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## Editorial...

### Welcome...

to the sixth ManuBuild Newsletter. This time the development activities concerning Value Driven Business Processes and Virtual Construction Site Simulator are presented in detail. Furthermore an exemplary outlook is given on the demonstrators, which are going to be realised on the basis of the achievements of the project. And last not least we would like to draw your attention to the next ManuBuild Conference in 2009.

All newsletters (current and past versions) are also available at the [ManuBuild Web Site](http://www.manubuild.org) ([www.manubuild.org](http://www.manubuild.org)) and at the [Community of Interest](http://www.manubuild.net) ([www.manubuild.net](http://www.manubuild.net)).

## Value Driven Business Processes

The workpackage Value Driven Business Processes strives for overcoming problems that slow down the process flow and that produce important economic losses to all participants, like conflict relationships among stakeholders, lack of communication and complete disintegration among the main phases in the processes. The investigation and developments have been divided into three main lines:

- definition of a new **process** for open building manufacturing,
- identification of **new organisational & service models** to support the process and
- creation of a new **integrated business model** to facilitate the buildings' life cycle

A possible solution to solve the disintegration and fragmentation the construction business

suffers from, could be to enable all stakeholders to cooperate, to communicate, to envisage potential problems and to try to solve them as a group, looking for their own personal benefit as well as for the benefit of the group at the same time.

For this reason, a **Process Game** has been developed and is giving its first enlightening results in games played inside the consortium. This "role" game gathers all stakeholders involved in the business in the same place and time and drives them through the creation of smooth processes, the identification of different problems and the proposition of appropriate solutions as well as the establishment of new ways of cooperation. Everything is monitored in order to define the required and optimised processes depending on previous specifications.

In addition, different organisational models which deal with the responsible stakeholders, the competencies and the relationships between the partners have been studied, identifying new roles, competencies and the contract relationships along the processes, defining a network constellation and the roles of each partner in the network. After a deep analysis of potential organisational models the workpackage team found out, that a virtual project organisation, with a system integrator in the centre and multifunctional teams for the design, planning, manufacturing and construction phases fits the best to the ManuBuild objectives and the target system (e.g. open access for new suppliers, every partner as a part of the same team, facilitating communication and team spirit and IT as an enabler, etc).

This new organisation, supporting a new self-assessing process, along with the services that will be identified constitute the basis for the new **ManuBuild Business Model**, which enters now its high activity phase of research and development (next 12 months).

## Construction Site Simulator

A Virtual Construction Site Simulator is under development by the ManuBuild consortium to train professionals about the "Construction Industry of the Future". The development, led by the University of Salford, involves both

industrial and academic partners. This training simulator will add the "experiential aspect of training and education" delivered by ManuBuild – the first of its kind worldwide.

In addition to simulating the new working conditions, the virtual construction site simulator will innovatively address a series of concerns raised by the construction industry, namely the lack of the experiential aspect of learning within multi-disciplinary working environments.

The main concept is to facilitate learning through experimentation and reflection without the "do-or-die" consequences experienced on real construction sites; hence, bringing changes in thinking and facilitating a "culture change" within the construction industry.

Users of the simulator will have a unique opportunity to interact with dynamic scenarios (reflecting the ManuBuild concepts). All decisions taken by the user will directly affect the direction of the simulator through bespoke interaction and feedback on the implications of decisions taken in respect of e.g. cost, time and resources etc.

This Construction Site Simulator will also be embedded into a new advanced Masters Programme in Construction Manufacturing, run by the University of Salford.

## NCC Demonstrator

The NCC demonstration is a medium-rise apartment building at Oxelbacksvägen 15 in Hallstahammar, 130 kilometres west of Stockholm. It is a 4 storey rental apartments building with 15 flats.



*Apartment Building, Hallstahammar (source: NCC)*

It is the NCC Komplet™ prototype house, into which the tenants moved in May/June 2006. NCC Komplet™ is the NCC building manufacturing system to construct high quality multi-storey apartments in a factory based on the customer's requests. A system that allows NCC to build houses in half the time and to a lower cost compared to ordinary construction methods.



*Interior of Apartment Building (source: NCC)*

This building will demonstrate architectural evaluation through the six design values (creating client value with small resources). As such, it will contribute to social acceptance for building manufacturing architecture through positive peer reviews, including a tenants survey and a critique of the architectural possibilities of this building manufacturing system. The need for tenants is the reason why an existing prototype building was chosen. In this building, we will also test and use partition walls being developed in ManuBuild, and the flexibility they will offer. In addition, we plan to model the building as a building template and in the ManuBuild sales office configurator.

## 20-24 April 2009 – ManuBuild International Conference

After the successful 1st International Conference in Rotterdam this year, ManuBuild is pleased to announce its 2nd International Showcase and 1st Call for Papers.

The conference will take place 20-24 April 2009 in Manchester, United Kingdom.

For further information about the call for papers please see [www.manubuild.net](http://www.manubuild.net) or send an email to [info@manubuild.org](mailto:info@manubuild.org).

## Partners

The ManuBuild Consortium consists of 23 partners from 9 countries in Europe:

Corus Group (UK), [www.corusgroup.com](http://www.corusgroup.com)  
(Coordinator)

VTT Technical Research Centre of Finland (FI),  
[www.vtt.fi](http://www.vtt.fi), (Technical Coordinator)

Dragados S.A. (ES), [www.grupoacs.com](http://www.grupoacs.com)

Empresa Municipal de la Vivienda, SA. (ES),  
[www.emv.es](http://www.emv.es)

FCC Construcción S.A. (ES), [www.fcc.es](http://www.fcc.es)

Fraunhofer Institut für Arbeitswirtschaft und  
Organisation (IAO) (DE),  
[www.rdm.iao.fraunhofer.de](http://www.rdm.iao.fraunhofer.de)

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NCC Construction Sverige AB (SE), [www.ncc.se](http://www.ncc.se)

Taylor Woodrow Construction Ltd. (UK),  
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Universidad Carlos III de Madrid (ES),  
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Consolis Oy Ab (FI), [www.consolis.com](http://www.consolis.com)

Enterprie Software Ltd. (FI),  
[www.enterprie.com](http://www.enterprie.com)

Graphisoft R&D Rt (HU), [www.graphisoft.com](http://www.graphisoft.com)

Building Research Institute (PL), [www.itb.pl](http://www.itb.pl)

IVF Industrial Research and Development Corp.  
(SE), [www.ivf.se](http://www.ivf.se)

Fundación Labein (ES), [www.labein.es](http://www.labein.es)

Nuova Quasco (IT), [www.quasco.it](http://www.quasco.it)

TNO Building and Construction Research (NL),  
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Technische Universität München (DE),  
[www.bri.ar.tum.de](http://www.bri.ar.tum.de)

University of Salford (UK), [www.salford.ac.uk](http://www.salford.ac.uk)

Institut für Arbeitswissenschaft und  
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**European Construction Technology Platform**  
ManuBuild partners also actively participate in  
the ECTP ([www.ectp.org](http://www.ectp.org)) defining the strategic  
research directions for the construction sector.

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