

The Sectoral  
e-Business  
W@tch

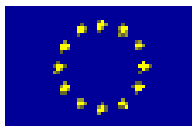


# Sectoral e-Business Trends and Challenges

empirica

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empirica GmbH

A programme of the



European  
Commission

eBSN Conference  
Oslo, 3 December 2007

# Agenda

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1

## ■ e-Business drivers:

- the influence of customers & suppliers on e-business decisions of SMEs

2

## ■ e-Business challenges:

- barriers to e-business adoption experienced by SMEs

3

## ■ Sectoral trends in e-business

4

## ■ Conclusions & outlook

# About Sectoral e-Business Watch

## ■ Background

- Study programme of EC, DG Enterprise & Industry
- Framework service contract, Jan. '07 – June '08 (with optional extensions)
- continues work of "e-Business W@tch" (2002-2006)

## ■ Objectives

- Assess drivers and impact of ICT adoption
- Highlight barriers for ICT uptake
- Identify public policy challenges
- Offer a forum for debate

# Work programme of 2007/08

## ■ 6 Sectoral e-business studies

- Chemical, rubber and plastics
- Furniture
- Steel
- Retail
- Transport & logistics services
- Banking

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## ■ 4 Cross-sector studies

- RFID adoption and impact
- Intellectual Property for ICT-SMEs
- ICT and e-business implications for energy consumption
- Impacts and drivers of ICT adoption

IDC

IDC

DIW Berlin

DIW Berlin

# e-Business Surveys 2007

## ■ 4 decision-maker surveys

- Manufacturing (chemical, steel, furniture) (N = 2100)
- Retail, transport & logistics (N = 2100)
- RFID (N = 430)
- Intellectual Property in the ICT industry (N = 680)

## ■ Approach

- CATI method (computer-assisted telephone interviews)
- Sector surveys in 7 EU countries and the USA
- Topic surveys in 6-8 EU countries
- Interviews conducted in August – September 2007
- Data weighted by employment and in % of firms

# What drives e-business?

1

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## Assumptions:

- 1. e-Business investments of SMEs are substantially influenced and driven by customer requirements.**
- 2. In particular, smaller companies are exposed to pressure (mainly from larger firms) to adapt their ICT systems.**

# Data exchanges with suppliers and customers

1

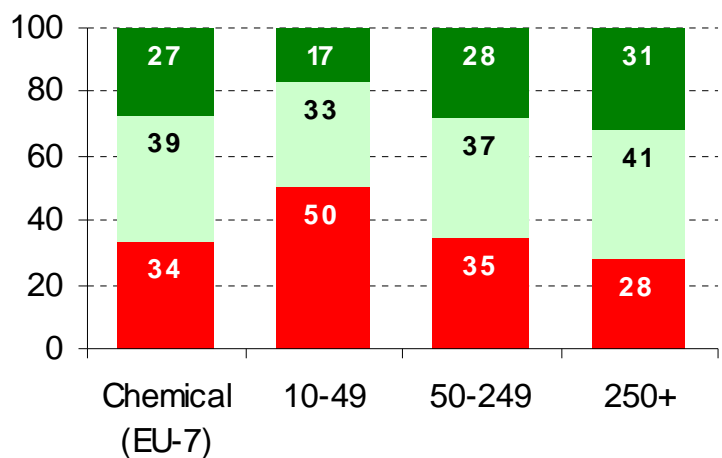
*"Which of the following statements best describes the way your company exchanges data with business partners: Orders and related messages are mostly processed and exchanged ..."*

2

3

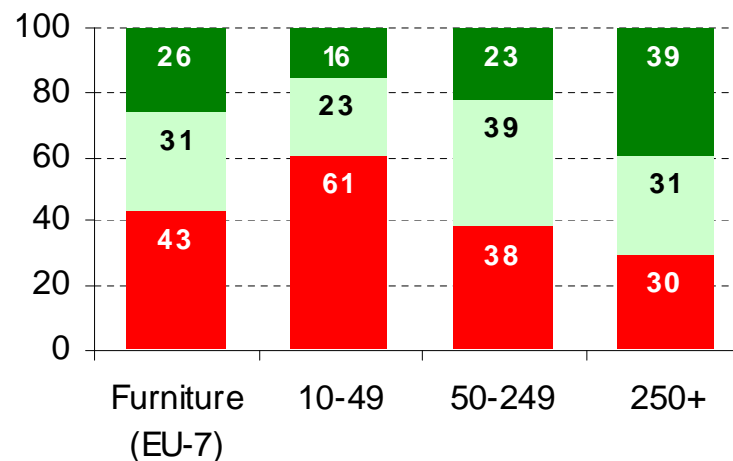
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### Chemical, rubber and plastics



■ Data exchange: mostly electronically  
■ Data exchange: mixed  
■ Data exchange: mostly paper based

### Furniture



■ Data exchange: mostly electronically  
■ Data exchange: mixed  
■ Data exchange: mostly paper based

# Pressure from customers / suppliers to adapt data exchange formats

1

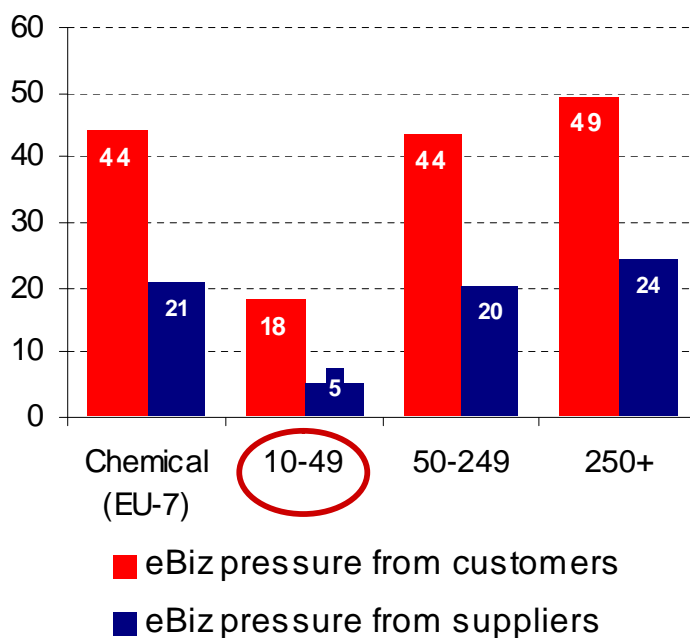
*"Has your company ever experienced pressure from customers / suppliers that your ICT solutions or data exchange formats should be adapted to comply with their requirements?"*

2

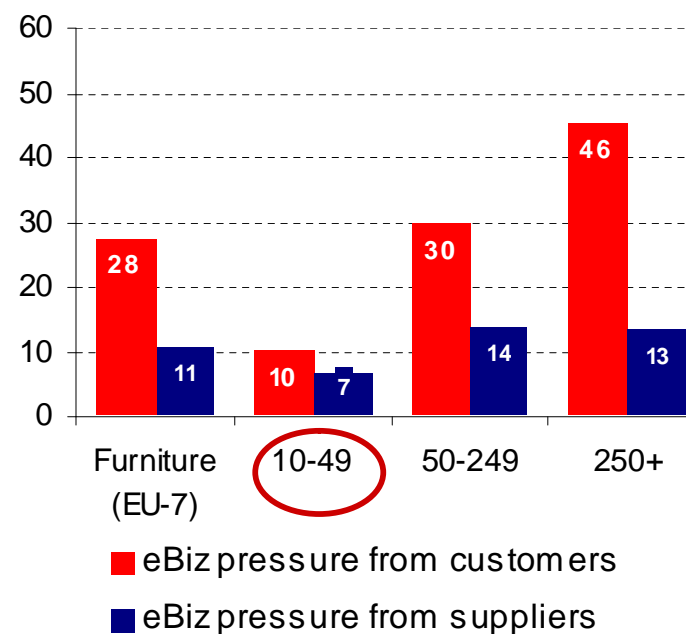
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### Chemical, rubber and plastics



### Furniture



# Pressure from customers / suppliers to adapt data exchange formats

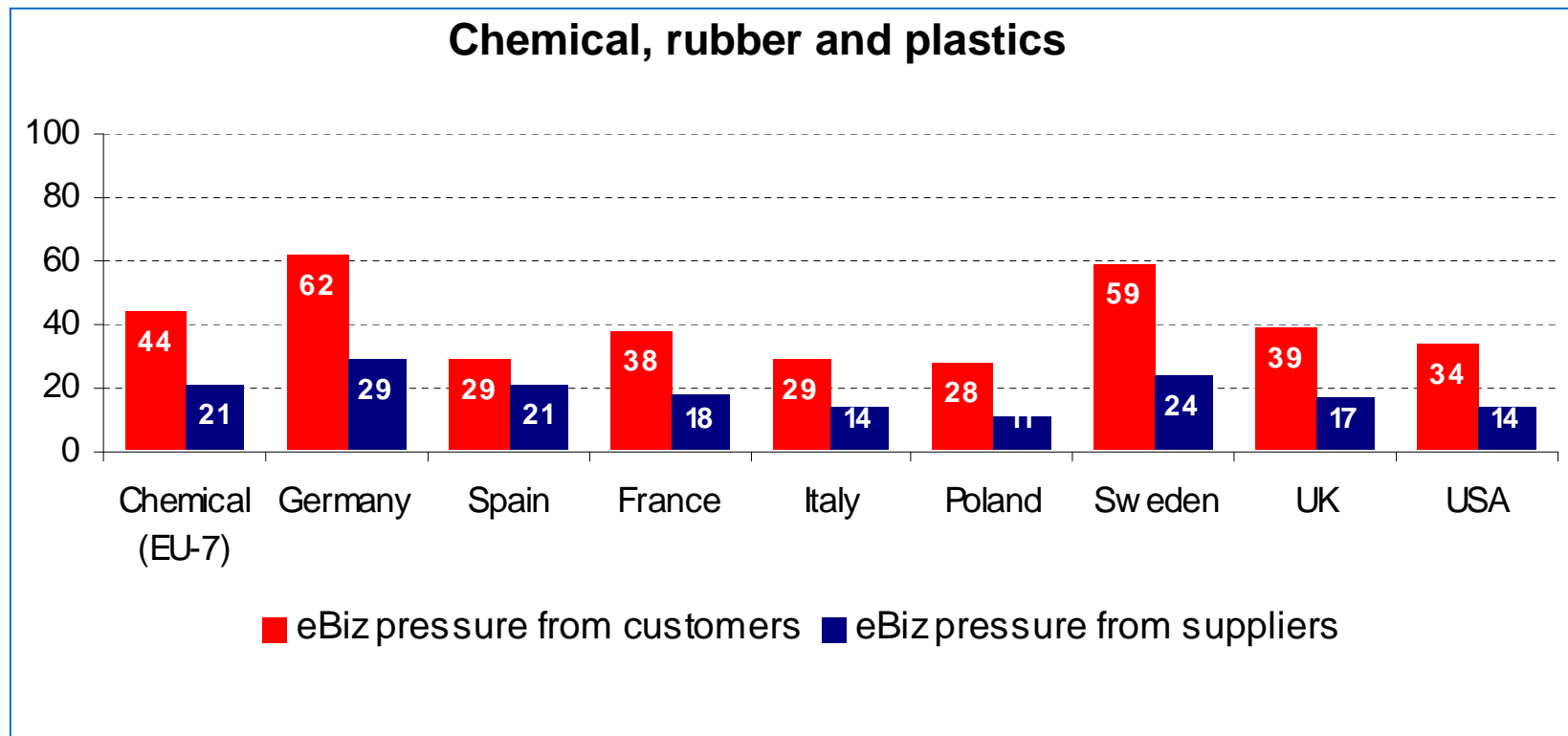
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*"Has your company ever experienced pressure from customers / suppliers that your ICT solutions or data exchange formats should be adapted to comply with their requirements?"*

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# Pressure from customers / suppliers to adapt data exchange formats

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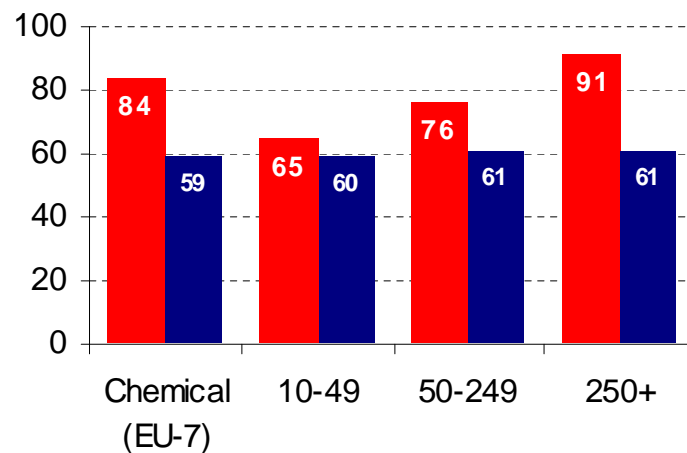
*"Has your company introduced any new ICT solutions or exchange formats in order to comply with such requests?"*

2

3

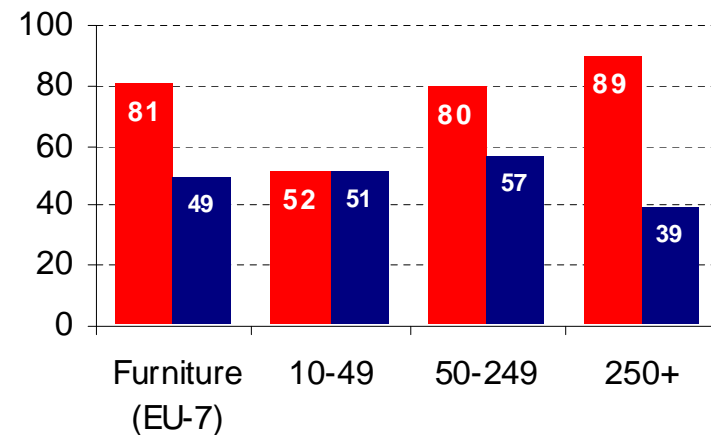
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### Chemical, rubber and plastics



■ Reacted to eBiz pressure from customers  
■ Reacted to eBiz pressure from suppliers

### Furniture



■ Reacted to eBiz pressure from customers  
■ Reacted to eBiz pressure from suppliers

# What are the main barriers to e-business adoption?

1

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## Assumptions:

3. For small firms, ICT costs and skills requirements are key challenges.
4. Digital divide: Larger companies typically have advanced e-business systems in place, but can only make limited use – due to the rather small base of installed systems among smaller firms.

# e-Business Challenges

1

1. "Our company is too small to benefit from e-business activities."

2

2. "The required technologies are too expensive."

3. "The required technologies are too complicated."

3

4. "Many of our suppliers or customers are not prepared for e-business."

4

5. "We are concerned about potential security risks and privacy issues."

6. "We think that there are important unsolved legal issues involved."

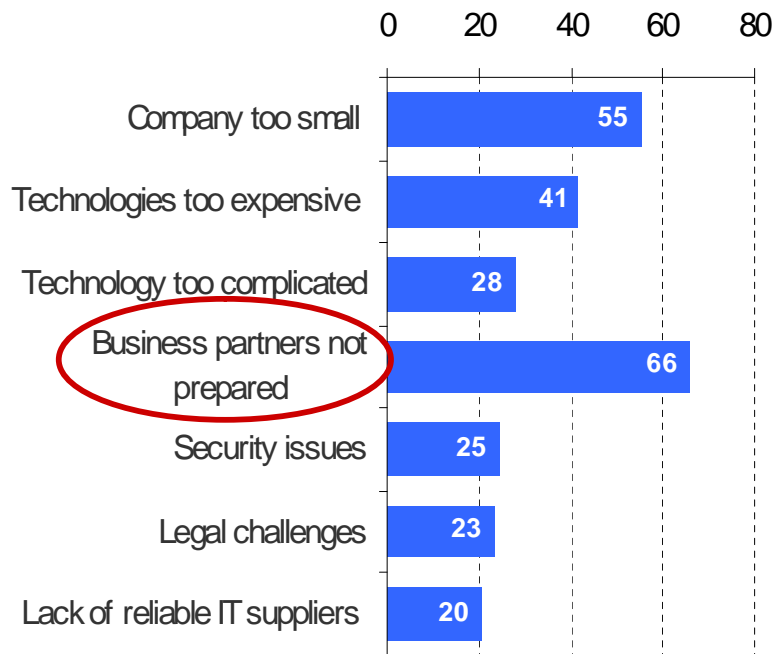
7. "It is difficult to find reliable IT suppliers."

# Barriers to e-business adoption

1 *"Please tell me if you think this is an important reason why your company does not use e-business more intensively."*

2

### Chemical, small companies (10-49)



3

### Chemical, large companies (250+)

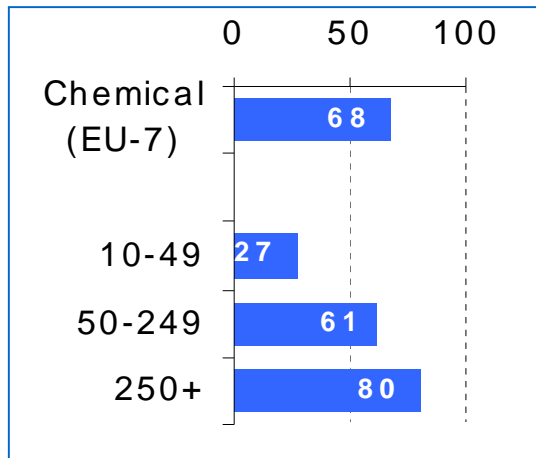


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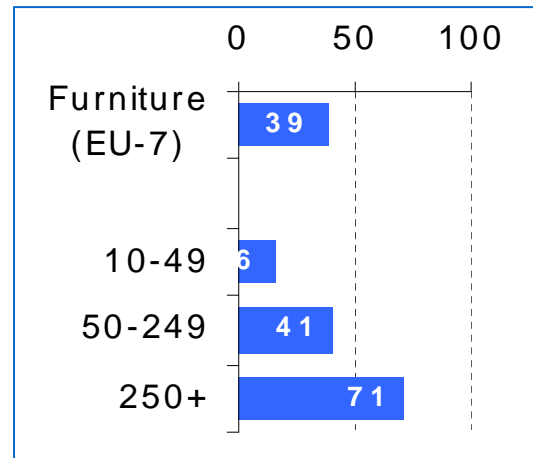
# Barriers to e-business adoption: installed base of ERP systems

*"Does your company use an ERP system?"*

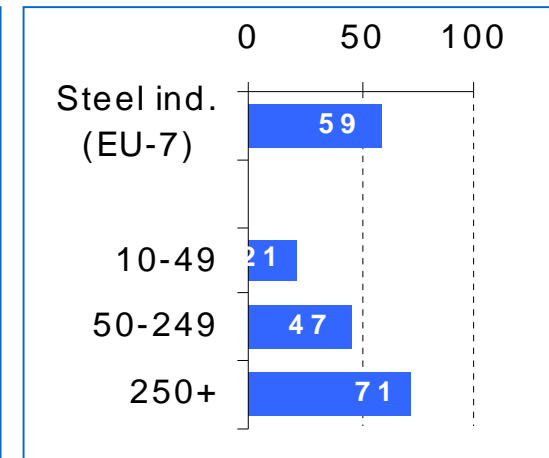
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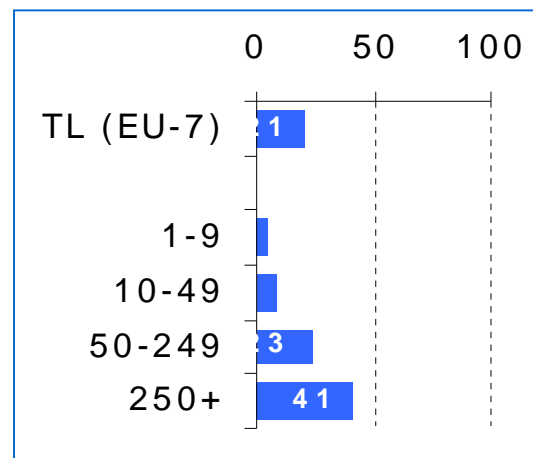
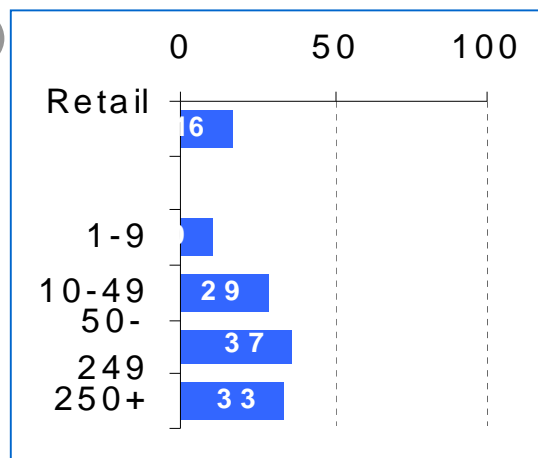
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# Sectoral trends

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The relevance of ICT and e-business in 10 sectors in 2006 (overall assessment based on survey results, desk research and case studies)						
Application Sector	e-Sourcing & procurement	e-Logistics / SCM	e-Design & planning	e-Marketing & sales	ICT use for innovation	Perceived ICT significance
Food & beverage		i		i		
Footwear				i		
Pulp & paper				i		
ICT manufacturing				i		
Cons. electronics		i		i		
Shipbuilding			i i		i	
Construction		i	i		i i	i
Tourism	i	i	i	i		i
Telecoms				i		
Hospital activities						

| = below average relevance / diffusion; || = average relevance / diffusion; ||| = above average relevance / diffusion;  
 |||| = high relevance / diffusion; i = applies only for some sub-sectors / types of firms

# eBiz Type 1: Process manufacturing (chemical, paper, steel, ...)

1

## ■ Characteristics

- typically mature, capital-intensive industries
- large, globally operating players

2

## ■ e-Business focus & trends

- ICT to optimise customer service
  - Use of extranets and portals for customers
- Process innovation in supply chain management and logistics (e.g. VMI)
- ICT to optimise production processes
  - e.g. quality assurance, shorter lead times

3

4

## ■ Challenges

- Digital B2B integration with small firms

# eBiz Type 2: Project-based business (construction, business services, ...)

1

## ■ Characteristics

- Typically highly customised services ("projects"), often on-site delivery
- Networks of contractors & sub-contractors
- Large number of small suppliers (often sub-contractors)

3

## ■ e-Business focus & trends

- Use of ICT tools for co-ordination and cooperation
  - work-flow management
  - e.g. use of project web solutions in construction
- e-Procurement of raw materials

4

## ■ Challenges

- Lack of widely accepted e-standards

# eBiz Type 3: Tourism (hotels, tour operators, recreational parks)

1

## ■ Characteristics

- No real "sector" – includes a broad variety of services
- Deep impact of internet

2

## ■ e-Business trends

- Sophistication of online marketing & sales strategies
- Dis-intermediation and re-intermediation
  - e.g. direct booking vs. new online intermediaries)
- ICT-based enhanced services for visitors
  - e.g. location based services, dynamic packaging

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## ■ Challenges

- Develop multi-channel strategies / new business models
- Erosion of margins – empowerment of customers

# Summary

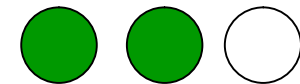
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## Assumptions

## Empirical evidence

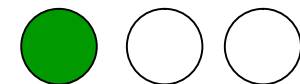
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1. Customer pressure drives e-business adoption.



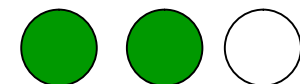
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2. SMEs are particularly exposed to pressure (mainly from large firms).

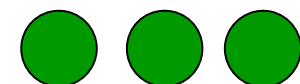


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3. For small firms, ICT costs and skills requirements are key challenges.



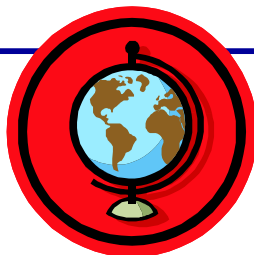
4. Digital divide: Limited use of e-business as customers / suppliers are not e-ready.



# Conclusions

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Rivalry in the market increases

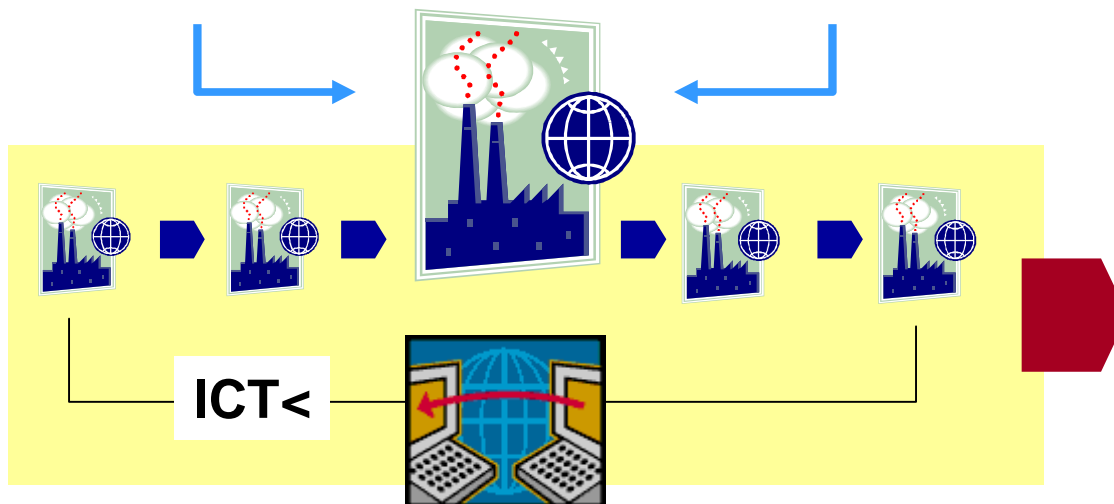


Negotiation power of customers increase

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- to cut costs (process efficiency)
- to improve product quality and customer service
- to grow (by reaching new customers)

Competitiveness of firms partly depends on the quality of the value network in which they operate.

e-Business can be a critical element to determine the efficiency of networks.

Metcalfe's law!  
(value of network technologies).

> Policy?

# Outlook: more evidence on drivers and impact of ICT adoption ahead

1

- **New Sectoral e-Business Watch Studies – to be published in spring 2008**

2

- **In progress: econometric analysis of ICT impact and drivers**

3

- **ICT and productivity effects**
- **ICT and innovation activity**
- **ICT and employment developments**
- **ICT and market structure**
- **ICT and value chain characteristics**

4

- **Data sources**

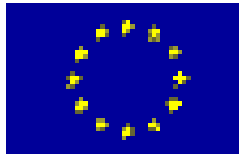
- **SeBW Surveys**
- **EU KLEMS project database**

# More information



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[info@ebusiness-watch.org](mailto:info@ebusiness-watch.org)

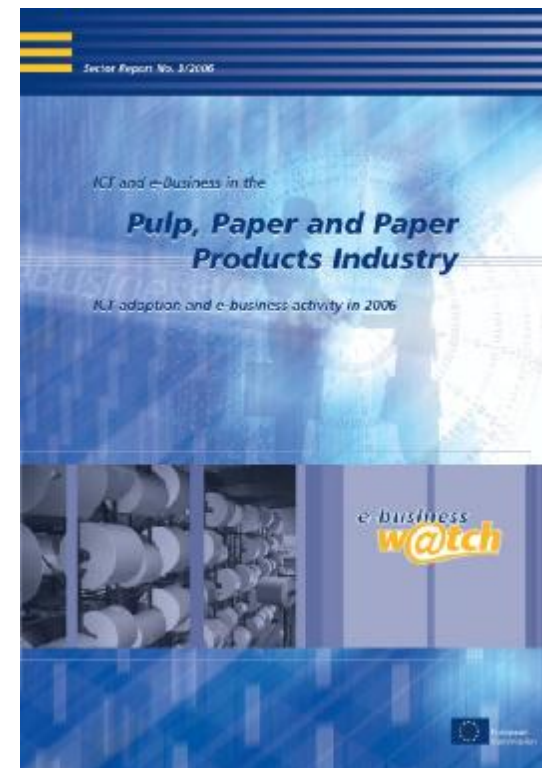


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