



National Institute of
BUILDING SCIENCES
Facilities Information Council
National BIM Standard

Charter for the
National Building Information Model (BIM) Standard
December 15, 2005

Vision: An improved planning, design, construction, operation, and maintenance process by using a standardized machine-readable information model for each facility, new or old, which contains all appropriate information created or gathered about that facility in a format useable throughout its life-cycle by all.

Mission: Improve the performance of facilities over their full life-cycle by fostering a common, standard and integrated life-cycle information model for the A/E/C & FM industry. This information model will allow for the free flow of graphic and non-graphic information among all parties to the process of creating and sustaining the built environment, and will work to coordinate U.S. efforts with related activities taking place internationally.

Standard: It is our intent that a comprehensive standard be developed now and matured over time. The initial standard shall be implemented as soon as possible, to define the scope of BIM and provide guidance to those currently establishing BIMs, in order to maximize the collection of information likely to be useful throughout the life of the facility. Having information collected in a standard format will allow parties to the process to migrate and access data collected throughout this life cycle. The Standard shall use the NIBS consensus process as maintained and overseen by the NIBS Consultative Council as assigned by the NIBS Board of Directors. The Standard shall consist of, at minimum, the following:

BIM Scope – This section of the Standard will identify the phases, participants, facilities, elements, and other significant objects in the built environment, and their business roles in the building information model. It will also identify development parties involved and their contributing organizations roles and responsibilities.

Coverage of Version – This section of the Standard will identify the portion of the scope being addressed by the current version being developed. It is understood that the BIM is significant in scope and that portions having potentially larger return on investment will be addressed first. This section will include a version plan identifying when various portions the BIM will be addressed in the Standard.

Reference Standards – The National BIM Standard is not a stand-alone document and will rely as much as possible on other national and international efforts both complete and in process to ensure interoperability and operation. This section of the Standard will list standards that are applicable to various sections of the BIM Scope. The creation of specific additional standards may be required to forge links that heretofore do not exist. The National BIM Standard will develop standard interfaces required for the free flow of information throughout the model, when such interfaces are not available or their creation is not planned by other parties.

Business Processes – Interfaces between various sections of the National BIM Standard and business processes will be at the core of the Standard. There are commonly-recognized relationships that have not yet been formally identified or documented in any standard. Standardizing these relationships will help to identify the information that needs to flow through the model and be made available to other parties as identified in the BIM Scope. Formalizing these information flows will help identify authoritative sources for information and help ensure that correct data is collected and need only be entered once into the model for all eventual re-use and modification.

Business Rules – Business rules define why certain processes occur and why certain relationships exist. This section of the model will identify those rules that are currently in place that make the information flow as it does today. Recommendations for business rule changes to improve the flow of information will be presented in this section. These may include changes to intellectual property rights and significant transformational changes to business processes currently in practice in the United States and elsewhere.

Data Structures and Models – Data structures and models are at the heart of the Standard. The relationships established by these models will drive implementation models and process models. It is recognized that through the fragmented growth of our industry that currently similar data entities and attributes are not identified in exactly the same manner by all parties participating in the building information model. The standard will serve to provide a common structure which will allow for the flow of information and assurance of data integrity by information receivers.

Implementation Guidance – This section of the Standard will provide support to owners, users and associated parties who have chosen to implement BIM. It will provide guidelines, educational sources and checklists for implementation; these are likely to include commercially available sources.

Maturity Model – The maturity model will help define the types of information and amount of detail that may be collected to achieve a certain levels of maturity. Maturity level may be selected based on how critical the facility is to the organization and the funds available for implementation. Level of support

provided by vendors whose products sustain BIM may also be identified by maturity level, further helping users to develop pricing structures and estimate the costs of implementing BIM.

Funding: Funding requirements shall be determined by the National BIM Standard Executive Committee. Funding for the National BIM Standard will come from member organizations and others, and shall be solicited and managed by the NIBS staff, and in conjunction with NIBS partners.

Organization: The National BIM Standard Committee shall be under the organizational structure of the National Institute for Building Sciences (NIBS), managed by the Facility Information Council (FIC). The National BIM Standard committee shall have a Chair, Vice-Chair, Secretary and Treasurer elected by the National BIM Standard committee-at-large on an annual basis. An annual meeting shall be held of all the members of the committee. Other meetings of the committee shall be held on an as-needed basis and called by the chair or vice-chair. There shall be an executive committee made up of the chair, vice-chair, NIBS staff member supporting the committee, and representatives of the committee-at-large. The executive committee is established by the chair and its purpose shall be the administration of the business affairs of the National BIM Standard Committee. Task groups may be established for specific purposes and durations as determined by the Executive Committee.

Agreement and Acceptance: The undersigned organizations agree to participate in the development team to produce the United States National Building Information Model Standard as a full partner in this development. All undersigned further agree that the work they produce shall be shared freely with the other members of the team. Wherever possible consensus industry and international standards development efforts, especially International Standards Organization (ISO) efforts will be recognized and incorporated into this standard so that the standard is usable by multinational organizations.

All team members believe and agree that the development of this standard will help improve the competitiveness of the construction industry and the efficiency and effectiveness of government agencies of the United States as well as similar international efforts, by helping to ensure that information gathered throughout the life-cycle of a constructed facility is collected in a standardized manner such that it will be useful to all interested parties for all purposes throughout the life-cycle of any constructed facility.

Work accomplished toward the Standard outside of the Standard but included or referenced by the Standard shall remain the property of the individual participant or organization. Acknowledgement of their contribution shall be provided as noted below. It is our intent to distribute freely the resulting standards and other work of the NBIMS committees for use in defining and implementing the National BIM Standard.

All work included in the Standard not otherwise identified shall be copyrighted in the form of the collected National Building Information Model Standard by the National Institute of Building Sciences, not for its gain but for protection of the development

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Credit shall be given to all participating team members in an acknowledgement statement provided with each publication, written, oral or electronic:

The National Building Information Model Standard is the product of a team effort made possible by the following participating member organizations and companies: (Organizations listed below). The Standard was prepared under the coordination of the National Institute of Building Sciences for the good of the construction and related industries as a whole.

This Charter is accepted and supported by the following organizations:

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