Issue 5/07

EUROPE INNOVA
Innovation and Standards
STAND-INN

# STAND-INN
Standards for innovation in construction and fm

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## Driving change with open standards

Public procurement is facing the challenges of sustainability and the need to create better-performing buildings. This key strand of STAND-INN activities is looking at current practice and the instruments for change.

There is a growing recognition in the public sector that the life-cycle of its built assets needs to be tackled at the outset. Construction must be sustainable, but many authorities perceive sustainability as costing more and running counter to the requirement for competitive tendering.

Improvements are slow in coming. This is due in part to inertia and resistance to change, in part to the bureaucratic structures that choke innovation. The adoption of standards – notably open standards such as IFC – would allow the industry to deliver efficient, optimised building projects, but take-up is disappointing across most of Europe.

'Standards that drive sustainability are alien to the prevailing culture of the construction industry,' says Juan Pérez, head of R&D for innovation in building processes at the Spanish technology centre LABEIN-Tecnalia. Juan also leads the public procurement work package for STAND-INN. 'Initiatives exist but are seen as troublesome and leading to an increase in costs,' he adds.

Processes in the industry involve a wide range of stakeholders and special interest groups, direct and indirect suppliers, different cultures and multiple technologies. Standards need to cut through this complexity with an integrated, adaptable approach.

Initially, the best candidates for this integrated sustainability-based approach are non-residential buildings. 'They usually have only one owner who is involved in the building project from the initial stages and will be responsible for the maintenance and exploitation of the building,' explains Juan. Public sector involvement is crucial. If governments were to support pilot projects – guidance and documentation are available in draft – they would provide models for others to follow.

There are already strong pockets of innovative improvement in public procurement. In Spain, the Basque government's Ministry of Education has developed a programme for optimising the construction and FM of new buildings. In Germany, new federal buildings must now be designed using guidelines for sustainable building. And the Norwegian construction directorate Statsbygg decided in 1998 to require design teams to deliver life-cycle cost calculations. (Details of all three initiatives appear in our forthcoming special issue.)

*'Governments must commit to an ICT infrastructure that increases sustainability.' – Juan Pérez*

ICT is the key to it all. It makes it possible to adopt sustainability standards without increasing project costs. ICT offers the ability to carry out design, construction and operation – and monitor the results – as well as the back-office activities of tendering and payment. Most important is the adoption of the Building Information Model (BIM), which a small but increasing core of enlightened governments are doing. BIM allows efficient collaborative working, together with other benefits such as automated building performance analysis.

'Governments must commit to an ICT infrastructure that benefits from existing open standards and increases sustainability,' concludes Juan.

### Editorial

In this issue, our lead article on public procurement highlights the problems and the potential, with an emphasis on the crucial role of ICT. On page 2, I give my own perspectives in an interview requested by our newsletter editor. In the new year, we are publishing a 12-page special issue, showcasing some of the innovative projects featured in our research reports – something to look forward to.

Meanwhile a happy new year to you all.

Svein Haagenrud

December 2007

### STAND-INN contacts

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WP4 Juan Pérez (*juan@labein.es*) (public procurement)
WP5 Christopher Groome (*chris.groome@b-r-t.co.uk*) (dissemination)
WP6 Julien Hans (*julien.hans@cstb.fr*) (handbook)
WP7 Jeffrey Wix (details above) (policy recommendations )

### Diary dates 2008

24 June Government/Industry Partnership in Construction and FM: The STAND-INN Route to Sustainability and Value for Money, London, UK
25 June buildingSMART with STAND-INN: Actions to achieve a Sustainable Future in Construction and FM, London, UK
26 June buildingSMART: Unlocking the Potential of Teamwork on the Front Line, London, UK
October STAND-INN Congress, Amsterdam, Netherlands (final arrangements to be notified)

# In conversation with Svein Haagenrud

STAND-INN project leader Svein Haagenrud is a senior scientist and professor with the Norwegian research organisation SINTEF Building and Infrastructure. He has long experience of managing international R&D projects, has chaired several projects under the Eureka umbrella and four EU projects, and participated in international standardisation work within ISO and CEN. Here he talks to newsletter editor Betzy Dinesen.


"Reducing our environmental impact is really about the future of us all." – *Svein Haagenrud*

### What are the overall aims of STAND-INN?

At STAND-INN, we want to show how information modelling – founded on the buildingSMART open standards and standards for sustainable construction – can change the whole building production process and lead to more efficient and environmentally friendly construction.

### We are now over half-way through the STAND-INN project. How do you rate its achievements to date?

The project has produced a series of excellent results and reports through the dedicated efforts of the project partners and the Europe INNOVA team. These will form the basis of the dissemination events and workshops, and for the policy recommendations.

### Why did you decide to get involved with STAND-INN?

I got really excited by the opportunities that the Europe INNOVA project call offered to buildingSMART. So with the call for project applications, I decided to get involved and developed the STAND-INN application during spring 2005.

Construction, at present, is very wasteful – by this I mean both the physical waste that construction causes and the large number of transactions in the supply chain which are themselves wasteful. I realised that the buildingSMART technology and project model are part of the answer to the requirement for a more sustainable construction sector.

The findings of the IPCC (and Al Gore) have overwhelmingly underlined the fact that reducing our environmental impact – and that includes the impact of buildings – is really about the future of us all.

### Your own country, Norway, is among the early adopters of IFC and BIM. How do you see its role among countries that adopt more slowly?

Implementing the buildingSMART principles requires a paradigm shift – and a change in the way we produce things – for one of the most important sectors of society. To achieve a shift like this, all the stakeholders must come on board. And since there is no single global industrial player in construction that could drive the shift by itself, government, as by far the biggest buyer/procurer of construction services in all countries – in Norway, for example, it is responsible for 40% of procurement – will play a decisive role.

Norway's biggest achievement is that it has managed to get representatives of all key stakeholders on board. The Norwegian buildingSMART movement is driven by the major stakeholders, with Statsbygg (the Directorate of Public Construction and Property) and the Defence Estate as the front-runners. In addition to driving the development, I also see Norway's role as offering an organisational model for developing and implementing buildingSMART.

### Can STAND-INN truly make a difference?

Yes, I really think so. It can do so through the synthesis of key knowledge that we have produced, the huge global networks we have access to for disseminating and promoting that knowledge, and the alliance and support provided by EU. This is a powerful combination.

### What will you personally take away from the project?

A feeling of great satisfaction at having established and run a project that has huge strategic importance and paves the way for a knowledge-based, competitive and much more sustainable approach to construction.

***STAND-INN is a two-year project, sponsored by the EU, within Europe INNOVA.***

***The STAND-INN vision proposes sustainable value creation for customers over the life-cycle of buildings, through the use of information models***

## Web links

BuildingSMART International aims to bring about co-ordinated change to improve productivity, efficiency and sustainability in construction and FM through 'building smart': see www.iai-international.org

For activities in Norway, visit: www.buildingsmart.no/

For more on the Intergovernmental Panel on Climate Change, visit: www.ipcc.ch

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