EurekaBuild Workshop and Brokerage Event

“How to commercialize a good idea? ICT solutions as a source of development in the construction sector”

January 22, 2008 – Poznań, Poland

Results and analysis
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*ASM – Centrum Badań i Analiz Rynku Sp. z o.o.*
1. INTRODUCTION

The 6th EurekaBuild Workshop & Brokerage Event took place on 22nd January 2008. The theme of this event was: "How to commercialize a good idea? ICT solutions as a source of development in the construction sector". Workshop was arranged by the Polish Construction Technology Platform in cooperation with International Construction Fair "BUDMA 2008" (the biggest construction event in Poland, which brings together stakeholders from the whole international construction sector), EUREKABUILD project and Lewiatan Business Angels (a network of private investors who are interested in supporting innovative startup companies) (http://www.lba.pl/anioly_biznesu/en/index.php).

The main aim of the workshop was to facilitate establishment of consortia in order to elaborate competitive projects in the EUREKA programme, and especially within the EurekaBuild umbrella related with the innovative ICT solutions. Because this was the second workshop on ICT theme organizers emphasized to continue the process started in May 2007 during the Oslo workshop and take already announced ideas to the next level – project submission.

EurekaBuild Workshop & Brokerage Event was an integral part of the international conference "Cooperation between enterprises, universities and regional administration towards application for EU funds. Examples of innovative projects in the construction sector." organized by the Polish Construction Technology Platform.

The report summarises the Workshop, presenting the programme, presentations, list of participants, the project ideas discussed and summarizing outputs and results.
2. EUREKABUILD WORKSHOP ORGANISERS

- ASM Centrum Badan i Analiz Rynku Sp. z o.o. (www.asm-poland.com.pl)
- Mostostal Warszawa S.A. (www.mostostal.waw.pl)
- Polish Construction Technology Platform (www.pptb.pl)
- Lewiatan Business Angels (www.lba.pl)
- EUREKABUILD (www.ectp.org/eurekabuild2.asp)
- TVN Business CNBS (www.tvncnbc.pl)
- Branch Contact Point of EU research Programs (www.pptb.pl/bpk/)
- Polish Agency for Enterprise Development (www.parp.gov.pl)
- International Construction Fair "BUDMA" (www.budma.pl)
- National Contact Point for Framework Programme (www.kpk.gov.pl)
3. PROGRAMME

The conference was organized in division of two main parts:

**First part** was organized as a typical, regular conference with speakers explaining different ‘case studies’. One of the biggest capital groups like: Arup, Acciona, Saint Gobain – presented their strategy in terms of R&D and innovations. Explained to the audience how to through the route from idea to star products on the market. Companies presented above have almost unlimited budgets for R&D and innovations that is why the most important think was to show an example of polish SME and innovation strategy. A company called Amepox ([http://www.amepox.com.pl/eng/index.htm](http://www.amepox.com.pl/eng/index.htm)) presented their history from the very beginning (academic research) to one of the biggest manufacturer of floor materials of highest quality in Poland. This part gave a view of how good R&D and innovative strategies can end up with market success.

All presentations provided in this part are available at [www.pptb.pl/konferencja](http://www.pptb.pl/konferencja).

**Second part** was organized as a workshop. The Workshop started with 3 introductory presentations:

- “Opportunities and best practices from EUREKA”. A success story of Belgium company EconCore ([www.econcore.com](http://www.econcore.com)) which firstly used EUREKA founds and afterwards set up company using venture capital founds. It was interesting example of advance technology used for construction sector as one of main market for this solution. The founder of the company presented his views of cooperation with private capital.
- “EurekaBuild – EUREKA Umbrella for the construction sector” presentation provided by Svein Willy Danielsen from Sweden on background information about the EUREKA and EurekaBuild project.

Afterwards nine specially selected (from those available at the EurekaBuild website) project ideas were presented to the audience and discussions to define partnership/consortiums. At the end of the workshop conclusion from presenters and organizers were gathered. This part
was mainly evaluation coming from BA representative and Eureka Umbrella whether projects proposals are sufficient for the first or second option. Some additional ideas from audience were evaluated additionally.

During the interactive workshop the participants were discussing their ideas for EUREKABUILD ICT projects and had opportunity to present them to Business Angels representative. BA defined few projects of real potential so it can be seen as main success of EurekaBuild workshop especially that few months before the Business Angels had been invited to the workshop has no special interest and did not really understand how construction sector can create innovative projects.

One of the main part of the workshop was discussion between representative of Business Angels Association and people which were presenting their ideas. LBA representative was explaining what their expectations are and how does business plan should look like, what should it include and how to go through the whole procedures. Applicators should have their ideas prepared in the clearest way that this is possible. No necessity of two hundred pages business plan based on some rules but one or two essential pages of the summary with clear investment plan and clear objectives. Person which is applying should be convinced and be able to make its own (even small) investment just to show how much he believe in his idea.

Some thoughts of what can be an interest of business angels were presented. Mainly “trendy”, “hot actions”. Nowadays we can think about technologies for energy efficiency, ICT for construction, renewable energy sources, etc. BA representative showed to all participants how business angels are working and difference between them and e.g. Seed or Venture Capital founds. The main mistakes of applicators are misunderstandings of main assumptions of Business Angel institution.

This workshop proofed that there is a need for exchange of information in two direction from private investors to construction sector and other way round. There is also a clear need for good practice dissemination as it is clearly more appealing to companies.
Cooperation between enterprises, universities and regional administration towards application for EU funds. Examples of innovative projects in the construction sector. January 22, 2008 - Poznan

DRAFT AGENDA

Aims of the conference:
A promotion of innovation policy instruments. Presentation of the role of innovations as a condition of competitive economy. Dissemination of information and promotion of EurekaBuild project (especially in the area of ICT in construction sector).

Opening session
Ministry of Infrastructure
ASM, Polish Construction Technology Platform
Chairman of the Poznan International Fair
The National Contact Point

9.30 – 10.00  Registration, coffee
10.00 – 10.15  Opening session

SESSION I  Innovative economy

Part 1 Opportunities for application for funds for the enterprise development
10.15 – 11.30
- "Challenges for Polish economy, the need to cooperation between business and entrepreneurs. The role of European Union" – Mercin Wilczek, European Commission
- "Challenges for entrepreneurs, local governments and universities for 2007 – 2013" – Jerzy Kwieciński, Ministry of Regional Development
- "The role of personnel in innovation development" – Agnieszka Gryń, Ministry of Science and Higher Education
- "Cooperation between science and industry for gaining innovation" – Mariusz Woznik, Polish Agency for Enterprise Development
- "Financing of innovations" – Marek Sirow, University of Szczecin
- "Innovations from business point of view" – Beata Piskorska, National Contact Point

Part 2 Innovations in the construction sector
11.30 – 12.45
- "European Construction Technology Platform – Innovations by SMEs" – Carlo Capelli, ECTP
- "7° Framework Programme and Innovations in the construction sector" – Anna Maria Sironi, National Contact Point
- "Examples of innovations in the construction sector" - ACCIONA
- Saint Gobain
- Amspace Sp. z o.o.
- e-VISION
- Discussion

12.45 – 13.30  Lunch

SESSION II  EurekaBuild Workshop and Brokerage Event – “How to commercialize a good idea? ICT solutions as a source of development in the construction sector”
13.30 – 16.30
- "Opportunities and best practices from EUREKA" – Jochen Pflug, EcoinCorps
- "EurekaBuild – EUREKA Umbrella for the construction sector" – Józef Wilczyński, National Contact Point
- "Business Angels as alternative source of financing early-stage investments" – Jacek Bieńko, Lemonade Business Angels
- EurekaBuild Workshop and Brokerage event
OFFICIAL LEAFLET OF THE CONFERENCE & EURAKBUILD WORKSHOP

OFFICIAL WEBSITE OF THE CONFERENCE & EURAKBUILD WORKSHOP

www.pptb.pl/konferencja
4. PRESENTATIONS

All presentations made during the international Conference are available at the official website (www.pptb.pl/konferencja). Below presentations presented during the EurekaBuild Workshop & Brokerage Event are enclosed.
EconCore Presentation for EUREKABUILD in Poznan
22. January 2008

Overview of the Presentation

Overview

• Introduction
  • Sandwich constructions by nature and in engineering

• Sandwich Construction with honeycomb cores
  • Sandwich core material types
  • Combination of aerospace material technology and automated production

• EUREKA Project TorHex/ThermHex
  • From basic research to industrial scale demonstration

• The Start-up company EconCore
  • Start-up and growth via Joint Ventures
Introduction to sandwich construction

Sandwich construction by nature
- Examples for sandwich constructions (with foam, truss and honeycomb cores) found by nature

Section of a human skull
Section of a bird wing
Section of an iris leaf

Introduction to Sandwich Applications

Sandwich constructions are composed of
- Two thin facings (skins, liners)
- One thick low density core
- Bonding layers (adhesive)

Sandwich applications
- Sandwich constructions provide high stiffness and strength for panels and shells

Aerospace
Trains
Building
Packaging
Automotive Industry

EconCore
Sandwich Construction Today
Jan. 2008
Leuven, Belgium
Classical Honeycomb Production

Honeycomb production with conventional processes
- Expanded honeycomb production
  - paper roll
  - stacked sheets
  - unexpanded stock
- Corrugated honeycomb production
  - corrugated sheets
  - honeycomb

Both processes
- require the cutting and handling of several sheets
- result in a labour intensive manual production

EconCore Technologies

EconCore Technologies

Patented EconCore honeycomb production processes
- Honeycombs produced from a continuous web by successive in-line operations
- Aerospace Industry
  - Internal structure and properties
    - Excellent mechanical properties
    - Very low weight
- Packaging Industry
  - Production principle and technology
    - Automated production
    - Low production costs

Innovative processes to produce honeycomb sandwich panels at minimal cost
ThermHex EUREKA Project Overview

EUREKA Project ThermHex

ThermHex: A fundamental knowledge base for the production and use of thermoplastic folded honeycomb cores

Date/Location: 1 April 2002 - 31 March 2004

Funding: Flemish NWT basic industrial research project in a European Eureka project framework

Project partners:

Material suppliers:
- Fraunhofer Coating (glass fiber PF and natural fiber PP)
- Umicore (PET and PP fiber non-wovens)

Part manufacturers:
- Johnson Controls (headliner, interior parts)
- Hermet Automotive (pneumatics and rams)
- Polynorm (automotive body parts)

Core and panel producers:
- Kistler Packaging (thermoplastic panel production)
- Polvron (visual communication boards)

End users:
- DelphiChrysler (aerospace, automotive applic)
- Toyota Motor Europe (automotive interior applic)

Research partners:
- K.U. Leuven IMA, Prof. Dirk Vandezande, production process development
- K.U. Leuven IMA, Prof. Iggelaar Verstraet, interiors MOWIS

ThermHex Project Data
Automotive Applications

Potential applications in automotive parts

- TorHex examples
  - TorHex paper honeycomb core with PP/natural fiber sheets
- ThermHex examples
  - ThermHex honeycomb core with Pp/glass fiber skin

Requirements for sandwich parts in automotive:
- Weight reduction in combination with cost reduction
- Possibility to be recycled (monomaterial sandwich)
- Integration of multiple functions (acoustics)

EconCore Development Steps

Fasibility and Basic Development
24/1999 - 09/2000

Lab-scale production and application development
06/2002 - 09/2002

Industries and Markets
WOM 12/2005

Packaging and logistic applications
Industrial demonstrative line, Patent licensing

Joint Ventures
for production and sales in specific market segments

Furniture and Building applications

EconCore
Economic Core Technologies

Licensees
for production and sales in specific market segments
EconCore, Research Park in Haasrode (Leuven)

EconCore N.V.: Spin-off of the K.U. Leuven Engineering Faculty

- ECONCORE Technologies for economic honeycomb panels and parts
  - founded on 22nd of December 2005 => expansion to new location in 1st Aug. 2007
  - today 3 employees (including management)

New Location in the Industrial Zone in Leuven, Belgium

EconCore N.V.,
Anbochtkaan 17
B-3001 Leuven
Tel: 0032 – 16 – 391040
http://www.econcore.com

Our New Location

EconCore Mission

Company Goals

We target

- to enable the production of honeycombs from paper and thermoplastics for lower cost than any competitor

- to develop and integrate technologies for continuous in-line production of sandwich panels and parts

- to support customers and licensees in their application development to enable widespread use of EconCore technologies and products
Summary

The EconCore technologies allow:

- Fast, easy, continuous, in-line production of the core and in-line lamination to a sandwich panel
  → Minimal costs

- Excellent mechanical properties due to an internal structure similar to classical aerospace honeycombs
  → Minimal weight

- Recyclable parts using minimal resources
  → Minimal environmental impact

Acknowledgements

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COMPOSITE MATERIALS GROUP of Prof. Ignasse Yerpeos

K.U. LEUVEN, DIVISION FENA (PRODUCTION ENGINEERING, MACHINE DESIGN AND AUTOMATION)
GROUP of Prof. Stijn Vandepitte

We gratefully acknowledge the support of

EconCore, European network for industrial R&D
Project E 1129 and Project E12769
Business Angels as alternative source of financing early-stage investments

Jacek Błoński
Poznań, January 22, 2008

LBA Founding Institution

Polish Confederation of Private Employers Lewiatan
- An organisation of private entrepreneurs set up in January 1999
- Confederation of business associations and companies from many sectors of economy and all regions of Poland
- ... representing about 3,000 companies – mostly large and mid-sized
- In total, member-companies employ over 600,000 people
- Strong media presence
- Easy access to entrepreneurs and managers (especially from traditional sectors)

EUROPEAN FUND FOR REGIONAL DEVELOPMENT
The project was co-financed by the European Union
**WHO IS AN ANGEL INVESTOR?**

**Business Angels:**
- Wealthy individuals
- Good business experience
- Good contacts and marketing skills
- Very often cashed out entrepreneurs or managers
- Actively supporting development of the company

**BUSINESS ANGELS ON THE RISK CAPITAL MARKET**
LBA KEY DATA

- A group of ca. 50 individual investors associated with LBA, interested in early-stage companies with extraordinary growth prospects, no sector specialization
- Typical investment – between EUR 50k and EUR 1.5m
- Services provided to investors:
  - provision of carefully selected business plans, according to individual preferences and investment criteria
- Services provided to entrepreneurs:
  - access to selected group of active investors
- Cooperation with Business Angel Seedfund

STRATEGY

LBA has established an extensive angel network in Poland and between 2005 and 2008 finalized 7 investments in different sectors/branches.

- 350 ideas screened
- 45 ideas refined in Meetings
- 25 ideas submitted to the investors
- 7 Number of Investments

- 2% of business plans submitted get financing
- Many of the projects submitted to investors came from LBA’s partners
- Negotiation process is less formal than with VCs, but also less predictable
COOPERATION WITH BA – BENEFITS

- Benefits for entrepreneurs seeking financing from business angels:
  - Provision of adequate financing, flexible terms
  - Experience and strategic know-how
  - Business contacts and relations within industry

PROJECT SELECTION CRITERIA

- Experience and competences of the management team
- Strong growth potential
  - Growing market or attractive niche
  - Competitive advantage
- Founders involvement and commitment (also financial)
- Stage of company development (preferred existing businesses)
- Identified and clear exit options
- Business plan and financial projections – coherent and well thought
EUREKA AND EUREKABUILD

Svein Willy Danielsen
SINTEF Building and Infrastructure, Norway
EUREKABUILD Technical Committee

What is a EUREKA project?

EUREKA projects are:
- Bottom-up - proposed, defined and managed by its partners
- International – with partners from at least two of EUREKA’s 38 members
- Industry-led
- Market-oriented - Developing hi-tech products, processes and services for the market
- Funded on a National basis
38 members of EUREKA

Austria
Belgium
Croatia
Cyprus
Czech Republic
Denmark
Estonia
European Union
Finland
France
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Latvia
Lithuania
Luxembourg
Malta
Monaco
The Netherlands
Norway
Poland
Portugal
Romania
Russia
San Marino
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Turkey
Ukraine
United Kingdom

National Information Points (NIP)
Albania
Bulgaria

Associated Country
Morocco

National spend on EUREKA projects in relation to GDP

All figures correct June 2006
Market oriented

- EUREKA addresses applied - not fundamental - research projects
- The result of a EUREKA project must be a marketable product, process or service

Positioning of EUREKA on International R&D Scene

European Cooperation in R&D

Precompetitive        Close to market
Idea ← →               Market

SYNERGY

- Top down
- EC supervision
- Large central funding
- Results property of EC and partners

- Bottom up
- Business agreements
- Smaller, coordinated national funding
- Results property of partners
Some statistics

Since 1985, 25 billion euro of public-private investment has been mobilised to support some 2,800 EUREKA projects.

All figures correct June 2006

EUREKA projects in figures

- Number of running projects: 700
- Total budget for these projects: 1.7 billion €
- Number of organisations involved in EUREKA projects: 2760
Who participates in EUREKA projects?

Nearly 13,000 partners from across Europe – and beyond

- 17% University
- 11% Research Institutes
- 29% Large companies
- 42% SMEs

All figures correct June 2006

Eureka Programme

Projects
- Attractive administrative procedures
- Fast (proposal > project)
- Close to the market
- Attractive to SME involvement
- Funding on national basis

Umbrella
- To generate ideas and to facilitate proposals
EUREKA has developed in two different directions

- An effective and efficient tool for SMEs
- An arena for European strategic R&D initiatives, mainly in the ITC sector

The two pillars of EUREKA

- Strategic initiatives
- Individual projects
1. Strategic initiatives

Two categories:

- Clusters
- Umbrellas

1a. Clusters

- Long-term, strategically-significant initiatives
- Large number of participants, many from Europe's major companies
  (eg Philips, Infineon)
- Develop generic technologies of key importance for European competitiveness
1b. Umbrellas

- Thematic network of public authorities and sectoral experts
- Their objective is the generation of EUREKA projects
- Fields of activity: manufacturing, logistics, food & feed, digital content …

FACTORY
EUROENVIRON
EUROAGRI+
EUREKA TOURISM
LOGCHAIN+
EULASNET II
ECOTEC
INNOFISK
ENIWEF
EUREKABUILD

Production technologies
Environmental R&D
Agriculture, food and feed
IT-Technologies for tourism
Freight chains and logistics
Laser & optics applications
Digital content
Innovative aquaculture
Industrial wear prevention
Construction technology
EurekaBuild initiative

EurekaBuild initiative is Europe’s oldest joint research initiative (1985)
To enhance competitiveness
Flexible and decentralised networks
Eureka projects
Eureka umbrellas

www.eureka.be
www.ectp.org
www.ectp.org/eurekabuild.asp

European Construction Technology Platform
"Challenging and Changing Europe’s built Environment"

Vision for a sustainable and competitive construction sector in 2030
ECTP

Strategic Research Agenda
(Nov. 2005)

Research priorities
Meeting client/users requirements
Becoming sustainable
Transforming the construction sector

FAs’ SRA

7 Focus Areas of ECTP
“Vertical”
Underground construction
Cities and buildings
Networks

“Horizontal”
Cultural heritage
Quality of life
Materials
Processes & ICT:

8 priorities

8 roadmaps

Value-driven business processes
ICT enabled business models
Industrialised production
Digital models
Intelligent constructions
Collaboration support
Knowledge sharing
Enterprise
Process
Product
Interoperability

Next 2 slides

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The Norwegian buildingSMART - project

3. Business development
- International business development
- National business development

Activities
- Export of knowledge
- Investigate new business models
- The “Nordic model”

2. Implement/deploy buildingSMART
eCollaboration & eProcurement
- Electronic collaboration
- Product information
- Changes in business processes
- eGovernment

Activities
- Pilot projects
- HITOS
- AHUS
- Pilot groups
- User requirements

1. Develop buildingSMART
Semantic technologies
- IFC-IDM (data model and information exchange requirements)
- IFD (ontology project) International Framework for Dictionaries

Activities
- Standardisation
  - IN
  - ISO TC 59/TC 184
  - EU’s J Frame program

4. Knowledge based systems
Active and Smart Building knowledge platforms

Laws and regulations
- Building regulations
- Building specifications

Knowledge databases
- Best practice knowledge
- Own practice

Briefing
- Functional reqs.
- Estimates
- Conditions
- Requirements

Demolition, refurbishment
- Rebuild
- Demolition
- Restoration

Facility management
- Letting, sale, operations
- Maintenance
- Guarantees

Construction management
- Scheduling
- Logistics, 4D

CAD software
- Drawings, calculations
- Engineer, architect

VRML
- Visualisation, 3D models

Simulations
- Comfort
- Ventilation, heating
- Life cycle cost
- Light, sound
- Insulation
- Fire, usage
- Environment
- Life time predictions

Specifications
- Specification sheets
- Classification standards
- Estimates, accounting

Procurement
- Product databases
- Price databases

EurekaBuild Workshop and Brokerage Event, Poznań, 22 January 2008

ASM – Centrum Badań i Analiz Rynku Sp. z o.o.
Among other Tools

- To implement R&D&I projects to achieve the vision 2030 by
- Exploiting all existing mechanisms and instruments
  - EU FP7 (European level and European funding)
  - ERANET (coordination of national programmes in international cooperation)
  - COST
  - CIP
  - Eureka (European level, national funding)

Main Funding Opportunities in 2007

7th Framework Programme FP7

ICT
NMP
ENERGY
ENVIRONMENT
TRANSPORT

ERABUILD
Joint calls for international RTD projects in national programmes

Σ!
EUREKA
EUREKABUILD
RTD projects on bottom-up topics

Competitiveness and Innovation Framework Programme CIP

Entrepreneurship and Innovation (EIP)
ICT Policy Support
Intelligent Energy-Europe (IEE)

Demonstrations & take-up actions
The ECTP did an excellent job
- Vision 2030
- Strategic Research Agenda
- Priorities
- Implementation Plan

To serve
- Society
- Economy
- Technology

Challenge
Create and maintain momentum
to real
Research,
Development and
Innovation
“Research needs money, Innovation needs a culture”
The reason that EurekaBuild exists

Find partners
Learn to work together
Develop technology/solutions together
Getting into the market
Create added value from innovation

Core Activity

Brokerage events
- To connect people for ideas, proposals and projects
Approach

- Brokerage Events
  - To connect people
  - To generate ideas
  - To find people to endorse ideas

- Information
  - Eureka: how to....
  - ECTP:

- Content
  - Based upon the ECTP SRA framework of....

- Procedure
  - How to ....

Project Portfolio Preparation

Define main Topic areas

Collect RDI Project ideas

Integrate & make complementary

Form consortium Define scope

Prepare and submit proposal

Application to EUREKA And for National Funding
Crucial elements in a brokerage event

- Market for match making, including a poster exhibition
- Opportunity for brief dedicated workshops, round table discussions
- Presentations with visions. Starting point societal needs leading to technological solutions, providing the audience a perspective to the future but also enthusiasm.
- General information on the processes and platforms.

What happens in a brokerage event?

- Present ideas
- Connect people with similar and/or complementary ideas
- Support by Eureka officers
- Submit the idea format
- By seeing each other and talking together
Turn the SRA into Action

Results in 2009
- 15 International events
- Each leading to 10 proposals

Conclusion
- The EurekaBuild umbrella delivers the ECTP 150 proposals for R&D&I with massive SME participation

Approach of EurekaBuild

- Brokerage Events
  - To connect people
  - To generate ideas
  - To find people to endorse ideas

- Information
  - Eureka: how to....
  - ECTP:

- Content
  - Based upon the ECTP SRA framework of....

- Procedure
  - How to ....
Preferred Commitment

- Focus Area Groups
- branches and their organisations
- professional associations
- NTPs
- national agencies
- innovations platforms
- Eccredi
- Encord
- other, other

New challenge

- From proposals to projects
  - Follow up from idea to proposal and finally to an awarded project
Idea to project – why not?

- RTO / university → have idea, but there is no dedicated industrial partner involved in the proposal, no user commitment
- Industrial proposer → easy to write a 1-2 page idea for a good meeting, but without being part of core business and company strategy it gets no further

Oslo workshop – key figures

- 42 participants
- 26 non-Norwegians
- 9 project ideas presented
- 7 of these from universities
- 2 from industry
- 0 projects have so far become reality
Results till May 2007

<table>
<thead>
<tr>
<th>Host</th>
<th>Theme</th>
<th>Participants</th>
<th>Proposals</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 2007</td>
<td>Rotterdam Networks</td>
<td>75 (15)</td>
<td>31</td>
<td>1+?</td>
</tr>
<tr>
<td>May 2007</td>
<td>Oslo ICT</td>
<td>42 (26)</td>
<td>9</td>
<td>1?</td>
</tr>
<tr>
<td>May 2007</td>
<td>Athens Cultural heritage</td>
<td>105 (38)</td>
<td>28</td>
<td>?</td>
</tr>
</tbody>
</table>

What should happen after the events?

Project ideas at ICT work-shop

<table>
<thead>
<tr>
<th>Project idea</th>
<th>Proposer</th>
<th>Category</th>
<th>Country</th>
<th>Needing</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>BuildingSmart knowledge platform</td>
<td>SINTEF</td>
<td>R</td>
<td>NO</td>
<td>I, F</td>
<td>2008</td>
</tr>
<tr>
<td>Development and diffusion of ICT innovations in the construction sector</td>
<td>Lund</td>
<td>U</td>
<td>SE</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>DESIGNING FOR CONSTRUCTION SITE SAFETY</td>
<td>Lund</td>
<td>U</td>
<td>SE</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Stakeholder management and communication in construction projects</td>
<td>Lund</td>
<td>U</td>
<td>SE</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>A Repository for life cycle design and construction for BAM</td>
<td>BAM</td>
<td>I</td>
<td>NL</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Intelligent or Smart Objects for use in BIM</td>
<td>NTNU</td>
<td>U</td>
<td>NO</td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>Integration versus Interoperability: Re-examining the Relevance of the IFC</td>
<td>NTNU</td>
<td>U</td>
<td>NO</td>
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<td>2007</td>
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<tr>
<td>Building Analysis and Evaluation Tools</td>
<td>NTNU</td>
<td>U</td>
<td>NO</td>
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<td>2007</td>
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<tr>
<td>Future design of building design and manufacturing processes based on integration and activation of experience / knowledge supported by IEC systems (preliminary template)</td>
<td>Selveag 1</td>
<td></td>
<td>NO</td>
<td>2007</td>
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ASM – Centrum Badań i Analiz Rynku Sp. z o.o.
### EurekaBuild Workshop and Brokerage Event, Poznań, 22 January 2008

#### 2007

<table>
<thead>
<tr>
<th>Theme</th>
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<th>Place</th>
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<tbody>
<tr>
<td>Jan Networks towards a reliable and public infrastructure</td>
<td>NL NTP</td>
<td>22-23 Jan 2007</td>
<td>Rotterdam, The Netherlands</td>
</tr>
<tr>
<td>May ICT and new integrated processes</td>
<td>NordicTIP’s</td>
<td>7-8 May 2007</td>
<td>Oslo, Norway</td>
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<tr>
<td>May Cultural heritage towards a sustainable built environment and a living cultural heritage</td>
<td>Greek TIP</td>
<td>21-22 May 2007</td>
<td>Athens, Greece</td>
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<tr>
<td>June Materials advanced building materials and technologies</td>
<td>Czech NTP</td>
<td>4 June 2007</td>
<td>Telč, Czech Republic</td>
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<tr>
<td>Nov Nanomaterials and Nanotechnologies for Construction Applications</td>
<td>Spanish NTP</td>
<td>5-6 November 2007</td>
<td>Valencia, Spain</td>
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#### 2008

<table>
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<td>Jan ICT</td>
<td>Polish NTP</td>
<td>23 January 08</td>
<td>Poland</td>
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<tr>
<td>Feb Energy Efficient Construction</td>
<td>Lithuanian NTP</td>
<td>February 2007</td>
<td>Vilnius</td>
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<tr>
<td>Mar - Apr Cultural Heritage</td>
<td>Slovenian NTP</td>
<td>6 June 2008</td>
<td>Slovenia</td>
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<tr>
<td>May Networks</td>
<td>Croatian NTP</td>
<td>23-25 May 2008</td>
<td>Croatia = Dubrovnik</td>
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<tr>
<td>Sep - Oct to be confirmed</td>
<td>UK NTP</td>
<td>sept./oct.</td>
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</table>
Newsletter 1: the process

1. GET AN IDEA
   - Visit the Eureka website to access the Strategic Research Agenda and relevant funding for the construction sector.
   - Attend the EurekaBuild workshop to gain an idea or join the consortium.

2. PRESENT YOUR PROJECT IDEA
   - Define goals and objectives of your idea.
   - Send the project form to the EurekaBuild secretariat.
   - Your idea will be published on the EurekaBuild website introduced to Eureka National Bodies.
   - Attend the EurekaBuild workshop to present your idea or join the consortium.
   - Declare your willingness to submit your idea to Eureka.

3. SET UP A PROJECT PARTNERSHIP
   - EUREKA projects have to be realised by participants from at least two EUREKA member states.
   - Find a partner who can contact your Eureka NRC or EurekaBuild Secretariat.

4. SECURE FINANCING FROM EACH PARTICIPANT
   - Obtain national funding schemes at EurekaBuild website.
   - Recognize financial support from national programmes by contact with your NRC.
   - Secure financing from a private source.

5. PREPARE A PROJECT PROPOSAL TOGETHER WITH YOUR PROJECT PARTNERS AND SUBMIT IT TO EUREKA
   - Download Eureka project documentation form and fill in all details.
   - Create and sign a consortium agreement.
   - Submit the completed project form to the Eureka National Bodies and Assembly (each partner has to send the application form to NRC in his own country).

6. VERIFICATION OF THE PROJECT BY NPC
   - The NPC of each participating country examined the application to ensure that the proposal meets the philosophy and criteria for EUREKA.
   - Participation fees at least two EUREKA member states.
   - Proposal of products which lead to an innovative product, process or service.
   - The project cannot be dedicated to the military subjects.
   - Financing of all contributions to the project must be secured.

7. PROJECT APPROVAL AND COMMENCE
   - If the project which fulfills the Eureka criteria is recommended by NPC to Eureka High Level Group (HLG) – the body authorized to grant Eureka status.
   - The project granted by Eureka HLG can officially begin.

8. PROJECT ANNOUNCEMENT
   - The application process formally concludes with a formal “announcement” of the new project at the next conference of ministers responsible for Eureka.

Supporting the process

<table>
<thead>
<tr>
<th>Stage</th>
<th>Responsible</th>
<th>Key advisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idea / initiative</td>
<td>Initiator</td>
<td>National NTP</td>
</tr>
<tr>
<td>Project definition and partnering</td>
<td>Intended project leader</td>
<td>National and foreign NTP</td>
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<tr>
<td></td>
<td>Appointed project leader</td>
<td>Funding bodies FA leaders</td>
</tr>
<tr>
<td>From proposal to project</td>
<td></td>
<td>NTP’s NUP’s and NPC</td>
</tr>
</tbody>
</table>
Eurekabuild Partners

- Austria
- Belgium
- Croatia
- Czech Rep.
- Denmark
- Finland
- France
- Greece
- Iceland
- Lithuania
- Netherlands
- Norway
- Poland
- Portugal
- Slovenia
- Spain
- Sweden
- Switzerland
- UK

2006 - 2009

www.ectp.org/eurekabuild2.sap
www.ectp.org/eurekabuild2.sap

Eurekabuild Projects

E!3790 Eurekabuild
secretariat.ectp@cstb.fr
www.ectp.org/eurekabuild2.asp
5. TARGET GROUP AND PARTICIPANTS OF THE WORKSHOP

The International Construction Fair BUDMA is held on 22-25 January every year. During that days fair was visited by over 65,000 attendees from 29 countries. Such a huge turnout confirms that the market is much interested in offers for the construction industry (for more informations http://www.budma.pl/en).

BUDMA is the biggest construction event in Poland, which brings together stakeholders from the whole international construction sector. Our target was to bring all of the target groups (three market players: construction based customers facilitators and promoters, technology providers and the finance sector) together and show them business possibilities in innovation.

There were three groups of Workshop participants:
- Representatives of companies from construction sector,
- R&D institutes,
- Representatives from Financing institutions (business angles, public founds).

Most of the participants registered themselves with a special questionnaire or by contacting coordinator by phone or e-mail. But as the Workshop was organized during the “Budma” any one who wanted to attend was much welcomed.
6. PROJECT PROPOSALS
EurekaBuild (E!3790) Project Idea Form

> **Title**

**ES15 - Integrated Platforms for Mass Housing Design and Construction**

**Describe your project idea**

The objective is to create a platform to promote the interaction among all stakeholders participating in the design and construction of mass housing throughout the whole building lifecycle. This platform would facilitate: 1. automatic generation of design solutions (housing layouts, housing aggregations) which will give rise to a knowledge-based system; 2. the integration of the design and construction processes around a building integrated model (knowledge-specific data extraction; building as assembly of components); 3. the communication among the stakeholders taking part in the processes, from design to construction, and from maintenance to demolition (customization of housing layouts with participation of users; integration of industrialized building components accessible from digital repositories; monitoring of building performance though computer model). The platform will have a modular architecture, and it will be based on existing technologies (web services, .NET, XML schemas), and it will support standards being developed by IAI and IFC. Batch processing might be used to generate and search optimal design solutions (housing layouts, blocks,…).

> **Please explain briefly your expertise**

ARC ([www.salle.url.edu/arc](http://www.salle.url.edu/arc)) is an interdisciplinary research group of Arquitectura i Enginyeria La Salle, Universitat Ramon Llull, Barcelona, Spain. We are coordinators of the research project **BAR_CODE HOUSING SYSTEM**, financed by the Spanish National Plan of R+D+I 2005-2005. The goal of this project is to develop an integrated design and construction system for housing built with industrialized methods. This research is based on a prototype application previously developed in the period 2001-2004 ([www.barcodehousing.net](http://www.barcodehousing.net)).

> **Please describe what your contribution will be to this project (financial, technological,…)**

We can provide the knowledge and expertise gained with the development of the prototype platform we are currently working on. In particular, we can provide knowledge on architectural systems (modular housing, architectural design) and information systems (web-based platforms, interface design, algorithmic processes of generation and search, 3d modelling and visualization). Associated partners currently working in the research project would bring additional knowledge in industrialized construction systems, and structural systems.

> **Explain which type of contribution you are looking for (financial, technological,…)**

We are interested in participating in an enhanced partnership which would include software developers, construction companies and public administrators.

---

**Contact information**

<table>
<thead>
<tr>
<th>Full name</th>
<th>Leandro Madrazo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email address</td>
<td><a href="mailto:madrazo@salle.url.edu">madrazo@salle.url.edu</a></td>
</tr>
<tr>
<td>Organisation name</td>
<td>ARC Arquitectura i Enginyeria La Salle (<a href="http://www.salle.url.edu">www.salle.url.edu</a>)</td>
</tr>
<tr>
<td>Address</td>
<td>Quatre Camins 2</td>
</tr>
<tr>
<td>City</td>
<td>Barcelona</td>
</tr>
<tr>
<td>Zip</td>
<td>08022</td>
</tr>
<tr>
<td>Country</td>
<td>Spain</td>
</tr>
<tr>
<td>Tel.</td>
<td>93 290 24 49</td>
</tr>
<tr>
<td>Fax.</td>
<td>93 290 24 20</td>
</tr>
<tr>
<td>Date</td>
<td>7.11.06</td>
</tr>
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</table>

To be sent back to [secretariat.ectp@cstb.fr](mailto:secretariat.ectp@cstb.fr) and [jrodriguezs@geocisa.com](mailto:jrodriguezs@geocisa.com)
### EurekaBuild (E!3790) Project Idea Form

#### PL04 - Networked Quality Management System For Concrete

**> Describe your project idea**

Networked Quality Management System For Concrete Building Industry.
The main objective of the project will be to make possible remote observation and quality controlling in concrete technology specially monitoring system of big-dimensional roofs.
The aim of the project will be to work out and create a monitoring system of big-dimensional roofs that will provide its safety. This system after the example of the fire-fighting system will monitor the technical condition of the roof construction in a continuous way. It will also indicate in advance possible security threat giving time not only to evacuate people but also to take an action towards restore technical efficiency of the construction.

**> Please explain briefly your expertise**

ITB is experienced in other monitoring systems for the concrete works in the construction.

**> Please describe what your contribution will be to this project (financial, technological,…)**

- concept and general project elaboration
- creation a back-up facilities for the modeling investigations
- creation of the prototype of monitoring installation
- realization of the system exchange

**> Explain which type of contribution you are looking for (financial, technological,…)**

Support in creation the Centre of the Informatics Services for the construction.
Technological: experience in electronics/informatics/surveying also electronics specialists

### Contact information

<table>
<thead>
<tr>
<th>Full name</th>
<th>Piotr Witakowski</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email address</td>
<td><a href="mailto:P_Witako@poczta.onet.pl">P_Witako@poczta.onet.pl</a>, <a href="mailto:P_Witako@itb.pl">P_Witako@itb.pl</a></td>
</tr>
<tr>
<td>Organisation</td>
<td>Instytut Techniki Budowlanej, Building Research Institute</td>
</tr>
<tr>
<td>Address</td>
<td>ul. Filtrowa 1</td>
</tr>
<tr>
<td>City</td>
<td>Warsaw</td>
</tr>
<tr>
<td>Zip</td>
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<tr>
<td>Country</td>
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</tr>
<tr>
<td>Tel.</td>
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</tr>
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**Date** | **14/09/2006**

To be sent back to secretariat.ectp@cstb.fr and … before Friday, September 15, 2006
EurekaBuild Workshop and Brokerage Event, Poznań, 22 January 2008

EurekaBuild (E!3790) Project Idea Form

PL03 - Knowledge Based Software for Geo and Transport Engineering

> Describe your project idea

Knowledge based software for computer aided design and management of industrial projects with application in geoengineering and transport infrastructure engineering. We create a hybrid, hard-soft code for individual use by an engineer, contractor or enterprise, based on his own professional experience included in an intelligent data-base. The final results should formulate a reasonable methodology of engineering computations taking into account local, non-technical (social, economical) core of the engineering activity. The new tool of computer aided design and management will help in more credible and very fast estimation of costs and resources in the local social and economical context of the engineering activity thus it will support the competitiveness of the user. The potential customers are individual engineers or enterprises all over the world.

> Please explain briefly your expertise

• Academic partners with experience in advanced computational mechanics, modern constitutive relationships for soils; artificial neural network simulations; field measurements, inverse modeling for data interpretation.
• Software developers.

> Please describe what your contribution will be to this project (financial, technological,…)

Financial and technological

> Explain which type of contribution you are looking for (financial, technological,…)

Financial and technological

Contact information

Full name Marek Lefik
Email address emlefik@p.lodz.pl
Organisation name Technical University of Lodz
Address Al. Politechniki 6
City Łódź Zip 90 924
Country Poland
Tel. 0048 42 631 35 92
Fax. 0048 42 631 35 92
Remarks

Date 14/09/2006 To be sent back to secretariat.ectp@estb.fr and … before Friday, September 15, 2006
# Eureka Build (E!3790) Project Idea Form

## Title of the project

**PLO8 - Integrated Informatics System of Construction Investment Process Management**

## Technological Area

Information Technology

## Project objectives

The aim of the project is to create integrated informatics system of construction investment process management. The system would cover all participants of construction investment - from the investors and designers, through investors' inspection of executors and their subcontractors, to the suppliers. Application of the mobile technology in the system could lead to increase in the speed of data flow and then, as a result, to increase in the tempo and accuracy of decisions taken by management.

## STAGES OF CREATING THE SOFTWARE

### Stage I – Modeling and designing

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Participants</th>
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</thead>
<tbody>
<tr>
<td>Analysing and building up the model of integrated informatics system of construction investment process management by using the UML diagrams (partner countries)</td>
<td>Analytics and Designers of informatics systems and Experts.</td>
</tr>
<tr>
<td>Attempt of identification the common elements in the model of integrated system of construction investment management.</td>
<td>Analytics and Designers of informatics systems and Programmers.</td>
</tr>
<tr>
<td>Selection of the programming technology</td>
<td>Programmers</td>
</tr>
</tbody>
</table>

### Stage II – Implementation

<table>
<thead>
<tr>
<th>Databases</th>
<th>Database Programmers</th>
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<tbody>
<tr>
<td>Software</td>
<td>Programmers</td>
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</table>

### Stage III – Implementation, tests and changes

<table>
<thead>
<tr>
<th>Implementation</th>
<th>Implementation firms/ companies</th>
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</thead>
<tbody>
<tr>
<td>Testing and evaluation of the system</td>
<td>Experts</td>
</tr>
<tr>
<td>Introducing changes to the system model</td>
<td>Analytics, Designers and Programmers</td>
</tr>
<tr>
<td>Implementation of accepted changes</td>
<td>Programmers</td>
</tr>
</tbody>
</table>

## Potential impact *(economic, environment, social, other ...)*

- shorten time of the investment and as the result the costs of realization
- make/ create the conditions which let to consolidate all participants of construction investment process
- introduce the standard of the construction investment project’s integrated management (improve of international projects)
- better control of quality and time of work execution at different levels
- fast, easy and remote access to information at different decisions making levels.

## Market application and exploitation

The project’s main target group are: executive companies and other participants of the process of the construction investment project management.

## Partner expertise *(please explain briefly)*
**Partner contribution to the project (financial, technological,...)**

American Systems of Marketing will realize the stage of the system implementation. It will also participate in the final stage of the system’s analyzing and designing. Moreover, after the software testing, ASM will realize possible implementation changes in the system.

**Type of contribution searched (financial, technological,...)**

- informatics or consulting companies involved in designing of informatics system by using UML
- companies that have the experience in implementation and managing of integrated informatics systems

Experts:
- contractors
- building supervision companies
- designing companies
- architects

**Estimated duration of project (months)**

36 months

**Estimated budget (in Euro)**

About 1,5M EUR (depends on the number of project partners)

<table>
<thead>
<tr>
<th>Contact information*</th>
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<tbody>
<tr>
<td>Full name</td>
<td>Robert Bagiński</td>
</tr>
<tr>
<td>Email address</td>
<td><a href="mailto:r.baginski@american-systems.pl">r.baginski@american-systems.pl</a></td>
</tr>
<tr>
<td>Organisation name</td>
<td>American Systems of Marketing</td>
</tr>
<tr>
<td>Address</td>
<td>Ul. Grunwaldzka 5</td>
</tr>
<tr>
<td>City</td>
<td>Kutno</td>
</tr>
<tr>
<td>Zip</td>
<td>99-300</td>
</tr>
<tr>
<td>Country</td>
<td>Poland</td>
</tr>
<tr>
<td>Tel.</td>
<td>+48 24 355 92 04</td>
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</table>
### EurekaBuild (E!3790) Project Idea Form

#### Title

**AT01 – PHLICS Probabilistic Health and Lifetime Identification of Concrete Structures**

#### Describe your project idea

The project is focused on the conceptual theoretical development and practical utilization of the probabilistic advanced analysis of concrete structures based on integration of non-linear structural analysis, reliability techniques and health monitoring approaches in order to assess reliability of existing concrete structures and its remaining service life (mainly bridges). The aim is to develop a complex system for individual reliability assessment. The system will be based on a synthesis of the following topics (expected contributors to topics from individual projects are included):

- Health monitoring of structures
- Laboratory experiments
- Material and loading stochastic database development
- Advanced nonlinear FEM computational modelling using advanced constitutive laws
- Inverse FEM analysis – material parameters identification
- Reliability assessment via modelling of uncertainties by random variables
- Spatial (time) variability modelling using random fields (processes)
- Material degradation modelling
- Life cycle, cost and risk analysis

Development and implementation of reliability techniques utilizing small number of samples will be essential and will enable to model also the spatial random variability of material properties. The economical consequences, maintenance planning.

#### Please explain briefly your expertise

The Institute of structural engineering (IKI) is the Austrian knowledge institute for safety and reliability-structural engineering. With over 10 years of experience in structural and probabilistic modelling, monitoring and design of engineering structures, IKI has a sound scientific reputation worldwide. Our experience involves laboratory work, physical modelling, numerical modelling and consultancy work.

IKI works together with government offices and other science institutes on the university level. The participating organisations import knowledge and research with each other. In that way, they bundle their strengths, and form a strong knowledge network. IKI’s objective is to contribute to the growth of the knowledge economy in Austria in an enduring and permanent way. IKI aims at a critical but foremost sustainable use of public wealth in the field of structural engineering.

#### Please describe what your contribution will be to this project (financial, technological,…)

Knowledge on monitoring, nonlinear probabilistic modelling and assessment of critical and large engineering structures.

#### Explain which type of contribution you are looking for (financial, technological,…)

We are part of the Department of Civil Engineering and Natural Hazards, working on a national network for safety research following the goals of the Federal Ministry of Transport, Innovation and Technology and the Federal Ministry of Agriculture and Forestry, Environment and Water Management. This project idea has been worked out in the cooperation with Brenner Autobahn (Italy); the Institute of Structural Mechanics and Chemistry, Faculty of Civil Engineering, Brno University of Technology, Czech Republic and Cervenka Consulting software and research company, who have long experience in the fields of probabilistic modelling, nonlinear modelling of concrete structures and inverse damage identification. We are looking for industrial partners (application, financial support) or partners with a similar complementary profile and expertise.
<table>
<thead>
<tr>
<th><strong>Contact information</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full name</strong></td>
<td>Alfred Strauss</td>
</tr>
<tr>
<td><strong>Email address</strong></td>
<td><a href="mailto:alfred.strauss@boku.ac.at">alfred.strauss@boku.ac.at</a></td>
</tr>
<tr>
<td><strong>Organisation name</strong></td>
<td>University of Natural Resources and Applied Life Sciences, Vienna; Department of Civil Engineering and Natural Hazards</td>
</tr>
<tr>
<td><strong>Head of department</strong></td>
<td>o.Univ.-Prof. DI DDr. Konrad Bergmeister M.Sc.</td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td>Peter Jordan Strasse 82</td>
</tr>
<tr>
<td><strong>City</strong></td>
<td>Vienna</td>
</tr>
<tr>
<td><strong>Zip</strong></td>
<td>A 1180</td>
</tr>
<tr>
<td><strong>Country</strong></td>
<td>Austria</td>
</tr>
<tr>
<td><strong>Tel.</strong></td>
<td>0043-1-47654 5254</td>
</tr>
<tr>
<td><strong>Fax.</strong></td>
<td>0043-1-47654 5299</td>
</tr>
<tr>
<td><strong>Remarks</strong></td>
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</tbody>
</table>
**EurekaBuild (E!3790) Project Idea Form**

| > **Title** | ES23 - Development of High-Performance Composite Material Panels for Multi-Functional Envelopes on the Construction Market |
| > **Describe your project idea** | Building envelopes, seen as the boundaries between the building itself and its surroundings, must offer several functions. These functions ought to cover mechanical, thermal, degradation, and aesthetical issues, and composite materials are called to solve some of these needs, by means their advantages and their behaviour under working conditions. The aim of this project is to develop composite material panels that take into account multi-functional capabilities and that open new markets on building construction with technical, economical and environmental advantages. This development will be focused on both polymer-based and cement-based matrix composite panels, considering several non-conventional reinforce systems (glass fibre, steel fibres, natural fibres, and construction and demolition waste) and research tasks will be done including manufacturing processes, characterization techniques and building systems related with claddings. |
| > **Explain briefly your expertise** | alonso hernández asociados arquitectos S.L. (ah) is an architecture office with in Pamplona, Bilbao and Barcelona. The aim of the company has been to give services of planning, design, project management, and building, with a huge experience in housing, public building and urbanism. Currently ah has a R&D Department that works on the development of building materials and building systems, the promotion of bio-climatic / sustainable architecture, and the study of energy behaviour of buildings. At this time, the company is carrying out research projects with several universities and companies in Spain and Portugal. |
| > **Describe your contribution to this project (financial, technological,…)** | The contribution will be on one hand technological, by means of the know-how of the company, and the experience of our architects and engineers On the other hand, as an architecture office, we have the potential for setting down the systems developed on real scale building, with advantages on control, measurement, characterization and adjust of purposed solutions, and we can participate as architecture designers of building envelopes. |
| > **Explain which type of contribution you are looking for (financial, technological,…)** | We are looking for financial support and technical partnership in order to carry out research projects on the construction market, with special interest on building materials and building systems related with envelopes (claddings and facades). |

| **Contact information** | |
| Full name | Rufino Hernández Mingüillón / Miguel Ángel Alonso del Val |
| Email address | rjhdez@ahasociados.com / adeval@ahasociados.com |
| Organisation name | alonso hernández asociados arquitectos S.L. |
| Address | C/ Ciudadela, 7 – 1º |
| City | Pamplona | Zip | 31001 |
| Country | Spain |
| Tel. | + 34 948 211 767 |
| Fax. | + 34 948 211 791 |
## EurekaBuild Project Idea Form

### Title
Preventive network maintenance management system (PNEMSYS)

### Describe your project idea
On-site monitoring as well as the use of NDT methods in concrete structures is a key issue in a long-term maintenance schema. It is also of most importance their role as tools for reliable predictions of performance and as a consequence, to reduce service life costs, prevent premature repairs while contributing to the refinement of present solutions and to the reduction of energy consume. The aim of this project is the development of an integral maintenance approach, focused on the major network concrete infrastructures (bridges, tunnels, etc.) by promoting the use of embedded sensors as well as non-permanent on-site techniques to detect and prevent concrete durability related problems. It includes not only the integral design approach but also the development of the specific sensors as well as the selection of the corresponding data storage devices and data analysis methodologies in order to improve its structural safety and durability as well as cost-efficiency.

### Please explain briefly your expertise
The consortium currently consists of two partners:
- **GEOCISA** is a company that holds an intense activity in the field of road management both in works developed for construction companies and road managers and in R&D projects.
- **Institute E. Torroja** is a research centre composed by a multidisciplinary research team dealing with the design, evaluation and analysis of concrete structures. Its expertise covers mainly topics related to safety and durability of concrete structures.

### Please describe what your contribution will be to this project (financial, technological, ...)
Technological

### Explain which type of contribution you are looking for (financial, technological, ...)

### Contact information

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<tr>
<th>Field</th>
<th>Details</th>
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<tbody>
<tr>
<td>Full name</td>
<td>Wouter van Bijsterveld(1) / Juan Jesús Muñoz(2) / Olga RIO(3)</td>
</tr>
<tr>
<td>Email address</td>
<td><a href="mailto:WvanBijsterveld@geocisa.com">WvanBijsterveld@geocisa.com</a> / <a href="mailto:JMunoz@geocisa.com">JMunoz@geocisa.com</a> / <a href="mailto:rio@ietcc.csic.es">rio@ietcc.csic.es</a></td>
</tr>
<tr>
<td>Organisation name</td>
<td>GEOCISA(1,2) / Institute of Construction Sciences E. Torroja-CSIC(3)</td>
</tr>
<tr>
<td>Address</td>
<td>GEOCISA: Calle de Los Llanos de Jerez 10-12 / Institute of Construction Sciences E. Torroja c/Serrano Galvache, 4</td>
</tr>
<tr>
<td>City</td>
<td>Coslada (Madrid)(1,2) / Madrid(3) / Zip 28220(1,2) / 28033(3)</td>
</tr>
<tr>
<td>Country</td>
<td>Spain</td>
</tr>
<tr>
<td>Tél.</td>
<td>+34 91 91 660 30 00 (1,2) / +34 91 302 04 40 (3)</td>
</tr>
<tr>
<td>Fax.</td>
<td>+34 91 91 671 64 60 (1,2) / +34 91 302 07 00 (3)</td>
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Date: 19 Jan. 2007 To be sent back to secretariat.cctp@csib.fr and...
EurekaBuild Project Idea Form

Title

Time Out Spots: the smart parking spaces

Our project idea

The development of time out spots: special parking spaces near the main highways. Intelligent traffic information systems at highways inform car drivers about actual travel times and give advice whether it is efficient to continue driving or to visit a time out spot. At those parking lots wireless internet is available (e.g. for videoconferencing) and on each parking lot a private flat screen gives the car driver the availability to check actual travel times to his or her destination and provides advice whether or not it is worthwhile to start driving again. The screen also gives the driver the opportunity to see a TV-programme of his or her choice. Several services are available on request: meals, snacks and drinks can be served at your car, hairs can be cut, shoes polished, clothes repaired etc. Time out spots reduce traffic jams and air pollution and provide car drivers with comfort and efficient use of valuable time.

Our expertise

PRC advises companies, governments and institutions in the fields of construction, housing, town and country planning, infrastructure, real estate and sustainable development. PRC makes strategic policy recommendations, monitors the progress of change, carries out feasibility studies and draws up housing plans. In addition, they manage projects, supervise their execution and advise on management and maintenance.

Our contribution to this project

- Feasibility study
- Risk management
- Contract management
- Project management

Requested contribution

- Technological
- Financial

Contact information

Full name: Ruud Loeve
Email address: r.loeve@prc.nl
Organisation name: PRC B.V.
Address: P.O. Box 1051
City: Bodegraven
Country: The Netherlands
Tel: +31 (0)172 611902
Fax: +31 (0)172 611902
Zip: 2410 CB
EurekaBuild Workshop and Brokerage Event, Poznań, 22 January 2008

EurekaBuild (E!3790) Project Idea Form

> **Title**

buildingSMART Knowledge Platform

> **Describe your project idea**

Bringing theoretical AEC-knowledge into a BIM based building process. SINTEF Building and Infrastructure has a vast pool of best practices and knowledge valuable to the AEC/FM Industry. By clever usage and development of buildingSMART Technology, it is possible to build a standards based knowledge platform, and greatly increase the value for various end-users in the AEC/FM Industry. The project will produce an open standards based knowledge platform, aimed at Integrated BIM users. All three standards, IFC, IFD and IDM/MVD will be used and necessary for the success of the project. The platform will help knowledge providers build their own systems for efficient knowledge delivery in a standards compliant way.

> **Please explain briefly your expertise**

SINTEF Building and Infrastructure are experts on the IFD, IFC and IDM/MVD standards. We have one of the founding members of the IFD standard, a member of MSG (developers of the IFC standard) and are leading the development of the IDM/MVD ISO standard. This combined experience has triggered our interest in an open standards based knowledge platform for a BIM based AEC/FM Industry.

> **Please describe what your contribution will be to this project (financial, technological,...)**

Technological.

> **Explain which type of contribution you are looking for (financial, technological,...)**


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**Contact information**

**Full name**  
Håvard Bell

**Email address**  
Havard.bell@sintef.no

**Organisation name**  
SINTEF Building and Infrastructure

**Address**

**City**  
Zip

**Country**  
Norway

**Tel.**  
+47 9888 2929

**Fax.**

**Remarks**

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**ECTP Priority** (Please select one or more from the list below)

| H |

**Kind of partner expected** (please select one or more from the list below)

| F,I,R,O,C |
EurekaBuild Workshop and Brokerage Event, Poznań, 22 January 2008

# EurekaBuild (E!3790) Project Idea Form

<table>
<thead>
<tr>
<th>&gt; Describe your project idea</th>
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<tr>
<td><strong>TELINSPEX</strong></td>
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<tr>
<td>The project is intended to develop a complete automated chain for acquisition and treatment that to information and communication technologies, intended for the inspection of civil engineering structures or, in other words a virtual inspection kit, dedicated to the detection of major problems that can be observed visually on the structures. This chain of acquisition will be designed to fulfill the expectations of the persons responsible for the inspection of the structures at an instrumentation level but also to make it possible particularly to use a civilian drone making it possible to get closer to the structures. The project will focus on the detection, characterisation, localisation and interpretation of problems on very large structures for which a regular inspection (delicate in relation to access) is necessary (e.g. bridges) or almost impossible (cable-stayed bridges, or large air cooling towers).</td>
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<th>&gt; Please explain briefly your expertise</th>
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<tr>
<td>BBRI Expertise in this domain:</td>
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**Parmentier B. & Van Ginderachter C. (2003)**  


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<th>&gt; Please describe what your contribution will be to this project (financial, technological,...)</th>
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<td>BBRI can achieve a classification and characterisation of faults with a view to automation of the detection and construction of a database of images of faults on the basis of the classification.</td>
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The aim of this part of the project is to develop a classification of the most important faults on structures with a view to automating their detection. This study will be based on work already realised on the subject (fib, Manuel Contevet, Projet Samaris, ConRepNet) but it will be adapted with a view to its implementation for the purposes of the automation of the detection of these faults. The identification of auscultation techniques will be assured allowing the identification of the faults to highlight the possibilities and limitations of visual inspection. This classification will be established on the basis:

- of the physical deterioration process
- of the consequences of this deterioration on the structure (locally)
- of the consequences of these deteriorations on the structure (globally)
- of the localisation of faults on the structure (potential)

In this way, it will be possible to know all the physical sizes that may characterise each type of fault, principally visually. For example, cracks are characterised by an opening (of which the lower detection limit may be defined), a length and an orientation. These are local descriptors but to which it is also possible to attach global positioning information on the structure.

In parallel, the implementation of criteria to assist decision making for risk management is provided. It will result from a series of criteria based on the basic inspection report. On the basis of different measurements, it is firstly possible to evaluate the need for an in-depth inspection and then to establish a diagnostic and propose a response:

1. Repair  
2. Protection  
3. Reinforcement  
4. Replacement/Demolition  
5. Adaptation  
6. Do nothing / increase the frequency of inspections

The establishment of a methodology based on the correlation between different measurement results will be attempted. This methodology should not completely replace the analysis of the engineer responsible but must allow him to accelerate his choices on the basis of objective data.

**Establishment of a database of images of faults on the basis of the classification**

On the basis of the classification of faults, these are characterised physically, classified and listed in a database (of images). There it is a question of associating descriptors (principally visual) associated to each problem. This database will initially be supplied with a large number of listed case-studies (on site visits, inspection reports already in hand, etc.). It relates to creating an initial input of a software solution. The creation of this database will allow data to show any visual differences between the same faults. It will also be possible to see to what extent visual information may contribute to additional information in relation to their initial goal. In this way it will be possible to establish whether "secondary" parameters may be identified on the basis of the basic inspection. For example, the surface of burst concrete may give information on the depth of the cover of the reinforcement (in the event of corrosion). Correlations with the type of structure, the quality of the concrete, etc. may be realised.

The origin of the problems (mechanical, physico-chemical, etc.) will also be associated here and the associated repair solutions.
BBRI can also carry on specialized measurements campaigns on site.

> Explain which type of contribution you are looking for (financial, technological,...)

*Technological partners in :*

**A) Definition of the hardware acquisition chain for the visual inspection :**

Definition of the specifications for the image acquisition subsystem:
- Illumination specifications;
- Camera objective specifications;
- Detector specifications;
- Signal and image pre-processing specifications.
Design of the image acquisition subsystem:
- Mechanical Interface Control Document;
- Electrical Interface Control Document;
- Optical Interface Control Document;
- Software Interface Control Document.
Simulation of the performance of the image acquisition system;
Building of a image acquisition subsystem breadboard;
Evaluation of the image acquisition subsystem breadboard;
Measurement of the Minimum Resolvable Contrast
Reporting design results at PDR, CDR, FDR.

**B) GIS and GPS systems to localise the faults on the structure**

**C) Specialists of Images processing, classification, identification of problems on civil engineering structures by using specific subroutines**

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Date | To be sent back to secretariat.ectp@cstb.fr and … before Friday, September 15, 2006
7. RESULTS AND OUTPUTS OF THE EUREKABUILD WORKSHOP AND BROKERAGE EVENT.

The EurekaBuild workshop confirmed that:

− Construction market stakeholders in Poland has low knowledge about financing instruments especially in area of private financing. Polish Economy (especially construction sector) has very low level of innovative projects and innovation awareness in construction companies (comparing with other EU countries). There are no public founds dedicated only for construction although number of founds are open for the sector.

− Private capital investment (BA) in Poland is on the stage of development. They have until now a few investments. There are no investments done in construction sector.

− The need to develop more “good practice”, “case studies” examples. The great interest had the EUREKA success story presentation which is a sign to. Such presentation are more appealing especially to companies who look for market indicators of innovation success.

− It has been visible an interest from market to advice how to find investor for new products/technology.

− Strong necessity to rise awareness of investors /public and private/ about potential of construction sector.

Outputs:

- Few project ideas gain interest of Business Angels and will carry on contacts and have potential to find investor
- Three ICT related EUREKABUILD projects defined partnership and next steps for collaboration
- Two new ideas were presented and evaluated
8. IMPRESSIONS