoption of technology. The top approach **(70%)** involves creating internal processes and requirements for the production and use of project delivery and asset data, demonstrating a strong intent by Owners to use data across the asset lifecycle.

"As owners increasingly push for digital transformation in their organizations, their need for structured, high-quality data is impacting project expectations," said Roger Grant, NIBS VP of Building Technology. "Using open industry standards, such as the National BIM Standard U.S. V4, can improve outcomes by leveraging shared best practices."

The study also found that digital technologies are widely used across construction projects, **over 60%** of owners report the use of BIM, GIS, CAD, and project and asset management software. Adoption of emerging tech is growing as well with **28%** of owners already using artificial intelligence (AI), with nearly half as many expecting to use it in the next two years. Digital twins—real-time, data-rich models of physical assets that depend on high-quality reliable data streams are also being used by Owners.

It is noted that both existing and emerging technologies benefit from the stronger data practices coming into use. Supporting this, the study found that the benefits of these technologies are significantly amplified for organizations with strong data foundations with **over 80%** of highly data-centric owners experiencing project and process benefits for planning, operations and asset management that are greater than those not following a data centric approach.

While the study focuses on Owners and shows what they can do and benefit from, it also points to an opportunity for designers, contractors, and technology providers to invest in data capabilities to be better positioned to collaborate, support the data-centric owner.

Look for the full Report being released on July 10th to learn more and benefit from the Findings and Recommendations and join us through our Digital Technology Council to work together to improve practice in the AECO industry in the United States.

ELEVATE 2025

Elevate 2025 - Elevating the Built Environment Workforce Shortage Threatening our Nation

Elevate 2025 will be held in September 4th at the National Building Museum. The event will discuss the built environment workforce shortage and its impact on national security.

The United States faces a growing crisis: a shortage of skilled workers in construction and infrastructure. Nearly half a million new workers are needed in 2025 alone, according to the Associated Builders and Contractors. A 2024 survey by AGC and Autodesk revealed that 91% of firms struggle to fill open roles, causing delays, rising costs, and jeopardizing critical infrastructure investments. With one in four workers over age 55, the challenge is intensifying as experienced laborers retire.

Elevate 2025 is a high-impact national summit designed to address this urgent issue through collaboration, policy solutions, and innovation.

Core Objectives

- Build a Unified Coalition: Industry leaders, unions, educators, and policymakers will rally around shared solutions like reauthorizing the Workforce Innovation and Opportunity Act (WIOA) to expand access and participation in the trades.
- Share Scalable Solutions: Proven programs from apprenticeships to public-private partnerships will be spotlighted to guide workforce growth nationwide.

Featured Sessions

- Policy Innovation: Legislators explore strategies for expanding technical education, inclusive apprenticeships, and workforce funding at all government levels.
- Labor Market Insights: Experts provide data-driven analysis on workforce trends, retirement patterns, and changing workplace expectations.
- Industry Leadership: Executives share case studies on how they are recruiting and retaining talent through mentorships, compensation strategies, and cultural transformation.

The opening fireside chat, moderated by Punchbowl News **Anna Palmer** with **Lori Chavez-DeRemer**, Secretary of Labor, will kick-off the day discussing the critical workforce shortage in the built environment and its impact on national security.

Elevate 2025 isn't just a conference it's a call to action. Register HERE

BUILDING INNOVATION
Conference

Building Innovation 2025 Spotlights Resilience, Recognition, and the Future of the Built Environment

The National Institute of Building Sciences (NIBS) brought together innovators, thought leaders, and changemakers for the Building Innovation 2025 Conference, held May 19–21 at The Ritz-Carlton in Tysons Corner, VA. The three-day event ignited conversations on the future of the built environment, while reinforcing the importance of resilience, collaboration, and actionable innovation.

Strategies for Resilient Communities

This year's powerful theme "Thrive: Strategies for Resilient Communities" wasn't just talk. In his welcome remarks, NIBS President and CEO **George Guszcza** stressed that "resilience must be a shared responsibility between the public and private sectors." He introduced the newly released 2025 Moving Forward Report, a timely roadmap advocating smarter retrofitting strategies to reduce risk in the face of growing climate threats.

Keynote That Resonated

Former U.S. Representative **Garret Graves** delivered a keynote that struck a chord with the audience. Drawing from his experience in disaster recovery, he criticized inefficiencies in post-disaster response, asserting that "our own federal government revictimizes victims with the process of recovery." His rallying cry: the system must—and can—do better.

Sessions That Inspired Action

The conference delved into a wide range of pressing topics, with sessions that sparked innovation and dialogue:

- Waterfront Resilience: **Tom Klein** (Waterfront Alliance) introduced the WEDG framework, gaining traction in coastal cities like Miami.
- Digital Transformation: From digital twins to integrated infrastructure planning, technology's growing role in shaping the built environment was front and center.
- Future-Proofing Codes: Experts evaluated how evolving codes and standards can better align with climate adaptation and safety.

Beyond the Agenda: Collaboration in Motion

In true Building Innovation fashion, the energy extended beyond the breakout rooms. The exhibit hall pulsed with live demos, industry showcases, and spontaneous idea-sharing. Key organizations—including IIBEC and the International Code Council—amplified the event's collaborative spirit.

Honoring Excellence: 2025 Award Recipients

A highlight of the event was the NIBS Built Environment Awards Luncheon, which celebrated individuals and teams making meaningful contributions to the industry:

Award	Recipient(s)
Distinguished Service Award	Dr. Steven McCabe, NIST (Ret.)
Exceptional Woman in Building Award	Leslie Chapman-Henderson, FLASH
Future Leaders Award	Sam Villalobos, SKANSKA & Virginia State University
Innovator Award	FEMA, NIST, ATC & STPI collaboration on post-earthquake recovery strategies
Beyond Green™ Award	Pepper Construction Cincinnati Headquarters Rehabilitation

Additionally, the Betty and Mort Marshall Memorial Scholarship was awarded to:

- **Reeja Shrestha**, Howard University (Architecture)
- **William Corey**, North Carolina A&T State University (Electrical Engineering)

These scholarships promote diversity in the building sciences and support students at HBCUs pursuing careers in architecture and engineering.

For more on the 2025 award winners, visit nibs.org.

Looking Forward

As the momentum carries into Building Innovation 2026, one thing is clear: this isn't just another industry event. It's where the future of cities, infrastructure, and communities is being envisioned—and built. As one attendee noted, "This is where the future of the built environment is being written."

Let's keep building—smarter, stronger, and more resilient.

Upcoming NIBS and Industry Events

July

16 Part 1: Electronic Leak Detection for Roofing, Waterproofing, and the Building Envelope

17 Part 2: Electronic Leak Detection: Lessons Learned from ELD Testing and Continuous Monitoring

22 Aligning Resilience Goals in the Built Environment: How Risk Management Processes & Standards Incentivize Resilience

31 Coastal Resilience Planning and Adaptation for Waterfront Facilities

August

5 Harnessing the Power of Cool Exterior Walls to Enhance Heat Resilience Standards

TBD Dodge Report Webinar

September

4 Elevate 2025

18 2025 Vitruvian Honors and Awards Ceremony

24 Smart Home and Furnishing Conference and Expo

25 BEC Regional Symposium

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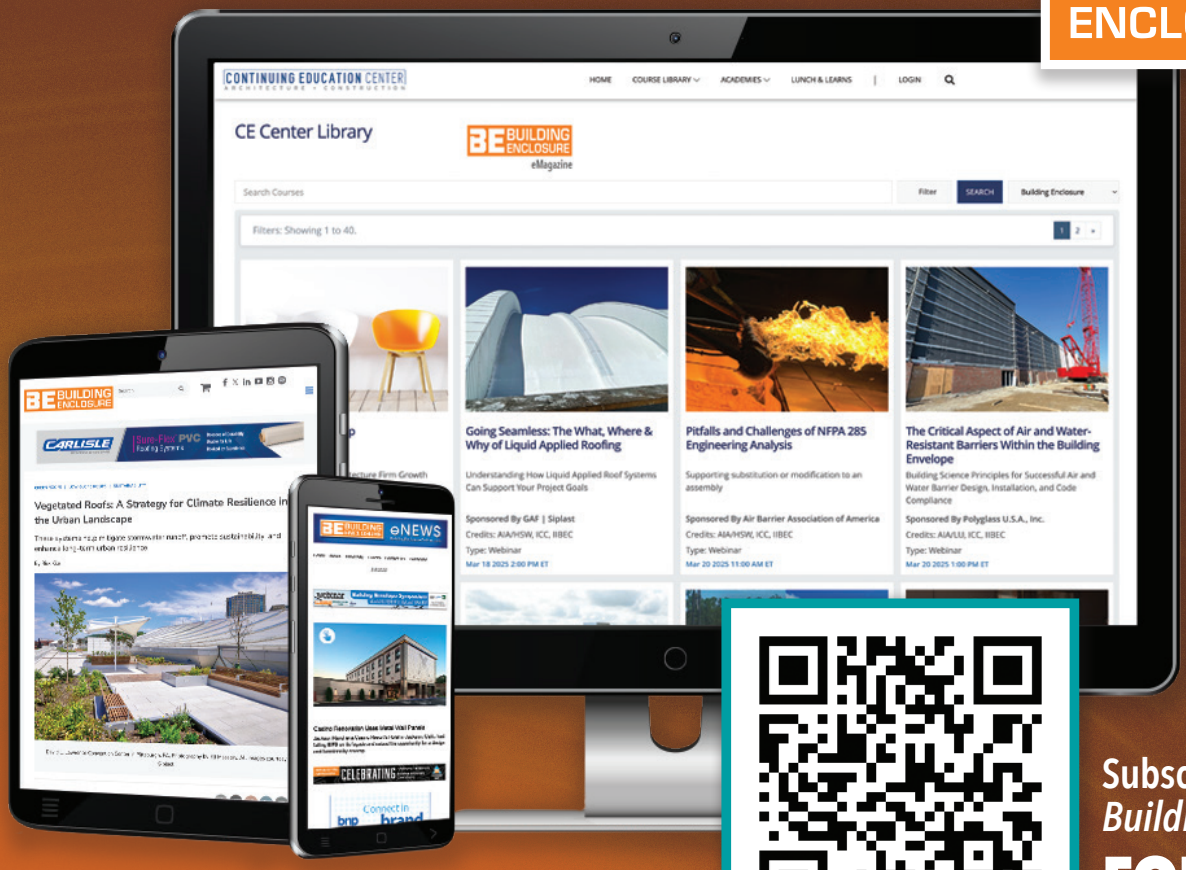

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