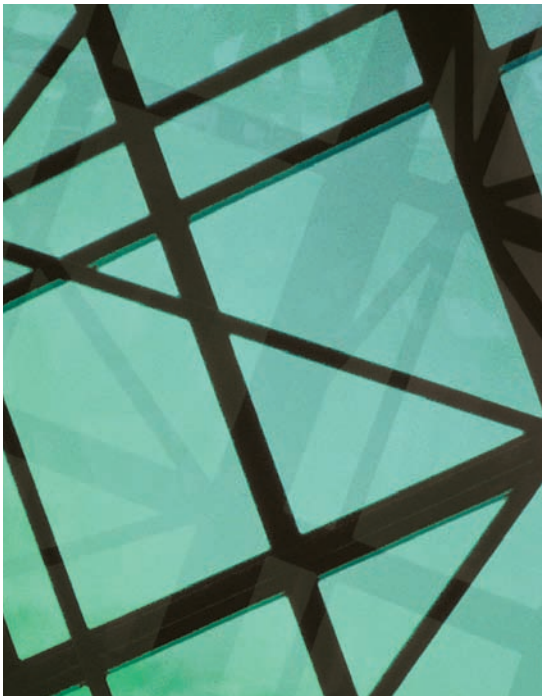




## buildingSMART alliance™



Some 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. Building smarter will become more of a national security issue as raw materials become scarcer.

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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 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. When different software programs cannot interface, people are forced to recreate or resubmit the same project information multiple times. This duplicated data entry wastes time and increases the potential for error on an enormous scale. 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 environmental protection of the earth's ecosystem.

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). IAI/NA began developing a standard, *Industry Foundation Classes* (IFC), for the data files that establish the relationships used to describe architectural objects electronically. FIC oversaw development of two standards. The first, which covers two-dimensional, computer-aided design (CAD), is called the *United States National CAD Standard*® (NCS). The other, the *National Building Information Model Standard*™ (NBIMS), addresses three-dimensional digital technology. Both IAI/NA and FIC were sunset in 2008 in a coordination and consolidation move by the

Institute. The Alliance now oversees the IFC, NCS and NBIMS programs.

The Alliance is the North American arm of buildingSMART International, formerly known as the International Alliance for Interoperability (IAI). The Alliance supports the ongoing technical work of the international arm, including subcommittees on IFC, *Information Delivery Manuals* (IDM), the International Framework Dictionary (IFD) and *Model View Definition* (MVD).

Participation with industry partners also is key to the Alliance achieving its goals. For example, in 2008, the Alliance worked with the IFD Library Partners, headed by the Construction Specifications Institute (CSI) coalition formed to develop a reliable shared data dictionary for the building industry. The Alliance cooperated with the Associated General Contractors (AGC), AGCxml, to code AGC's suite of standard paper forms. A new project, the architects, engineers, contractors, operators and owners (AECOO) test was planned using an approach defined by the Open Geospatial Consortium to look at IFC interfaces to cost engineering, energy and project management. The Alliance was also involved with a project to determine business processes associated with precast concrete.

Sharing information is a key mission of the Alliance. The organization publishes the *Journal of Building Information Modeling* (JBIM) biannually to a circulation of 7,000 readers.

Representatives from a wide range of industry stakeholders join the Alliance. The organization seeks to be as inclusive as possible, welcoming any person or entity, public or private, engaged directly or indirectly in activities that support its purpose. ■

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