

# European Trend Chart on Innovation

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## Conference on e-Business & Innovation

“The objective of the conference is to discuss key success factors for e-business & innovation. The more adapted policy instruments will be challenged and recent policy developments to address these two concepts in parallel will be analysed”

Brussels, 26 –27 May 2005

### *Scoping Paper*

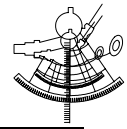
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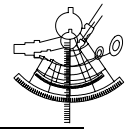


### SUMMARY

This paper sets out the scope of the conference on e-Business & Innovations that is organised on behalf of the European Commission Directorate-General Enterprise and Industry. The objective of the conference is to gain better understanding of the relation between e-business and innovation. It is discussed to what extent e-business and ICT is still a driver for innovation and economic growth and in which part of the innovation process e-business may offer advantages for companies.

The importance of e-business is reflected by the wide range of policies and instruments European Member States have deployed in order to create a favourable environment for e-business and facilitate the structural change towards the knowledge economy. Very few instruments however focus on e-business as a tool for innovation. These best practises examples and “lessons learned” will be discussed during the conference.

Finally the strong relation between e-business and innovation demands also a change of public governance as in many countries e-business issues and innovation policy is addressed separately. Linkages between these two policy areas however emerge in several countries. The conference will focus on the relation between e-business policy and innovation policy and discuss emerging trends in governance of these two related policy fields.



# 1 Introduction

Within the frame of TrendChart<sup>1</sup> the aim of this conference is to look more closely at the relationship between innovation and the implementation of e-business tools. The areas of e-business and innovation have historically been looked at individually and this conference provides an opportunity to bring these two interrelated concepts together.

This conference offers a platform to policy makers and industry representatives to discuss in greater depth and exchange experience on the linkages between the two concepts and also policies and programmes that are being used to affect change successfully. The conference will especially focus on:

- Understanding the relation between e-business and innovation
- Identification of best policy initiatives that support the development of e-business and innovation
- Discussing emerging trend in governance of e-business and innovation

Chapter 2 will provide some more background about the relation between e-business and innovation and the role of e-business in the innovation process of a firm. Chapter 3 focuses on types of policy instruments –and the policy fields where they originate from - that are being used to address e-business. Chapter 4 provides some background about the governance of e-business and innovation and to what extent these two policy concepts are becoming interrelated.

# 2 E-business and innovation

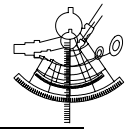
E-business is a topic that has been widely discussed over the last decade as an important tool for companies embracing the information society. This issue was originally just perceived as e-commerce but this has quickly become absorbed by the term of e-business which depicts a more dynamic relationship between all business processes and technology. The European Commission defines electronic business (e-business) as the productive use of information and communication technologies (ICT) to support both internal and external business processes<sup>2</sup>.

It has changed the way that organisations compete, cooperate and deliver services across the private and the public sector. This has created opportunities and threats. Opportunities for their use as tools within the business process, improving efficiency and flexibility, more customer and market orientated, and promoting innovation. Threats as companies come under increasing competition, with shorter product life cycles and the opening up of global markets.

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<sup>1</sup> <http://www.trendchart.org>

<sup>2</sup> <http://www.europa.eu.int/comm/enterprise/ict/policy/econ-anal/index.htm>



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E-business has the potential to affect users' behaviour, business processes and the socio-economic system and therefore has always attracted a high level of attention from policy makers. The European Commission is committed to helping the Member States to take advantage of e-business and in 2002, the industry council conclusions (6 June 2002) invited Member States and the European Commission to *Intensify dialogue, exchange regularly experience, identify specific goals for e-business and to share best practice.*

### 2.1 E-business as driver for innovation?

However, e-business cannot just be looked at as an isolated phenomenon. It is an expression of the wider process of change and innovation which takes place within companies. Innovation<sup>3</sup> itself is a principal key to the prosperity of companies and the combination of innovation and technological developments like e-business can lead to new and improved products, processes and services that are vital to future competitiveness.

Other<sup>4</sup> argue that the e-business and ICT has become a commodity good (or infrastructure technology) which is available to everyone and is not anymore a strategic device for companies to gain competitive advantage or improve innovation. On the other hand *how* companies actually use opportunities offered by e-business and ICT differs strongly and determines their innovative behaviour and economic advantage. E-business affects innovation within companies in two ways:

- Efficiency gains via process innovations (e.g. transforming business processes through technology)
- The creation of new products or services (innovations)

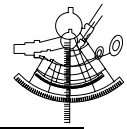
Therefore there are clear linkages between innovation and e-business. Below is a classic diagram which shows how innovation takes place within the marketplace (Exhibit 1) with the **coupling** between the market, science and technology.

E-business can be used at any point in the system as a tool for innovation, effecting process, product or management change. This includes marketing and communication, supply chain management and newer areas of knowledge management and codification. To what extent companies are able to integrate e-business tools into their innovation process determines improvements in (economic) performance and innovation.

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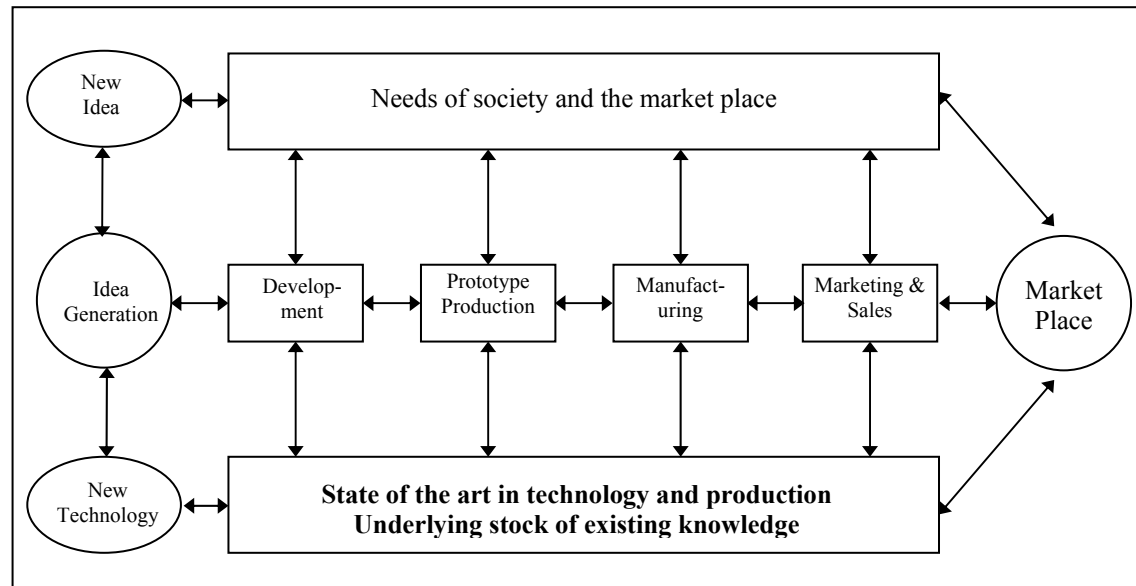
<sup>3</sup> Innovation is defined as a new or significantly improved product (good or service) introduced to the market or the introduction within an enterprise of a new or significantly improved process (CIS3 – Community Innovation Survey). Innovations are based on the results of new technological developments, new combinations of existing technology or the utilisation of other knowledge acquired by the enterprise.

<sup>4</sup> Nicholas Carr. 2003. IT doesn't matter. Harvard Business Review. May 2003.



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### Exhibit 1 Modern 'Coupling' Model of Innovation



**Source:** Mowery, D.C. and Rosenberg, N., 'The Influence of Market Demand upon Innovation: A Critical Review of Some Recent Empirical Studies', *Research Policy*, April 1978

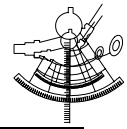
## 2.2 Questions challenged at the conference

This leads to interesting questions about the relationship between e-business and innovation which will be explored in the conference.

- Is e-business a commodity or a driver to innovation?
- Where is it within the innovation model that e-business can be successfully applied?
- What type of evidence is there that e-business has improved performance and innovation?
- Is there a causal link between company's ability to innovate and their use of e-business?

## 3 Practical instruments to support the promotion of innovation and e-business

The push from industry and government to encourage companies to do e-business at the basic level has reaped its rewards. Figures from the latest *e-Business W@tch* report have shown that more than one quarter of firms had broadband by late 2003 and that almost half of all firms buy supplies online. B2C electronic commerce is



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gaining momentum in specific markets and more companies are taking up business process integration<sup>5</sup>. However, research shows that there are large differences in the rate of progress in e-business development within the EU, mainly related to three aspects:

- Regional factors
- Sectoral factors
- Firm size

Firstly, Nordic and some Western European countries are fast and sophisticated adopters of e-business while the situation is entirely different in regions with less developed economies, particularly in Southern Europe.

Secondly, the 10 sectors studied by the *e-Business W@tch* in 2003/04, showed variations in the use by sectors with the most intensive use of ICT and e-business being made by companies from the ICT services sector, manufacturers of transport equipment and of electronics and electrical machinery. The textile industries and the health & social services sector are among the late adopters of e-business. Although this is partly explained by the dominance of SMEs in these sectors.

Thirdly, there is a significant gap between SMEs and larger enterprises in terms of using the Internet as an efficient business tool or using advanced e-business techniques. As a consequence, many policy initiatives to promote ICT and e-business adoption focus on SMEs.

### 3.1 Policy instruments

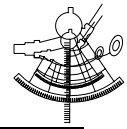
It is an objective of European enterprise policy to facilitate the structural change towards the knowledge economy, by addressing the specific needs of SMEs and creating a favourable environment for e-business. European Member States have deployed a wide range of policies and instruments.

The following table (Exhibit 2) gives an overview of the types of policy instruments – and the policy fields where they originate from - that are being used to address e-business<sup>6</sup>.

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<sup>5</sup> The European e-business report – A portrait of e-business in 10 sectors of the EU economy 2004

<sup>6</sup> Friedewald et al. 2004. Benchmarking National and Regional policies in support of the competitiveness of the ICT sector in the EU. Fraunhofer Institute Systems and Innovation Research. Karlsruhe. Germany. Prepared for the European Commission DG Enterprise, Benchmarking e-business policies for SMEs, GD Enterprise 2002



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### Exhibit 2 Classification of policy fields

Policy field	Sub field	Examples <sup>7</sup>
Innovation Policy	R&D funding	-Ireland: E-business Acceleration Fund -France: RNTL, RNRT
	Demonstration and test centres	-Sweden: K+ Competence centre programme -IMEC -Norway: e-Handel.no for marketplace development -Germany: Network e-commerce Nord-Rhein Westphalia -Denmark CAIT- Centre for Applied IT -NL: Gigaport
	Technology transfer, Partnership, Networking	-Sweden: Svea -UK/Wales BLOC workshops <a href="http://www.bloc.org.uk/">http://www.bloc.org.uk/</a> -NL: SME support Networks
	Provision of data, Market analysis, supporting studies	-Denmark: ICT index -EU: e-Business Watch
	Incubators and innovation clusters	
Human Capital Policy	Specific support schemes for ICT sector SMEs	-PRISM III Ireland
	Skills and training	-Spain: Forintel -UK: Technology means business -IT: Skillspass programme -Sweden: SME link
	Employment policy	-The Green Card Initiative
Financial and Tax policy	Fiscal incentives	-UK R&D fiscal incentives for SMEs -Spain: Venture Capital fund for e-business
Investment Climate	Non-fiscal inward investment support	-Semiconductor Region Dresden
	Trade support, export market stimulation	-Intertrade Ireland

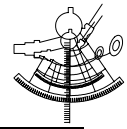
Source: Friedewald et al. 2004

### 3.2 Questions challenged at conference

The exhibit 3 reveals the interrelation between e-business and other policy fields, especially innovation policy. During the conference instruments to support the promotion of e-business and innovation will be discussed in more detail. Specific questions to be discussed are:

- Where can policies and programmes be found that directly affect the e-business and innovative capabilities of firms and is this linked to specific policy fields (e.g. innovation policy)?
- How are SMEs actively involved in such programmes?
- Are the successful initiatives and instruments transferable to other Member States?

<sup>7</sup> Extracted from Benchmarking e-business policies for SMEs (2002) and Trend Chart



### 4 E-business & innovation systems of governance

The political powers and authorities in Europe are increasingly dispersed with many countries having devolved service delivery through regional and local authorities and agencies. The growing importance of *multilevel governance* leads to a complex picture of responsibility and makes it difficult to drill down and understand the linkages between the governance structures and the overall effect of policies and decision-making at the different levels.

E-business and innovation policy governance takes place at national, regional and local level across the Member States and also vary from countries to country. E-business policies for SMEs are often channelled through intermediaries and multipliers such as chambers of commerce and professional associations, whereas the responsibility for innovation is traditionally more central with the support being channelled through the universities, agencies and the regions, as well as national innovation systems. During the conference it is discussed how e-business and innovation issues are governed (separately or intergraded) and what are emerging trends the governance of e-business and innovation in Europe.

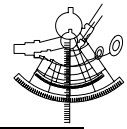
#### 4.1 Trends in governance of e-business and innovation policies

For example, in the UK it is the responsibility of the Business Links that act locally to support businesses in general (including e-business), whereas innovation policy is undertaken nationally and regionally through the regional development agencies. However, the regional development agencies are taking over responsibility for business link and their service delivery and so the policies will in the future be more aligned.

In the Netherlands innovation policy and e-business are not very closely linked because responsibilities for innovation, e-business, and ICT are divided between several ministries. For example, in the recent “innovation letter” of the Ministry of Economic Affairs e-business is not mentioned once. However, integration of these policy areas is increasing with the publication of the national ICT agenda 2004 which specifically addresses the relation between ICT, e-business and innovation.

Some other countries have examples of governance structures that address both innovation and e-business. In Ireland, Forfás is the national policy advisory board for enterprise, trade, science, technology and innovation. It delivers its activities through a number of mechanisms including Enterprise Ireland which has responsibility for business support.

#### 4.2 Issues challenged at conference



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One of the challenges for policy makers is to link and network across the levels of governance in order to ensure economies of scale and to replicate good practice, both in delivery and articulation. This also helps European policy to be delivered at the points in the system where it will create most added value.

- What are emerging trends in governance of innovation and e-business policies?
- How are e-business and innovation promoting policies related?
- How are local/regional and national problems being addressed and what articulation is given between the different levels
- What added value can be achieved at the European Union level?