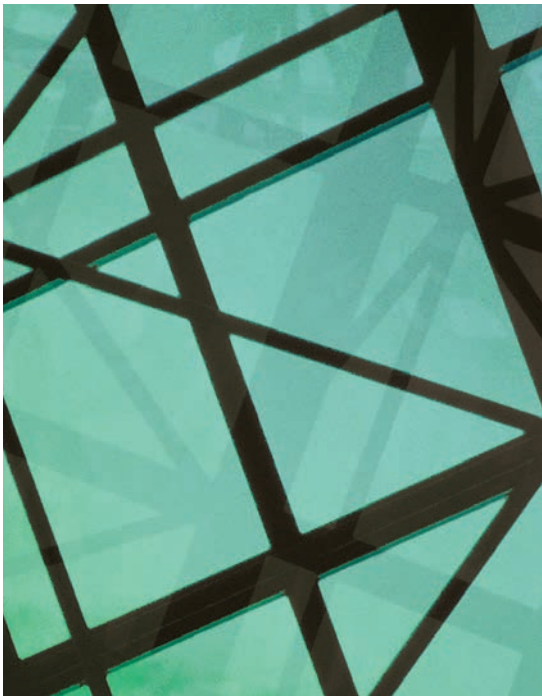




## buildingSMART alliance®



**S**ome industries are known for their streamlined processes. The building industry is not one of them. Waste is high—some reports estimate it as much as 57% in the United States alone. Couple that fact with the knowledge that buildings and infrastructure use more than three quarters of the world's raw materials and 60% of its energy consumption, and it becomes clear that building smarter will have a tremendous economic and financial impact, both in the United States and around the world.

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## buildingSMART alliance®

Technology plays a key role in reducing wasted time and materials. The extremely fragmented building industry is undergoing profound changes. The National Institute of Building Sciences established the buildingSMART alliance® (the Alliance) in 2007 to coordinate those changes and help streamline the way buildings are designed and operated. For streamlining to work effectively, information has to be shared in an open, interoperable format that is consistent across the industry. Through information sharing and technology, the Alliance is tackling the complete building life-cycle process, from planning and construction to operation, occupancy and disposal. The potential rewards are huge—cost savings, improved performance (for both buildings and occupants), energy conservation, sustainability and security.

The Alliance builds on two preceding Institute programs—the North American Chapter of the International Alliance for Interoperability (IAI/NA) and the Facilities Information Council (FIC). The IAI/NA developed the *Industry Foundation Classes* (IFC) international standard, now in its fourth version—the data files that establish the relationships used to describe architectural objects electronically. While the FIC initiated the development of two United States standards, the *United States National CAD Standard®* (NCS), now in its sixth version, covering two-dimensional, computer-aided design (CAD), and the *National BIM Standard-United States®* (NBIMS-US™), now in its third version, addressing three-dimensional digital technology. IAI/NA and FIC were sunset in 2008 in a coordination and consolidation move by the Institute. The Alliance, which now oversees the IFC, NCS and NBIMS-US programs for the United States, recently released NCS Version 6 and is about to release NBIMS-US Version 4, the first consensus edition of the standard.

The Alliance is a public/private initiative that promotes the use of building information models (BIMs), the digital tools that are increasingly helping building industry stakeholders to share highly accurate information throughout a facility or project's life cycle. Effective use of BIMs has the potential to eliminate enormous waste in the industry resulting from the recollection and recreation of project information and data. The Alliance has a goal of helping the building sector eliminate 31 percent of current waste, or almost \$400 million, by 2020.

The Alliance has four strategic goals:

- Create a strong industry presence and recognition for the buildingSMART alliance® vision and mission and the programs to support and achieve them.
- Connect major participants of the building industry in a stakeholder activity model that promotes improved information exchange processes.
- Implement and support coordination of candidate open standards and guidance to ensure information flows throughout the lifecycle of the building to all stakeholders.
- Develop a consensus infrastructure to advance open industry standards for interoperability and collaboration between practitioners.

Participation with industry partners is key to the Alliance achieving its goals. The Alliance has worked with the Construction Specifications Institute (CSI) to develop a reliable shared data dictionary for the building industry; with the Associated General Contractors (AGC) on the development of AGCxml to code AGC's suite of standard paper forms; and with the Open Geospatial Consortium (OGC) to look at IFC interfaces for cost engineering, energy and project management. The Alliance also participated in a project sponsored by the Charles Pankow Foundation and the Precast/Prestressed Concrete Industry to determine business processes associated with precast concrete.

Last year, in coordination with its development of the NBIMS-US™, the Alliance incorporated six information exchange standards, including the highly recognized and internationally implemented Construction Operations Building information exchange (COBie), 11 reference standards, 4 standard practice documents and a new terminology section in the 2015, NBIMS-US™ V6. The approved consensus documents, many of which standards unto themselves doubled the content of the standard.

Sharing information is a primary mission of the Alliance. The Institute publishes the *Journal of the National Institute of Building Sciences* (JNIBS) with two editions focused on BIM to a circulation of 7,000 readers. In addition, the Alliance website is a place where organizations can come to see what BIM initiatives are underway.

Representatives from a wide range of industry stakeholders join the Institute as an Alliance sponsor. Seeking to be as inclusive as possible, the Alliance welcomes any person or entity, public or private, engaged directly or indirectly in activities that support its purpose. ■

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