Technology Solution using openBIM

An applied technology solution developed on the back of buildingSMART schema.

Entry Details

Satisfying the following core requirements is necessary to advance to the judging round. Entries that do not meet these minimum core requirements will not be considered in the judging round.

1. Entries must demonstrate with evidence the deployment of one or more buildingSMART tools or standards.
2. Entries must be delivered in International English; the jury will not be able to assess content written in a language other than International English.
3. One submission = one project.
4. One project can submit for multiple awards if they meet the criteria. When submitting a project for multiple awards, it is expected that each submission be tailored to each category scope.
5. There is no limit to the number of submissions a proponent can submit.
6. Past submissions that did not win an award in previous seasons are able to resubmit to any new season. Past award winners are not eligible for resubmission in the same category but may submit to other categories.
7. It is a requirement for applicants to submit IFC model files and/or any other technical file formats as evidence of the claims of the submission.

Please note: - The Submission Title will be used to refer to your submission throughout the process. For examples of previous project titles, please visit the buildingSMART.org website: [https://www.buildingsmart.org/awards/bsi-awards-2022/]

Submission Title
Dear Submitter,

We want to ensure your submission efforts are focused and the mission is clear.

Need help?
Contact your chapter representative for help with understanding the submission requirements or language translation support.
Alternatively, you can contact the Awards Program Manager at awards@buildingsmart.org.
If you are having technical issues with the platform, you can contact websupport@buildingsmart.org.

Good luck!

By checking this box I understand and acknowledge that this awards program is to assess information about openBIM, and that openBIM is not only about the use of solutions. openBIM is about setting up an environment where every party in a team can work in the optimal way ("how they prefer") without putting limitations on others. It is about freedom to take control over your data and workflows, while keeping that freedom for others as well. Full use of open standards is not mandatory for this mission.

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**Entry Overview**

Use this section to provide a high-level overview of the scope of work.

*Keep in Mind:* openBIM is not only about the use of solutions. openBIM is about setting up an environment where every party in a team can work in the optimal way ("how they prefer") without putting limitations on others. It is about freedom to take control over your data and workflows, while keeping that freedom for others as well. Full use of open standards is not mandatory for this mission.

*Note:* Use the Attachments section to upload attachments, such as images, screenshots, documents, and videos.

**Website (optional)**

If the entry has a website or webpage, you can link to it here.

**Location**

100 words

Address Country This should be where the project is located OR the company or institution and faculty where the research was conducted or technology solution was developed.

**Submitting Party and Stakeholder Logos (compiled into one .ppt/pptx file for upload)**

Provide all stakeholder logos. Include any additional logos relevant to the entry. Identify all contributors to the project/research/product. You are encouraged to credit all members that contributed to this submission. Ensure to spell names correctly and get titles correct. You may also use this space to credit any contributing organizations. Email addresses or contact information is not required.

**Entry Description**

1000 words

TIP: You can write in Word and copy/paste to this field when ready. Describe the entry to the jury. Introduce the context, scope and objectives. What was achieved? How was openBIM relevant? Are there any innovative advancements? What makes this entry competitive within this awards competition? Where relevant, include construction or facility type, size and scope of project, budget/cost or investment value, link to any larger programs of work or development efforts, etc.
openBIM Technology

Provide a full overview of the technology solution on this tab. It's important to understand what it is, what it does, how this compares to other tools on the market, how openBIM fits into it, and how it was identified as a market need prior to development.

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*Note:* Use the Attachments Section to upload additional materials that support the submission, such as images, screenshots, documents, and videos.

**Technology Solution Description**

Provide a detailed description of what the technology solution is and does. The jury wants to understand what your solution is about. Is it a new tool, or is it a new way of using an open standard? What is innovative about it?

**What underlying technology are you using for your solution?**

Describe the backbone architecture. The jury wants to see an overview of how your solution works. How does the data flow? What (software) components does is use in the background? How are components connected to each other? What does the end-user see and what is actually going on in the background?
openBIM methods used
- IFC 2x3
- IFC 4
- ifcXML
- ifcOWL
- bSDD
- BCF
- IDM
- IDS
- mvdXML
- COBie

Choose all that apply.

Were there other open data standards used other than those listed above? (optional)

Was interoperability achieved in an open format by a standard or schema not identified in the openBIM list above? Ex: OmniClass, UniClass, MasterFormat, UniFormat, CoClass, SFB, ETIM, etc. Was this instrumental in the successful use of openBIM?

Similar or Comparable Solutions on the market today

What solutions on the market are similar or comparable to yours? Explain to the jury why your tool is different from tools that seem to be doing the same? For example: your code compliance check is a completely new approach to black box versus white box testing, but you have to explain that to the jury that has a 'code compliance check' first impression. How is your technical solution different than others? Feel free to be technical, but try to explain generally instead of the details.

What added value does your solution give?

What problem are you solving? And why was that not possible before? What is the added value of your solution for end-users, but also for the long term of openBIM use? How is this going to change the industry when it is used on big scale?

Results In Practice

Elaborate on the practical use and added value (in practice; daily projects) of your solution. Give some examples of your system in practice. Testimonials from users, or results from pilot testing. Anything to show that your promise is being delivered.

Example Use

Attach one or more example uses of your solution in a real-world project.

What is the accessibility of your solution?

Accessibility is about the speed of scaling up. When your solution is easily accessible to the market it can spread fast. Depending on your solution, it might be better to publish it as an online proprietary service, distribute it as open source, or offer it as an integrated approach with commercial paid services. Explain your situation and why you chose what you did.
What are next steps and future developments of your solution?

Provide a response that is suitable to a public audience. Next steps and future developments help the jury to see the bigger picture and your vision.

What is potentially possible in the future? (optional)

Potential future applications help the jury to understand your solution better, and understand the impact of your innovation. Ex: Use cases, additional functionality, additional applications, etc.

Make the case for why your solution should win.

What is it about this solution that stands heads and shoulders above everyone else? Your solution will not win because it is better than another. It will win because it will help the industry. So explain why your solution is the best for helping the industry get better control over their data flows.

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openBIM Evidence

This section should provide evidence to support the claims. Refer to the following site for reference:

bSI Technical Site
bSI Certified Software List

Software Ecosystem Map

What tools and information exchanges were used? How were the tools connected? Provide a visual diagram of all the BIM software and openBIM information exchanges between the various project stakeholders or user groups. Be explicit about openBIM elements. We want to see the openBIM data exchanges, formats and applications, related to the outcomes. What APIs did you use? (Ex: BCF, Documents API, bSDD API, property exchange API, other)

Process Maps

Use this field to upload process map views (as a single file upload) that shows where and how openBIM was used between the various parties exchanging digital information. Include any description text you feel is important to describe the processes demonstrated. Ensure the jury can easily understand and read the content (ex: Does it have a title? Is it well labelled? Is it a logical sequence? etc.).

openBIM Data Metrics Summary

For example: How many revisions, how many objects inside IFC, how many BCF topics/issues, how many IFC aspect files during coordination, etc. This summary should give a general idea of scope and scale of use or impact of openBIM.

Additional openBIM Supporting Evidence (optional)

Use this field to provide additional supporting evidence to better your submission. May include written materials, process maps, visual graphics, photos, screenshots, images, etc. Submit as a single document in .pdf format.
Lessons Learned (optional)

Describe what was learned through this project experience about openBIM and open environments for data exchange. If you were to apply what you learned to your next project, what would that be? You can also include recommendations for what buildingSMART should consider providing to the industry in the form of reference resources, technical standards or tools.

"We were able to identify where we need openBIM to develop further." (optional)

Identify where you could have used more development of openBIM to bring greater benefit to the project.

Upload .ifc file(s) to an online viewer and provide the URL for viewing HERE [copy/paste URL]:

Refer to the Submission Guidelines for more information about free IFC Viewer platform choices. *NOTE: For restrictions around access to viewing these files, send a message to awards@buildingsmart.org.

Share any instructions for accessing the .ifc or other technical files for review. (optional)

Include any log in requirements or access restrictions.

Use the bSI Validation Service to check IFC files against the specification (and bSDD). Create a free account at: http://validate.buildingsmart.org

Send an email to awards@buildingsmart.org to request a free Box folder to upload the same IFC files for use by the Technical Team to run through the bSI Validation Service. These IFC files will not be available to the jury or the public; only the technical team.

Attach results from the bSI Validation Service. (optional)

PDF format The Technical Team will provide this service. However, submitters are encouraged to try it out themselves in parallel. The Validation Service is in Beta version. For technical issues or feedback, email validate@buildingsmart.org.

Sustainability

Completion of this section remains optional, as not all submissions will have sustainability criteria or outcomes as part of the scope of work. Those that do have sustainability elements to demonstrate, have the opportunity here to highlight them in this section. Completion of this section results in the potential to win an award or special mention that commends innovative advancements or excellence in sustainability using openBIM.

What were the sustainable outcomes achieved? (optional)

For example: -Carbon emissions decrease (lower embodied carbon and/or lower energy usage) -Better decisions through applying a wholistic view on sustainability (supported by i.e. lifecycle assessments) -Better working conditions (i.e., increased safety in construction) -Better climate change resilience of the built asset/built environment -Enhanced biodiversity/greening of the built environment -Increased well-being of the built asset's occupants or users (i.e. measured by feedback/testimonies or increased asset value) -Generation and usage of renewable energy -Increase of reuse and lifespan of materials and building elements -Automation of, or better connection to, sustainability assessments or reporting systems -Reduced (potable) water consumption
Business Value

Business value or return-on-investment (ROI) can be defined in quantitative metrics and qualitative measures. Business value can achieve gains economically, environmentally, and socially. Business value can also show a decrease in risk, uncertainty, or waste. However you are able to demonstrate business value or ROI, be sure to identify how openBIM contributed to these desired business outcomes.

Provide stakeholder statements. 500 words

Provide a minimum of one (1) and a maximum of five (5) different stakeholder statements that exemplify the merits or business value of this scope of work. Consider client/owner, senior executive, director, technical or end user stakeholders that could support this requirement. Also consider how to identify business value from using openBIM.
Use Cases

You are invited to submit information regarding "Use Cases" to strengthen your submission and help inform ongoing buildingSMART activities around this important topic. Completion of this tab is optional. Entrants are encouraged to leverage the bSI Use Case Management Tool activity page.

Completion of this section results in the potential to win an award or special mention that commends innovative advancements or excellence in use case activities using openBIM.

- BIM Uses were defined on the project (optional)
- BIM Uses formed an integral part to how the project was delivered (optional)

Documentation on use case(s) as a single file upload (optional)

File formats accepted: .doc, .docx, .pdf, .ppt, .pptx, .xls, .xlsx You may need to consolidate various documentation into one file format. This file may also include live links.

Attachments

Additional material shall be supplied as follows:

1. Ensure the written component of your entry be fully explained within the other tabs; only supporting documentation used as reference should be added here;
2. A minimum of ten (10) images should be uploaded with your entry that best represent the submission;
3. Formats accepted are as follows: .pdf, .ppt/pptx, .jpg/jpeg, .png, .mp3, .mp4;

Describe the business value generated from using openBIM.

For example, but not limited to: • Increased Revenue • Increased Profitability • Decreased Risk • Increased efficiency • Standing out from the competition • Positive Environmental or Social Impact • Improved organizational culture • Improved relationships between stakeholders • Improved employee attitude, skills, and maturity • Faster Time-to-market • Reduced waste • Shortened production processes • Usability, utility, and value of outputs • The satisfaction of users and clients • Return on Investment • Innovation opportunities

Provide an attachment that promotes the achievements in business value using openBIM on this scope of work. (optional)

Complete the bSI survey on Business Value from openBIM.

https://bsicommunications.typeform.com/to/SoEJhpbx

Attach survey results as PDF export.

Results can help contribute to the strength of your submission and judges' overall scoring.
4. Links and externally hosted videos are allowed as attachments.

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