

ICT and E-Business in the Construction Industry: Implications for Firm Productivity and Policy

An *e-Business W@tch* Workshop

Brussels, 10th June 2005

About 20 international participants from industry, academic and research communities and the European Commission attended the workshop on "ICT and E-Business in the Construction Industry", organised by **e-Business W@tch** in co-operation with UEAPME.

1 Background and programme

The enlargement of the European Union has important implications for firms in the construction industry. Competition and rivalry among players is further increasing as companies are searching for strategies to expand into the new markets. The scenario is shaped by consolidation, industrialisation and specialisation processes.

In this market environment, the ability of construction companies to use information and communication technologies (ICT) and to manage business processes electronically gains critical importance. This can be a challenge and, as a result, a competitive disadvantage for small and medium-sized enterprises (SMEs).

The purpose of the workshop was:

- To present this year's results of the *e-Business W@tch* for the building and construction sector;
- To present cases of recent innovative projects regarding e-business in the construction sector;
- To discuss the current ICT trends and challenges in the European construction industry, notably its many SMEs, with industry representatives and e-business experts;
- To discuss possible policy implications.

The agenda for the meeting was the following:

- Introduction: e-Business as a European Policy Concern, Kasper Ovesen, Ramboll Management
- e-Business related activities of the European Commission, DG Enterprise & Industry, Georgios Karageorgos, European Commission, DG Enterprise & Industry
- Electronic business in the construction industry: the state of play, Kasper Ovesen, Ramboll Management
- The national Dutch PAIS initiative, Dirk Spekkink, UNETO-VNI

- e-Business in Construction: a European SMEs perspective, Freek Posthumus, NORMAPME
- The road to opportunity in e-construction: the BILD-IT project, Michel Brachmond, directeur-adjoint of the Chambres des Metiers of Luxemburg
- Policy implications & concluding discussion

2 Major Points

The *e-Business W@tch* study explores the development and implications of information and communication technologies (ICT) and electronic business in the construction sector. The construction sector is defined as NACE Rev. 1 Codes 45.1-45.5, including a wide range of enterprises involved in site preparation, construction supply lines and concrete work, design and construction of buildings, building elements and steelwork, building installation and joinery, maintenance and repair.

The *e-Business W@tch* data 2005 shows that the construction industry is far behind the other 9 sectors analysed this year in uptake and use of e-business technologies. This includes all four main areas of the e-business scoreboard: A. Connectivity of the enterprise, B. Internal business process automation, C. Procurement and supply chain integration and D: Marketing and sales.¹ The participants agreed that the explanation is a combination between the industry structure (many small enterprises, the type of product, etc.), cultural and organisational barriers. On the other hand, participants also saw a potential for productivity increase in the construction industry through use of ICT and e-business applications, e.g. for more efficient project management, more efficient procurement or for collaboration.

Standardisation and interoperability are key factors in this respect. The Dutch PAIS initiative and the Luxemburg BILD-IT project showed some of the barriers for increased use of e-business in construction by illustrating the difficult process of standardising internal and external exchange of business documents over ICT systems. In both cases, even agreeing upon a common set of standards at national level has proved to be a very lengthy and costly process, which is still ongoing. It should be added, that standardisation at international level, which is important given the increased globalisation, increases the complexity manifold. However, important lessons regarding raising awareness, establishment of a common understanding and involvement of stakeholders can be learned from these projects.

3 Policy implications

The examples presented during the workshop and experiences reported from other EU member states indicate that the potential of e-business to increase productivity and efficiency in the construction sector is far from exploited. Rather, the relatively low level of use suggests that the development has only just started.

Participants, therefore, agreed that policy actions that facilitate uptake of relevant ICT are well justified. Based on the discussions, three areas of policy actions were identified as most appropriate and cost-effective. The three areas were:

1. Increasing the **awareness** of ICT benefits and potentials
 - i. Develop analytical tools for cost-benefit assessments of IT-investments (Return on Investment, Total Cost of Ownership etc.). Calculate examples of cost-benefit of productivity enhancing IT-investments.
 - ii. Benchmarking of companies and IT-investments.
 - iii. Identify good practices and communicate potential business benefits of productivity enhancing technologies.

¹ **NB:** Further information on the e-Business Scoreboard is available at ...

2. Training

- i. Training to SMEs and stakeholders such as business associations, industry federations and consultants to improve understanding of IT strategy, IT architecture, standard platforms, etc.

3. Facilitating the process of **interoperability**

- i. Agree on standards for the basis of e-collaboration practices (exchange of business documents);
- ii. Agree on standards for product classification, including IFCs (Industry Foundation Classes).

4 Further information:

Workshop proceedings (agenda, background information, all the presentations, list of participants) are also available for download at the *e-Business W@tch* website (under 'events' at www.ebusiness-watch.org). For further information, questions and input you are welcome to address:

e-Business W@tch

c/o empirica GmbH

Oxfordstraße 2

53111 Bonn - Germany

Tel +49(0)228-98530-0

Fax +49(0)228-98530-12

info@ebusiness-watch.org