



CIB NEWS ARTICLE

International Council for Research and Innovation
in Building and Construction

Providing a global network for international exchange and cooperation in research and innovation in building and construction, in support of an improved building process and of improved performance of the built environment.

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From the General Secretariat



STAND-INN

Standards for innovation in construction and fm



Fourth Report

by

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Introduction

STAND-INN is a two-year project, funded under the European Innova Programme and is 'underway'. The full title of the project is: Integration of performance-based building standards into business processes using IFC standards and its objectives are to enhance innovation and sustainable development and using tools as the building information model (BIM) for communication and information sharing in projects.

CIB is one of partners in STAND-INN.

This CIB News Article is a summary of the issue 4/07 of the STAND-INN Newsletter. Among others this issue brings together further case studies, continuing the series on sustainable housing and launching a new series in public procurement.

The Sustainable Imperative

Construction has a large carbon footprint. In Europe, 40% of all material and energy consumption is down to the construction industry and 40% of emissions are caused by construction. And the industry itself is inefficient and wasteful in the way that it operates: almost a third of transactions do not add value to the process. The tool to trim off that waste is already there: it is the Building Information Model (BIM),

commonly based on the IFC standard, whereby all participants share project information.

STAND-INN has analysed the benefits of using an IFC-based BIM. A BIM is a repository for digital, 3D information generated by the design process and simulations: it's the design, fabrication information, assembly instructions and project management logistics in one database. The BIM will exist for the life of a building and can be used to manage the client's asset. The benefits include reduced risks, improved productivity, streamlined production, maintenance of design intent and facilitation of quality control. IFC and BIM are gaining ground. STAND-INN research has shown the major areas of use are for life-cycle costing and energy performance declaration. But these uses are at the periphery of decision-making and BIM needs to be used at the heart of that decision making to contribute to sustainability.

Recommendations on Sustainable Housing

Based on its research so far the STAND-INN project concludes that countries and organisations need to:

- Continue efforts to bring about uptake of standards
- Remember the local nature of housing
- Encourage commercial uptake – so far there is no real business model of sustainable housing

- Raise awareness of building performance – owners/users are often unaware of true energy consumption
- Quantify the benefits of sustainable housing, e.g. through life-cycle costing – sustainable solutions often have a short payback period
- Develop tools and methods relevant to operation and maintenance
- Encourage good sustainable practice at the level both of individual dwellings and whole neighbourhoods
- Promote value creation – high-performing housing should be worth more than inefficient housing, so encourage market differentiation of efficient lower-impact housing

Case Study on Sustainable Housing

BedZED – eco-village in a London suburb

The project has been recognised as a model of green design and sustainability in numerous awards. The high density of the development also makes it suitable for inner cities and the model will help to minimise urban sprawl.



Case Studies on Public Procurement

Earlier this year, STAND-INN produced a research report on best practice in public procurement, bringing together examples from across Europe. Many of these projects have used national or international standards, including the global open standard IFC.

The following four case studies are described in detail in the issue 07/4 of the STAND-INN Newsletter.

Project financing at the New Mestre Hospital, near Venice



With the Mestre Hospital, Italy has entered the arena of private financing for public sector healthcare projects, following the UK public-private partnerships (PPP) model. Meticulous work at the front end of a project to develop the

financial model and safeguard the interests of all parties has proven crucial, especially when an innovative approach to funding is being adopted.

Turin Polytechnic: A new validation process in public procurement

Validation proved to be a useful process to improve quality at little extra expense. But the system would be more effective if the Inspection and Control Authority were set up in accordance with the EN ISO/IEC 17020 standard and the process extended to earlier stage of the project



US federal buildings and GSA's 3D-4D-BIM programme



The use of BIM technologies enables time, cost and life-cycle savings (particularly for energy consumption) through efficient design and collaborative working. With its massive portfolio and decisive adoption of BIM, GSA's ambitious approach leaves most of

Europe far behind. With buildings such as the San Francisco Federal Building, there is already evidence of how using a BIM assists energy-efficient design.

Public procurement with BIM in Finland

The decision to require BIMs in government projects puts Finland among a tiny handful of pioneers.

This is the first step of what will become an

all-embracing, integrated use of models for construction and FM in Finnish state projects.



First Conclusions on BIM and Public Procurement

The STAND-INN research on standards in public procurement shows that:

- Standards are not a constraint: the user is in charge and in control
- Standards often take many years to emerge and gain adoption
- Standard-setters need to harness existing knowledge and adapt it to practical realities



- The use of standards is relatively new in public procurement
- Most standards in public procurement are national not international – they are best prescribed at a national level
- Standards would be more effective if linked to the use of the IFC data model or IFC building information model.

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The full issue 4/07 of the STAND-INN Newsletter can be downloaded [here](#).

Other Stand-Inn Reports

- STAND-INN 1 – February in [2/07](#)
- STAND-INN 2 – April in [3/07](#)
- STAND-INN 3 – July in [5/07](#)
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