



European Network of Construction Companies for Research and Development

Lake Constance 5D-Conference 2012

Welcome Address ENCORDER

21-22 May 2012 | Lake Constance, Germany

Menno de Jonge | Ballast Nedam – Director of Innovation
| ENCORDER – Vice President



Content



- ENCORD



- ENCORD Virtual Construction Platform



- 5D Initiative (5D*i*)

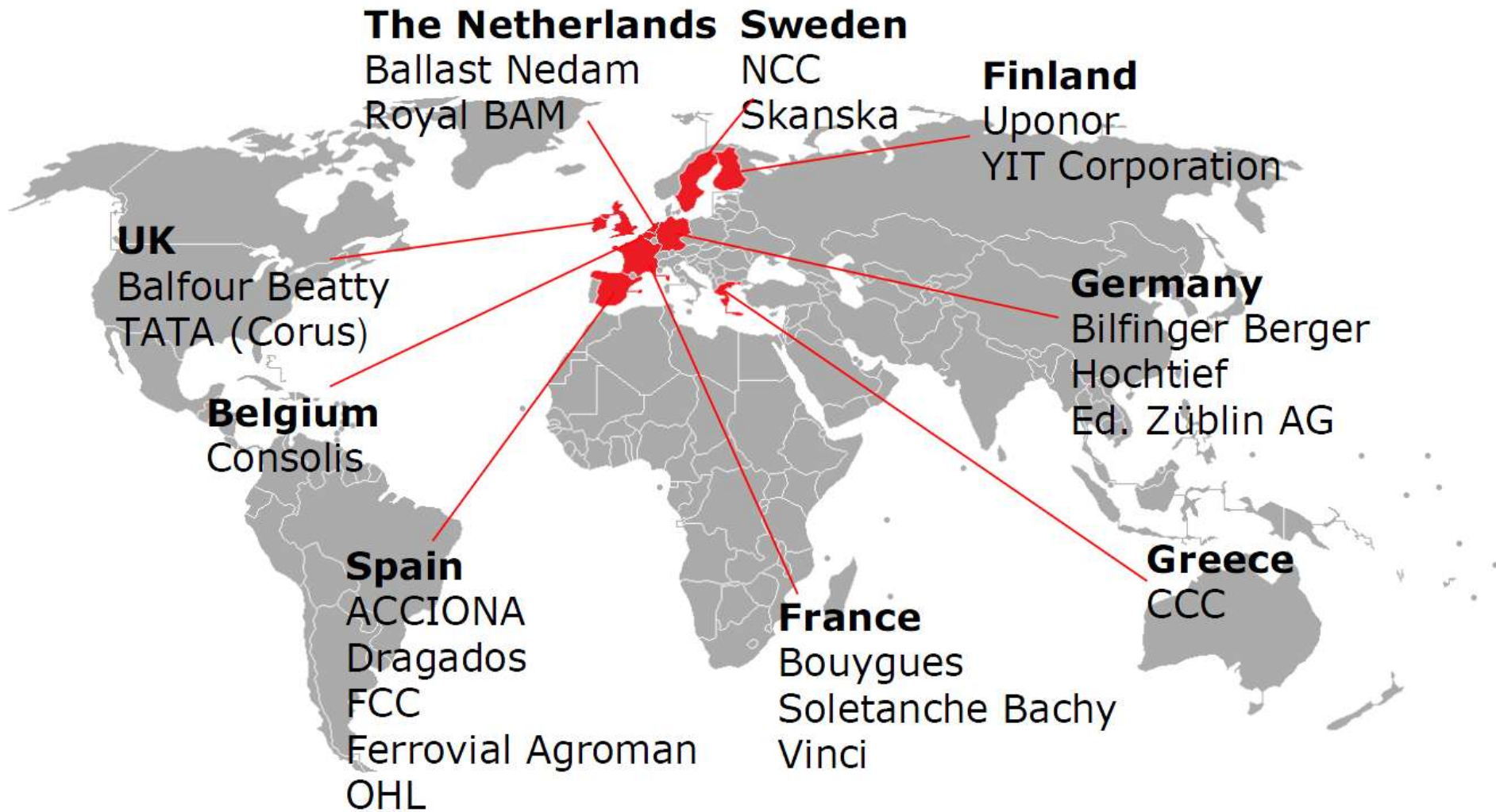
ENCORD's Main Objective

Be Europe's forum for the promotion of **industry-led** research, development and innovation in the construction sector (established in 1989)

Our members are **leading construction companies and suppliers** from all over Europe



ENCORD impact



Combined turnover € 360.000.000.000 | over 1.700.000 employees worldwide

Relevance "Europe's Top Contractors"

2011 EU	2011 Global	Company Name	Location	Rev. total	Rev. Int.	2010 New contracts
1	4	VINCI	France	45,110	16,558	37,215
2	6	BOUYGUES	France	30,671	12,432	33,275
3	8	HOCHTIEF AG	Germany	28,980	27,425	37,652
4	9	Grupo ACS	Spain	20,632	6,562	23,388
5	12	EIFFAGE	France	17,729	2,853	14,563
6	14	FCC	Spain	16,060	7,458	25,433
7	16	Skanska AB	Sweden	14,636	11,632	18,235
8	22	STRABAG SE	Austria	12,777	10,870	12,449
9	23	Balfour Beatty	U.K.	12,400	5,161	12,351
10	26	Bilfinger Berger SE	Germany	10,781	6,324	10,681
11	28	Royal BAM Group	Netherlands	9,808	5,435	11,129
12	36	Sacyr Vallehermoso	Spain	6,942	2,163	10,280
13	38	OHL	Spain	6,481	4,625	6,569
14	41	Ferrovial Agroman	Spain	6,111	3,346	7,053
15	47	CCC	Greece	5,265	5,265	6,428

Source: ENR Engineering News Record, August 2011 Top International Contractors – total revenue

Goals of ENCORD

- ❑ **Exchange experiences and best practice**, discuss strategies for the development of the construction sector, develop new ideas for research projects (...and do it together)
- ❑ **Define priorities** for European construction R&D&I / Communicate with EU administration and EU research community, to initiate new R&D&I programmes, proposals, projects / Influence the R&D&I agenda
- ❑ **Create awareness** of the benefits of (increased) investments in construction R&D&I

Activities

- Three **Council Meetings** per year
- **Thematic** R&D&I groups and **Workshops** on key issues facing the construction sector today:
 - Eco-efficient / Sustainable construction
 - Health & Safety (H&S)
 - Lean construction Management (LCM)
 - Knowledge Management (KM)
 - Mastering Greenhouse Gases Emissions
 - Infrastructure
 - Virtual Construction & ICT (Information and Communication Technology)
 - Implementation of Results of Research Activities
 - ... open for new topics

ENCORD
European Network of Construction Companies
for Research and Development
<http://www.encord.org>

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Menno de Jonge Ballast Nedam	Vice-President
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Content



- ENCORD



**Virtual Construction
Platform**



- 5D Initiative (5D*i*)



Virtual Construction
Platform

ENCORD VCP

Virtual Construction Platform

www.encord.org



ENCORD VCP – How did it start

- Reasons for initiating ENCORD VCP:
 - Individual developments and research approaches → expensive, slow and will not set standards;
 - Difficult to monitor fragmented but emerging technical developments;
 - Co-operation and exchange of experiences with clients, industry, suppliers, universities and research institutes is desired to gain synergies.

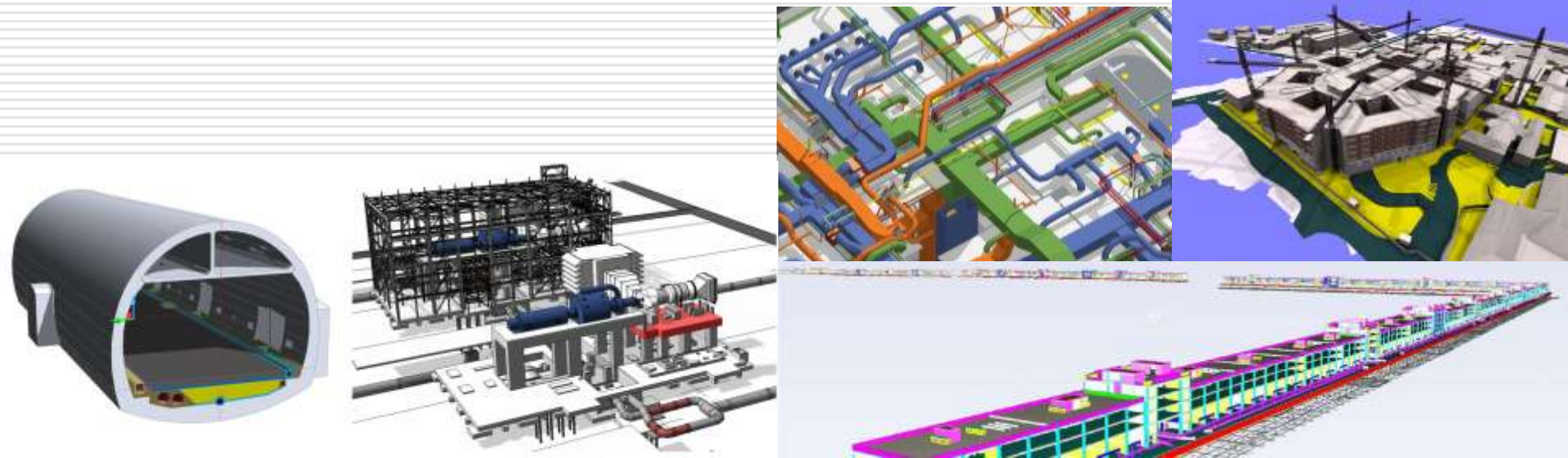
ENCORD VCP – How did it start

- ❑ Aims of the Virtual Construction Platform:
 - Improve efficiency of construction process
 - Improve quality of construction process
 - Reduce failure costs and make (more) money
 - Enlarge awareness in construction sector

- ❑ 1st VCP meeting Jun 2002 – Netherlands (BAM)
- ❑ 2 to 3 meetings per year
- ❑ Hosting by our member companies
- ❑ 24th VCP meeting Oct 2012 - Spain (Acciona)

ENCORD VCP – Results until now

- ❑ 1st ENCORD VCP meeting in June 2002
- ❑ 2 meetings / year at member companies
- ❑ Meeting content:
 - Best (and Worst) Practice exchange
 - What's new presentations
 - Software vendor presentations



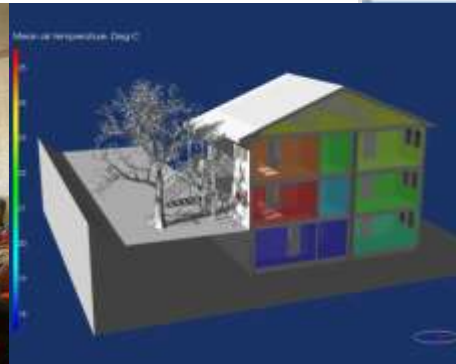
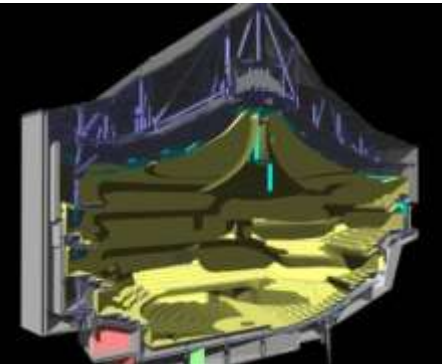
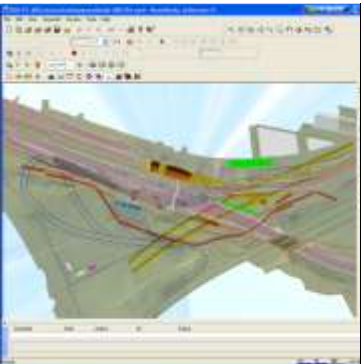
ENCORD VCP – Results until now

□ Results:

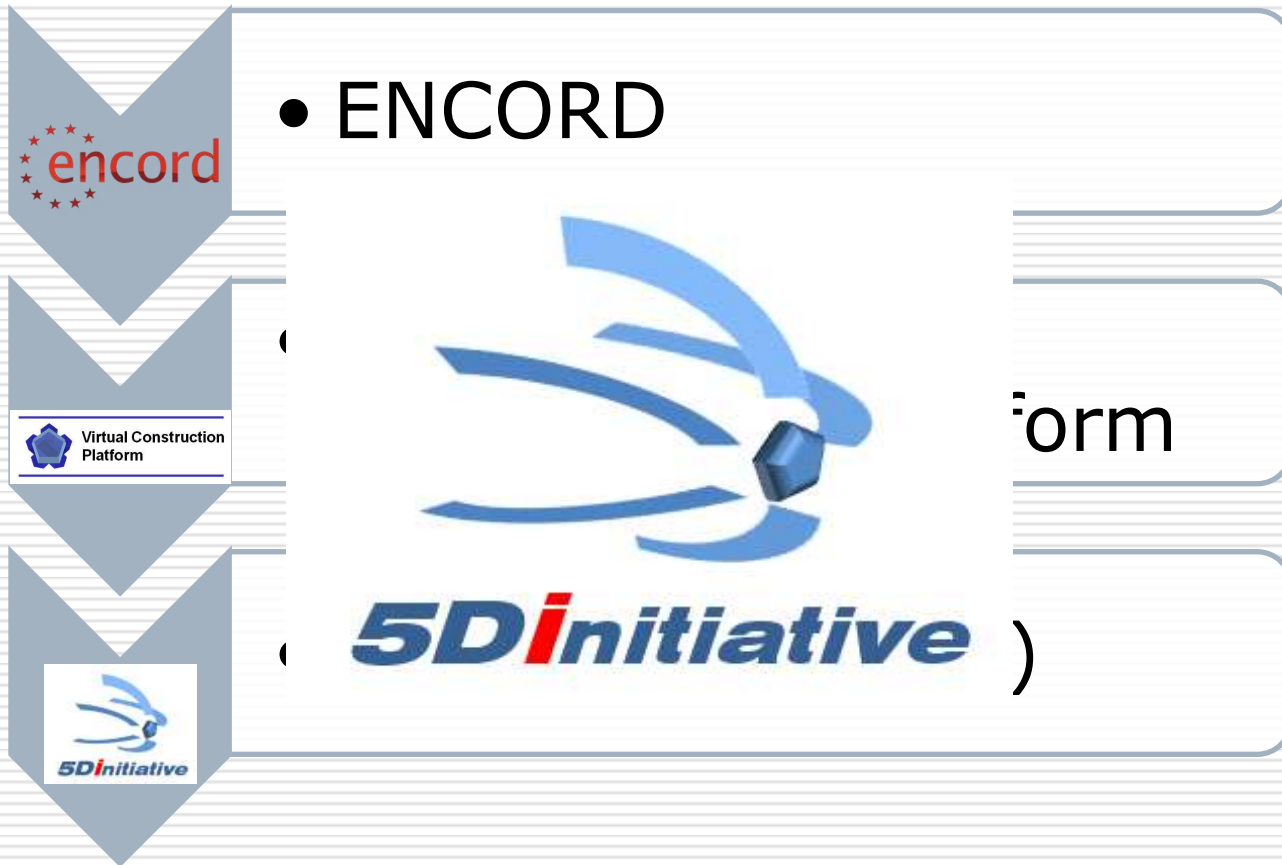
- Massive progress at member companies
- BIM is now standard practice in ENCORD companies

□ Challenges:

- Need for improvements BIM software
- Need for collaboration tools
- Need for sustainability tools



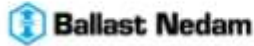
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5D Initiative (5D*i*) – How did it start



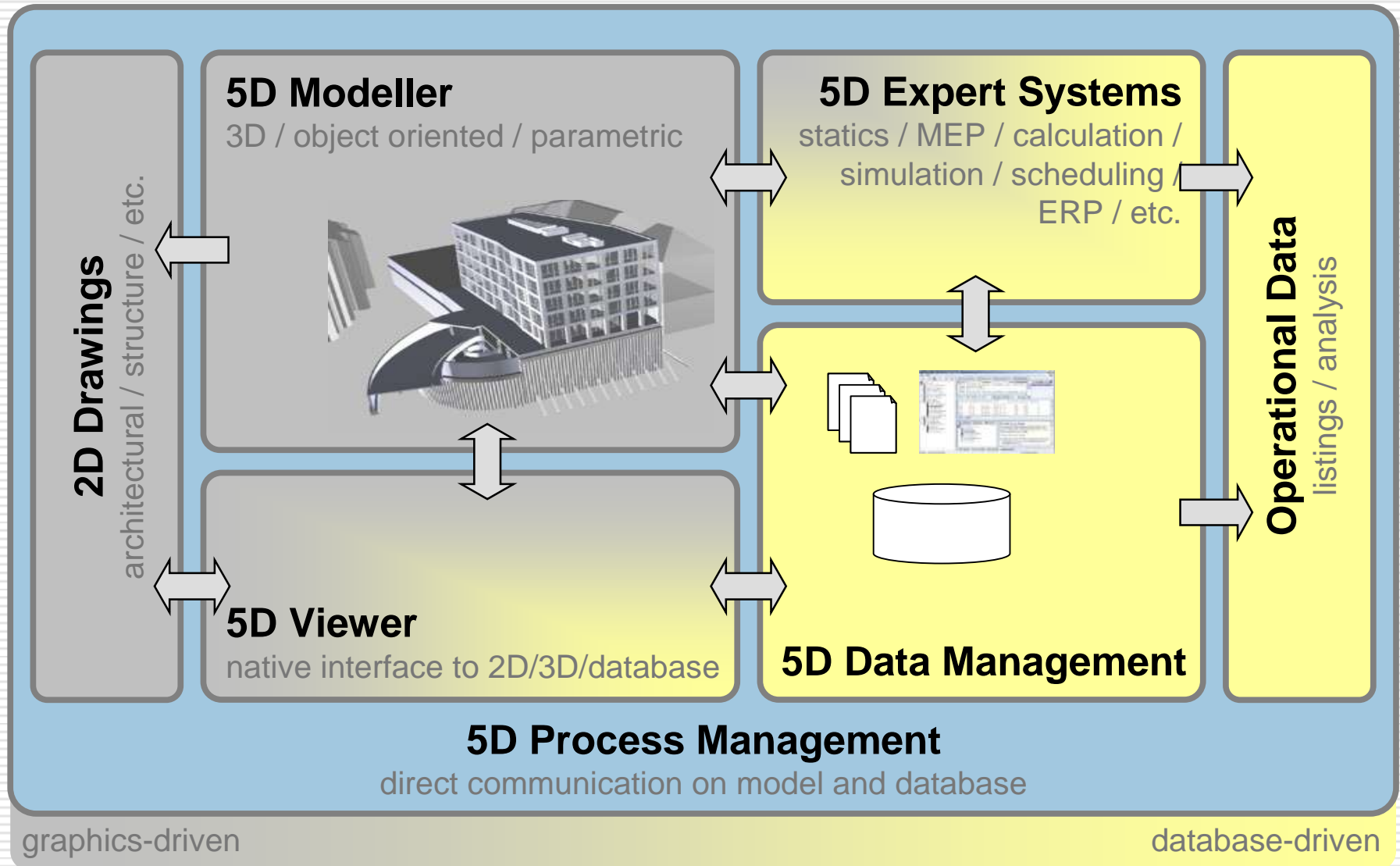
□ Founded in June 2008 by



□ Objective:

- Setup common requirements for model based IT tools for planning, realising and operating buildings and infrastructure => **BIM for Construction / BIM 2.0**;
- **Open**: collaboration platform of construction companies;
- **Active**: actively driving the discussion by workshops / definition papers

5D*i* Achievements – Vision map (solution components)



Closing remarks

- ❑ 5 EU contractors active in 5D*i* since 2008
- ❑ Supported by 15 contractors in ENCORD VCP since 2002
- ❑ Supported by 20 contractors in ENCORD since 1989
- ❑ Collaboration with international software industry and universities & research institutes



- ❑ The ingredients for a great 5D-Conference!!



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