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## Editorial...

### Welcome...

to the seventh ManuBuild Newsletter. This issue is centred on ICT support for open building manufacturing. Exemplary the Intelligent Component Catalogues are described in more detail and subsequently there is also an overview of the overall ICT developments taking place in ManuBuild.

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

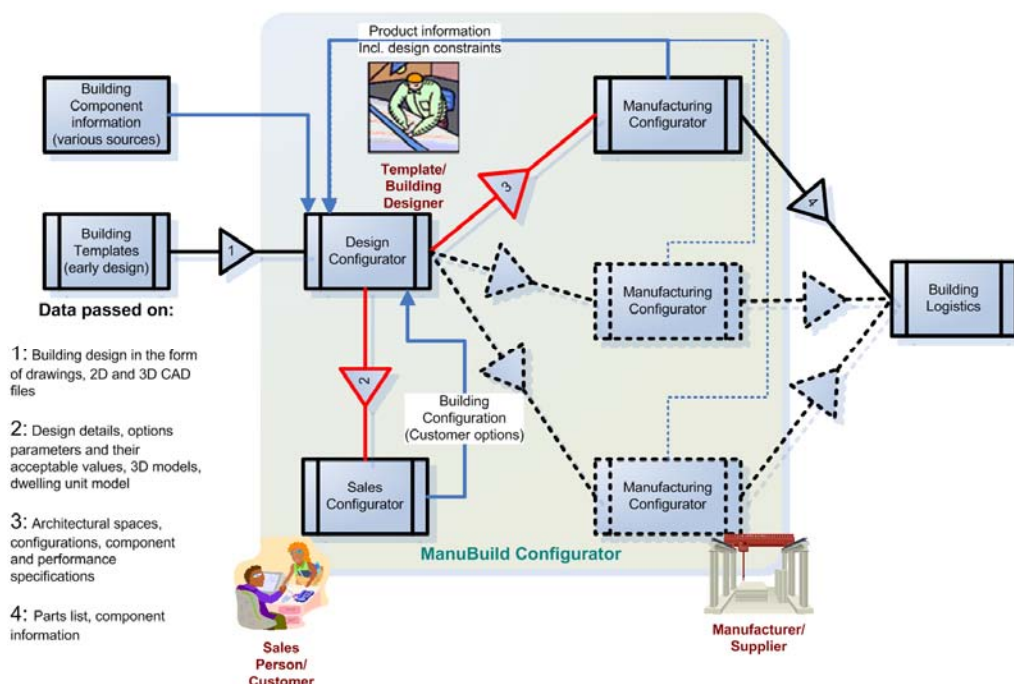
## Intelligent Component Catalogues

The use of intelligent component catalogues, which are being developed by the ManuBuild project, are expected to radically improve the

efficiency in construction not only by providing advantages for manufacturers but also by minimising the time spent by the project teams to detail and customise designs that are fit for manufacture offsite. Information that is available in a catalogue will be adapted to suit the varying needs of the different users: architect, specialised engineer, manufacturer, purchaser, facility manager.

Open specifications for the creation of component catalogues for parametric, intelligent building products have been developed as well as prototype implementations of software tools that will demonstrate how parametric catalogue components can be configured and customised. The term "parametric" refers to the customisability with respect to end-user needs and "intelligent" refers to built-in design/configuration logic and life cycle information. Therefore one catalogue object is able to represent numerous available variations of a product.

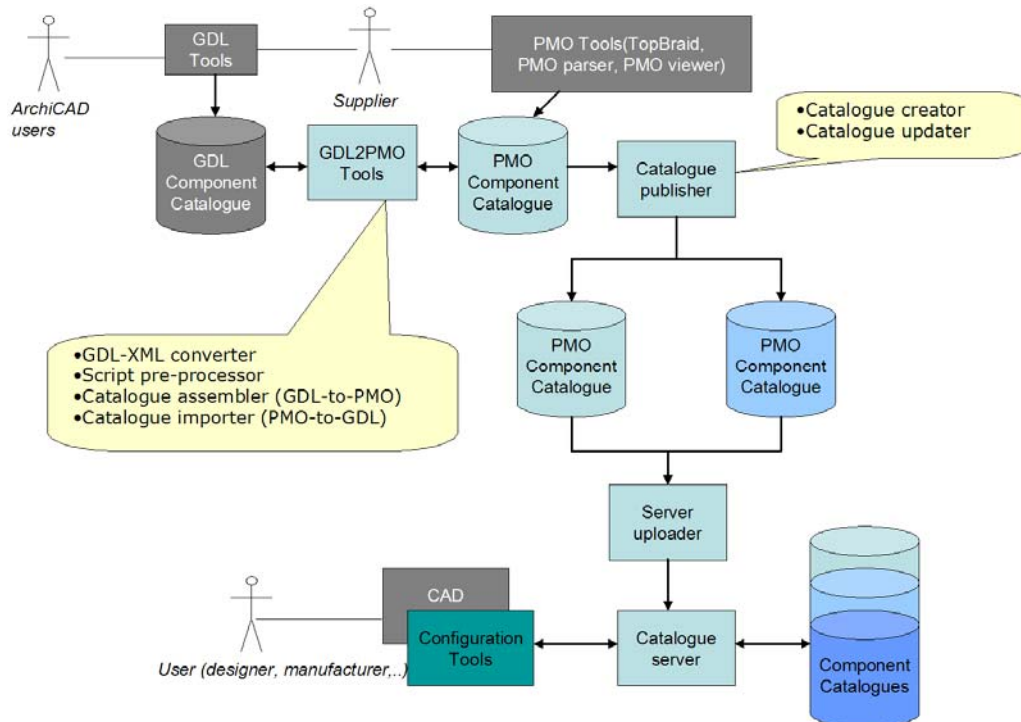
Such "Intelligent Component Catalogues" will provide open access to building products from various manufacturers, to all participants of the building process, in order to allow design instead of drafting and therefore make project management easier.



ManuBuild Building Configuration Process (source: ManuBuild)

The approach is to base the development on existing software tools for catalogue management and enhance those by building on results of the SWOP project ([www.swop-project.eu](http://www.swop-project.eu)). The technology developed there is Product Modelling Ontology (PMO) which extends the XML-based web ontology language

(OWL) for product modelling. It is compatible with recent semantic web developments and will support very much needed universal access to distributed information sources such as manufacturer product catalogues.



Components for creating, updating, publishing intelligent catalogues using PMO/OWL (source: ManuBuild)

## ManuBuild ICT Support

One of the goals of ManuBuild is to provide construction with appropriate ICT to support distributed building manufacturing. Therefore critical tools for information management are implemented and developed, ranging from catalogues of products via information delivery, design, customised configuration, up to logistics and assembly planning:

- **market analysis method** taking into account economical models, demography and cultural conditions. Reactions to market changes can be initiated in advance which enables to focus production according to demand.
- **intelligent component catalogues** for parametric, intelligent building products. Here "parametric" refers to the customisability regarding the end-users' needs; "intelligent" refers to built-in design/configuration logic and life cycle information of the objects: one catalogue object is able to represent numerous variations of a product.
- **design and configuration tools** for customer driven design and configuration of manufactured buildings. They are based on

intelligent component catalogues and pre-designed building templates. The tools are targeted to sales persons, professionals but also to end-users.

- **assembly planning and monitoring tool** to integrate production planning and construction component delivery scheduling with visual 3D assembly planning. For tracing of the components along the whole supply chain and on site, RFID (radio frequency identification) will experimentally be used.
- **Open ManuBuild System Platform:** the solutions will be made available on a common portal which permits access to all developed tools for everyone involved in the construction processes (customers, consumers, architects, suppliers, manufacturers, etc.).

## 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)

Mostostal Warszawa S.A. (PL),  
[www.mostostal.waw.pl](http://www.mostostal.waw.pl)

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

Taylor Woodrow Construction Ltd. (UK),  
[www.taylorwoodrow.com](http://www.taylorwoodrow.com)

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Universidad Carlos III de Madrid (ES),  
[www.uc3m.es](http://www.uc3m.es)

Construction Industry Research and Information  
Association (CIRIA) (UK), [www.ciria.org.uk](http://www.ciria.org.uk)

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),  
[www.bouw.tno.nl](http://www.bouw.tno.nl)

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  
Technologiemanagement (IAT), University of  
Stuttgart (DE), [www.iat.uni-stuttgart.de](http://www.iat.uni-stuttgart.de)

### 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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