

## WP4 – New Components and Production Methods

By **Konstantinos Kessoudis, Züblin AG**

The objective of I3CON project WP4 is to develop efficient, scalable production methods. These methods should produce new intelligent components for buildings using automated production processes like industrialization and prefabrication.

Automated production processes permit mass customization by keeping the costs for these elements in the range of mass production.

WP4 has chosen various products to highlight this approach from various angles. As achievement of the above aim can be accomplished in various ways.

Common to all approaches by the selected products is the need to complete virtual design and virtual simulation of the product itself but also during the actual production and installation process.

Complete virtual design enables simulation before building and confirms that the product fulfills the demands of the clients (users, stakeholders, regulation, etc.). Also simulation brings the conditions of production and installation to the design phase. This “front loaded design” process ensures the compliance of design with the condition of full industrialised production and installation, services, regulatory bodies and infrastructure.

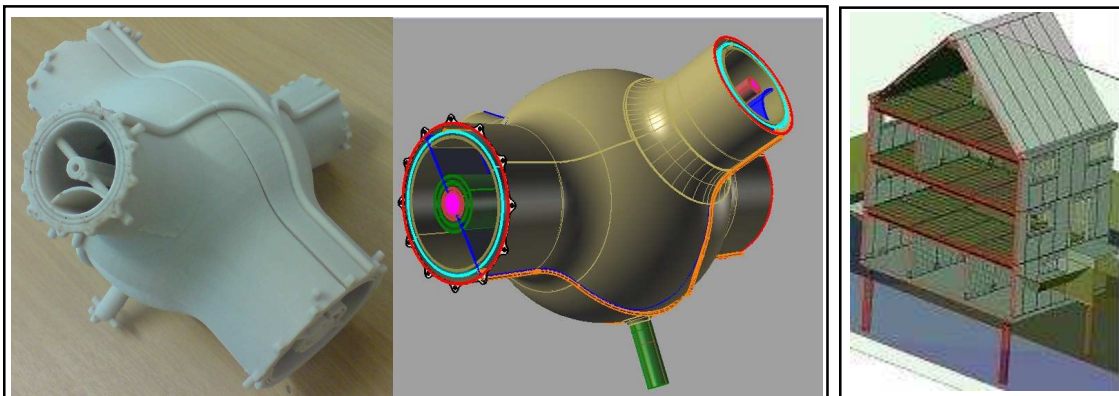
Virtual design and simulation can be used to establish a high, integrated design process on one platform permitting client, designer, fabricator and user to achieve complex, high installed, multi-usage products. The common element of all products developed in WP4 is a multi functionality of its elements.



**Konstantinos Kessoudis**  
**Züblin, Germany**

To guarantee the collision-free development of these complicated units it is essential to develop them strictly to the criteria of the whole process and all the people involved.

In WP4, these developed products will show these new possibilities.

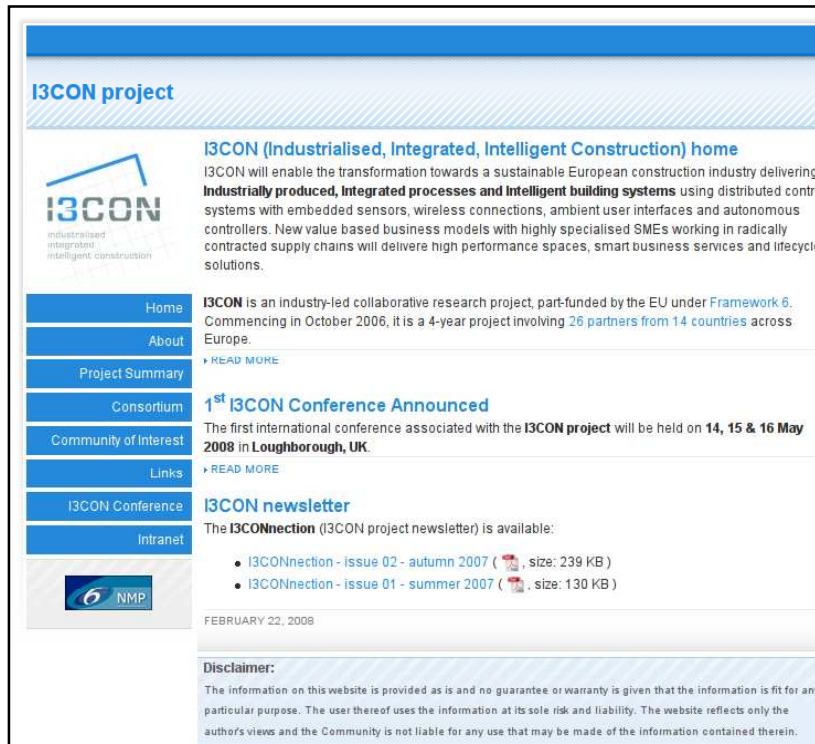


*Züblin AG: Multi functional precast elements (bearing / cooling / heating / installation) being produced in a high industrialised process using “front loaded design” and simulation of behavior of elements to simulate production and erecting.*

*Loughborough University - Freeform Construction Group: Multi-Service Trunking and Integration using printing as a new method of customised mass production.*

## WP10 – Public Website Goes Live

by **Robert Klinc**, *University of Ljubljana*.



**I3CON project**

**I3CON (Industrialised, Integrated, Intelligent Construction) home**  
I3CON will enable the transformation towards a sustainable European construction industry delivering **industrially produced, integrated processes and intelligent building systems** using distributed control systems with embedded sensors, wireless connections, ambient user interfaces and autonomous controllers. New value based business models with highly specialised SMEs working in radically contracted supply chains will deliver high performance spaces, smart business services and lifecycle solutions.

**Home** I3CON is an industry-led collaborative research project, part-funded by the EU under **Framework 6**. Commencing in October 2006, it is a 4-year project involving **26 partners from 14 countries** across Europe.

**About** [▶ READ MORE](#)



**Project Summary**

**Consortium** **1<sup>st</sup> I3CON Conference Announced**  
The first international conference associated with the **I3CON project** will be held on **14, 15 & 16 May 2008** in **Loughborough, UK**.


**Community of Interest** [▶ READ MORE](#)

**Links**

**I3CON Conference** **I3CON newsletter**  
The **I3CONnection** (I3CON project newsletter) is available:

- **I3CONnection - issue 02 - autumn 2007** (  , size: 239 KB )
- **I3CONnection - issue 01 - summer 2007** (  , size: 130 KB )

**Intranet**



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**Robert Klinc**  
*University of Ljubljana, Slovenia*

*The web site is hosted on servers at University of Ljubljana (LJU) and can be found at*  
**<http://www.i3con.org>**

After the successful first project review everything was set to introduce a public section of the I<sup>3</sup>CON web site. The site has been built for a wider audience including academia, industry, customers and consumers, to raise awareness for the vision, mission, developments and results of I<sup>3</sup>CON project. It serves as a primary aspect of the project's communication with external stakeholders.

The web site has been designed to be simple and intuitive. It presents all-important details of the project (summary, details, list of partners) as well as a special area of the page aimed at people who have an interest in the dissemination of possible opportunities arising from the project.

For this reason the I3CON European Community of Interest (CoI) pages has been set up to:

- Provide the web infrastructure to support dissemination and promotion of the project outcomes
- Publicise the outcomes of the project through on-line discussions and conferences
- Liaise with other projects and publish newsletters
- Liaise with key stakeholders in the industry and RTD communities

In addition, the web site will present the details of the conference, organised by the **I3CON** consortium and Loughborough University, supported by BSRIA and the ECTP (European Construction Technology Platform).

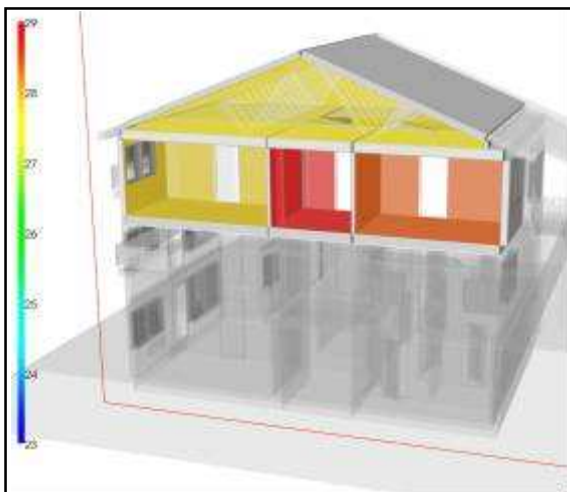
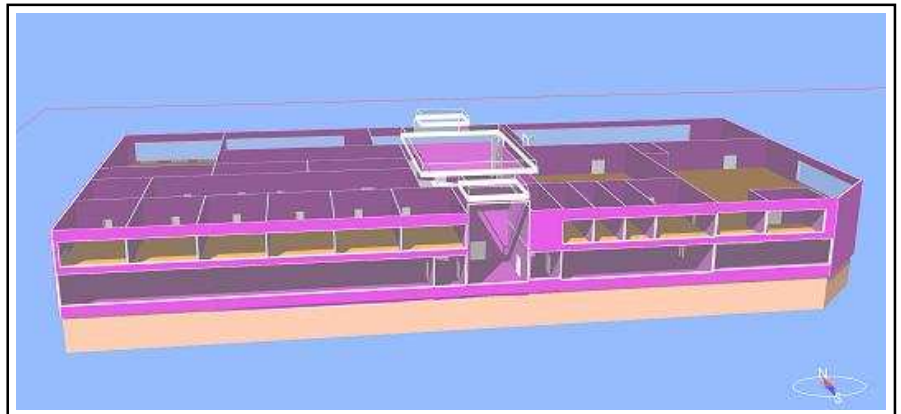
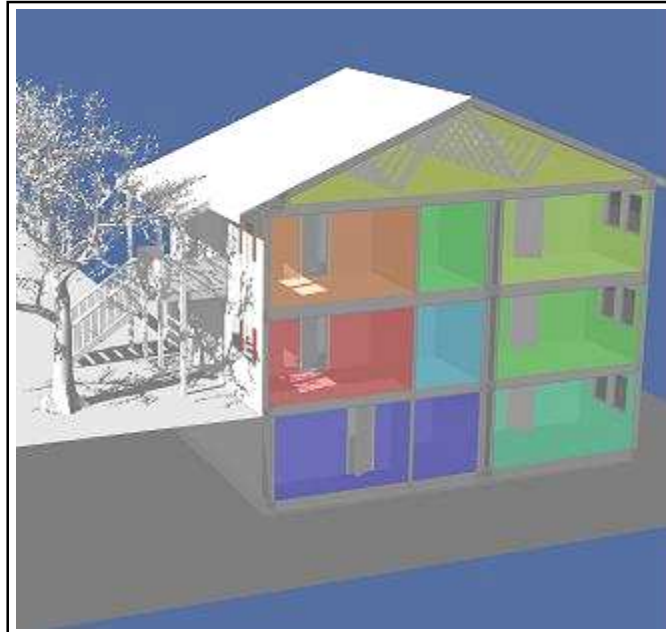
## WP 6.2 Simulation engine and toolset

EQUA Simulation AB are developing simulation support for I3CON within WP 6. The developed simulator is intended to be used both to study expected functionality of proposed new smart components and system solutions as an integral part of the virtual building model of WP6.

The work is based on the existing commercial building simulator IDA Indoor Climate and Energy (IDA ICE) from EQUA. IDA ICE was first released in 1998 and has since grown into one of the internationally leading whole-building simulators. Within I3CON, IDA ICE will be enhanced in a number of ways to form a truly open and flexible platform for virtual building modeling.

Main work to date within I3CON has been devoted to the inclusion of the new modeling language Modelica into IDA ICE, development of a 3D building visualization system and implementation of discrete time components in IDA ICE.

**By Per Sahlin**  
**EQUA Simulation, Sweden**





## WP 10.5 – First International Conference on Industrialised, Integrated, Intelligent Construction : Loughborough, UK 14-16 May 2008

The first international conference related to the I3CON project was held on 14-16 May 2008. This was hosted by Loughborough University, UK.

Papers from around the world will be presented at the conference in May 2008. Countries participating include Australia, Canada, Denmark, Finland, France, Malaysia, Netherlands, Spain and UK.

A full report on the conference, including feedback on the seminar sessions that were held, will be published in the next issue of I3CONnection.

### Programme summary

Wednesday, 14 May	Poster & Exhibition Setup Technical tours Cocktail reception
Thursday, 15 May Morning	Welcome & introduction speech Two keynote speeches Parallel paper presentations
Thursday, 15 May Afternoon	Parallel paper presentations Adaptable Futures workshop/TERMES workshop/ECTP workshop
Thursday, 15 May Evening	Trip to National Space Centre in Leicester Conference gala dinner
Friday, 16 May	Presentations: Funded FP7 projects & funding opportunities on ICT for Energy and NMP programmes Parallel paper presentations



### Conference Chairman

**Dr Tarek Hassan**

Director European Union Research Group

Department of Civil & Building Engineering

Loughborough University, UK

## Forthcoming Events

Date	Title	Format	Location
26-29 June 2008	XII International Conference Air Conditioning and District Heating	Conference	Szklarska Poreba Srednia, Poland
2 October 2008	Smart Homes	Trade fair	Eindhoven, NL
8-9 October	The M&E Show. Total Workplace Management. Energy Solutions Expo. AMPS - Power Expo	Exhibition, Conference, Seminars	Olympia, London
21-22 October 2008	Rapid Manufacturing (RM), Time Compression (TCT)	International Conference	Ricoh Arena, Coventry, UK
Late October 2008	Sustainable Innovation	International Conference	Farnham Castle Conference Centre, Farnham, Surrey, UK
November 2008	Integrated Building Systems GlgaCon	Intelligent buildings, Integrated systems (IT conference)	Warsaw, Poland
17-18 November 2008	WorkTech	Conference	British Library, London, UK
26-28 November 2008	Civils 2008	Industry Exhibition	Earls Court, London, UK

## I3CON Newsletter

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**20th August 2008**

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