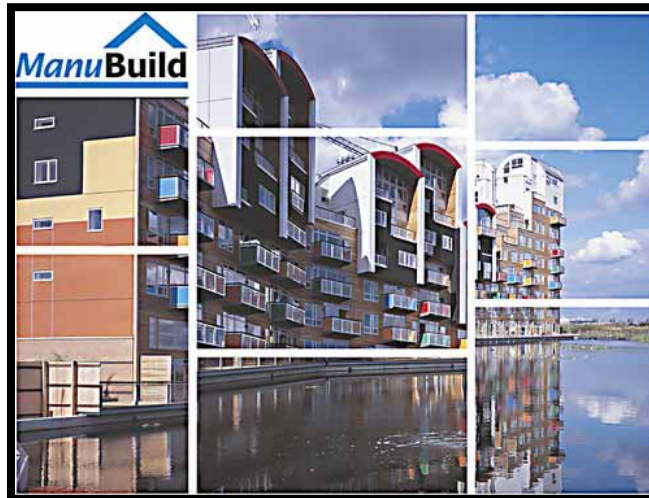


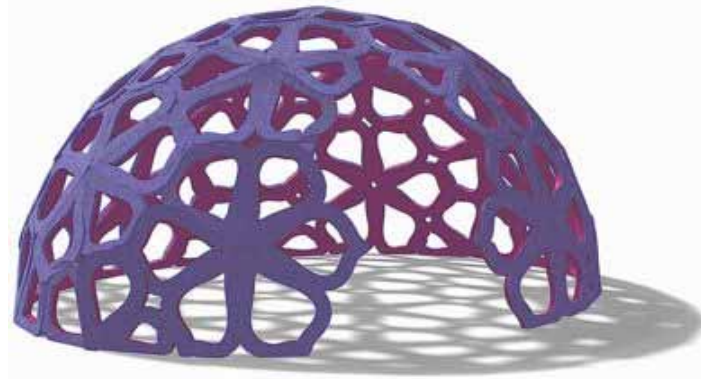
ManuBuild

Open Building Manufacturing



European Integrated Project on Industrialised Construction

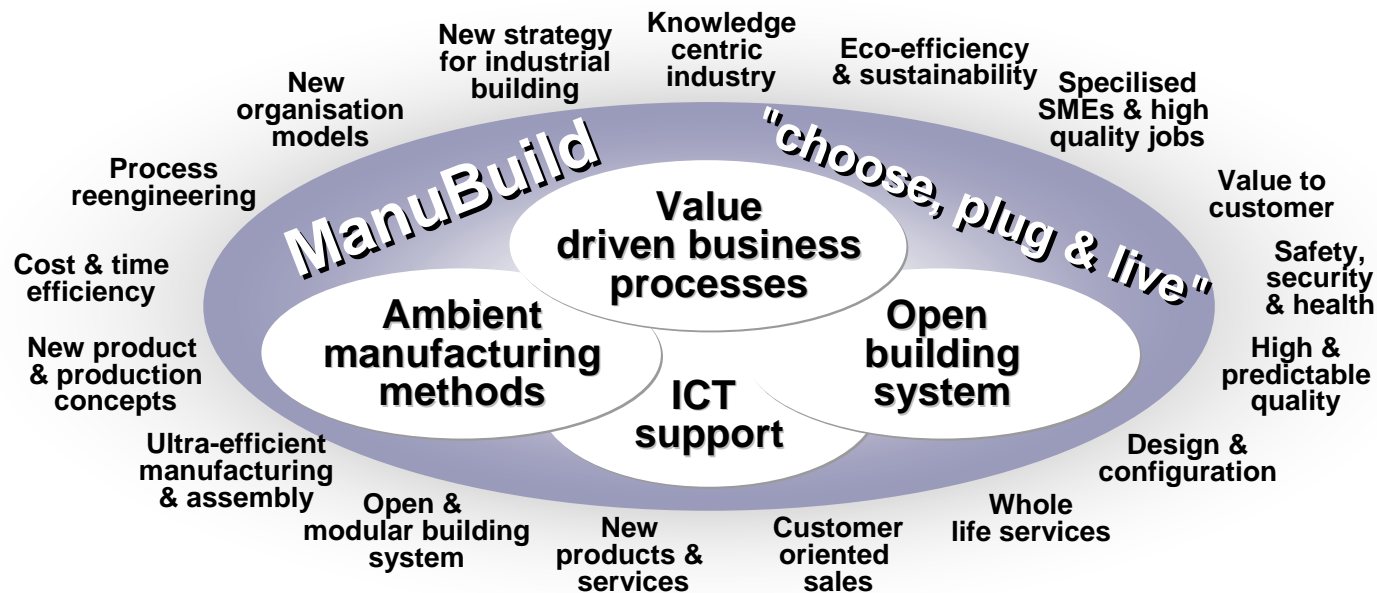
ManuBuild - Vision



The vision of ManuBuild is **open building manufacturing**, a new paradigm for building production and procurement by **combining** highly efficient **manufacturing techniques** in factories and on construction sites **and an open system** for products and components offering diversity of supply and building component configuration opportunities in the open market.

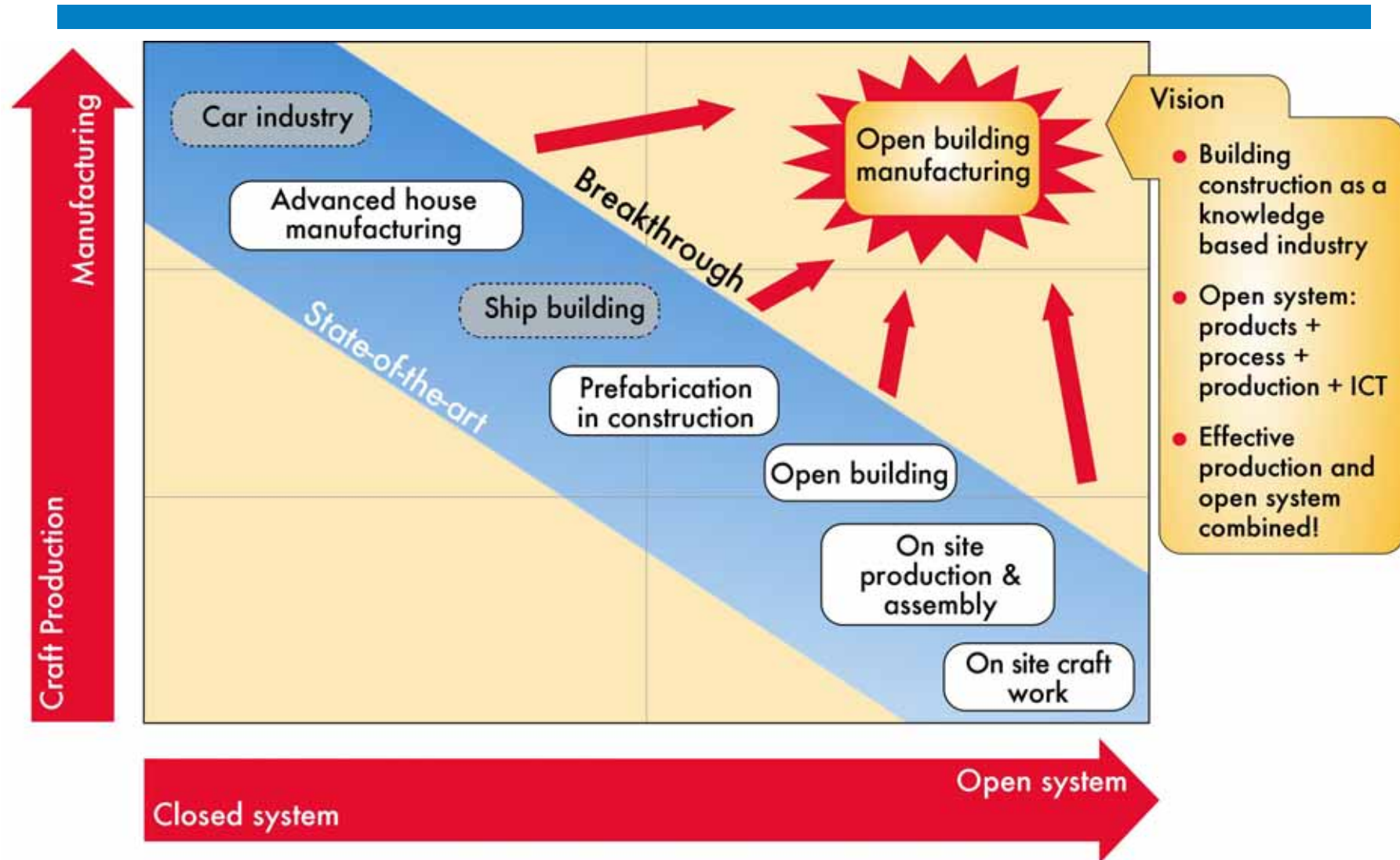
ManuBuild - Objectives

"To develop a **ManuBuild System** that will be used to produce uplifting, sustainable and cost-effective customer-oriented building through radical integration and industrialisation of the design, production and delivery processes as well as greater integration and involvement of the customer; helping them to determine the shape of function of their development."



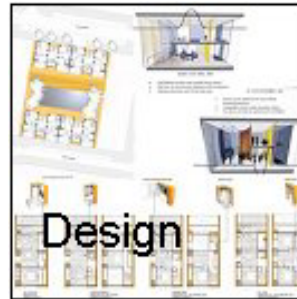
- Construction costs reduced by 50%
- Construction time reduced by 70%
- Work related accidents reduced by 90%
- Affordable customised and flexible buildings
- Architecturally rich & sustainable communities
- Diversity of plug and fix components

ManuBuild - Open System



ManuBuild - Approach

Building Concepts



Design



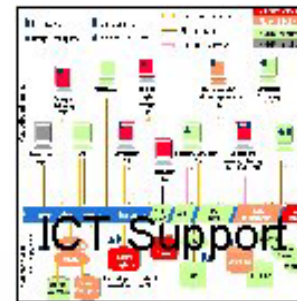
Process

Business Processes

Production Technologies



Production



ICT Support

ICT Support

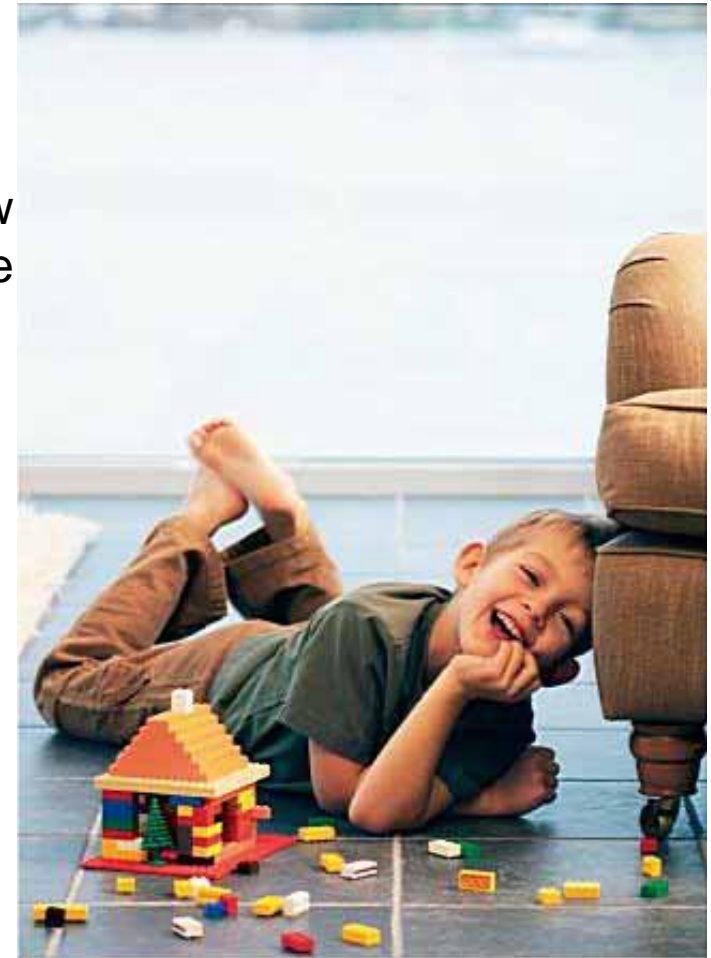


Demonstrations

Design Process Production ICT

Develop and introduce concepts, rules and new products for building design for manufacture employing a system engineering approach,

- ❖ Customer choice and design flexibility through lifecycle
- ❖ Design for living
- ❖ Design for manufacture
- ❖ Openness to multiple sourcing of components
- ❖ Principles and rules of open systems



Design Process Production ICT

Develop and implement a new value driven business process specifically for open building manufacturing and the indicators to measure the efficiency of the process.

- ❖ New and value added process and organisations that integrate the key players
- ❖ Organisational concepts and models to support the integration of the customer
- ❖ New services covering the whole life cycle of buildings from design until demolition and recycling.



Business Processes + Organisational Models + Service Models = MBM

Design Process Production ICT

Integrate and develop technologies and methods new to the construction industry for flexible, value added manufacturing and assembly processes

- ❖ Off-site manufacturing and pre-assembly: highly flexible, scalable, efficient, and automated manufacturing methods and systems
- ❖ Mobile factories: concepts for portable/mobile factories that will bring efficient manufacturing and pre-assembly operations to building sites
- ❖ Logistic solutions: for efficient and lean handling and on-time delivery.



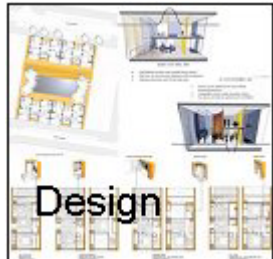
Design Process Production ICT

New integrated ICT infrastructure and key tools to support distributed building manufacturing with seamless information management and delivery.

- ❖ A tool that enables the ManuBuild process where the customer, developer and manufacturer are linked.
- ❖ Customer-oriented design and configuration
- ❖ Market analysis and new product development methodology
- ❖ Model-based, site logistics and assembly planning.

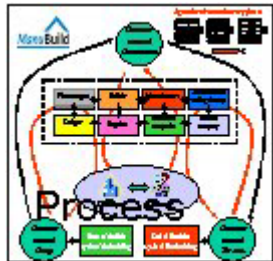


Realising the Challenge for Flexible and Open Building Manufacturing



- **Novel open system and European-wide standard for buildings:**

modular, cheaper and faster manufacturing and assembly, future expandable and open for modification,



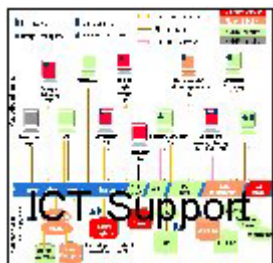
- **New value driven business models and processes:**

focus on customer and community perceived whole life cycle value, and involvement of stakeholders in planning, design/configuration, customisation, delivery and service of individual buildings,



- **New ambient and scalable technologies and methods for manufacturing and assembly:**

efficient, flexible, fast, safe, healthy and environment-friendly,



- **New ICT methods and tools:** full integrated support throughout the whole life-cycle for customer, community, suppliers and manufacturers.

Demonstrations

Validate results and key scenarios using real and full-scale buildings

- Madrid
- Sweden
- UK



Consortium

24 partners from 10 European countries
Covering the whole value chain



ManuBuild - Summary

ManuBuild is an integrated project on industrialised construction and forms part of European Framework 6 with 10 M€ EC financial support

❖ Vision

- Transformation of building construction into a knowledge based industry.
- Open system: Building + Process + Production + ICT

❖ Focus & approach

- Open building system concepts
- Value driven business processes
- Ambient manufacturing methods
- ICT enablers
- Demonstration in full scale building projects in Spain, UK and Sweden

❖ Duration -

- April 2005 – March 2009

❖ Consortium

- 24 partners from 10 European countries.

❖ Web site

- <http://www.ManuBuild.net>

ManuBuild - Keeping in touch

1st International Conference

The Transformation of the Industry:
Open Building Manufacturing

Wed 25th - Thur 26th April 2007
Rotterdam - The Netherlands



Community of Interest

<http://www.ManuBuild.net>



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