How bytes meet coils: ICT and e-business in the steel industry

Stefan Lilischkis
empirica GmbH
Bonn, Germany

e-Business ... in the steel industry??

Steel makes headlines – but not about ICT

Steel price soars as material costs are passed on FT.com FINANCIAL TIMES

Steel demand and supply from China at new all-time high

Arcelor and Mittal united to world's biggest steel trust

empirica

Industry characteristics

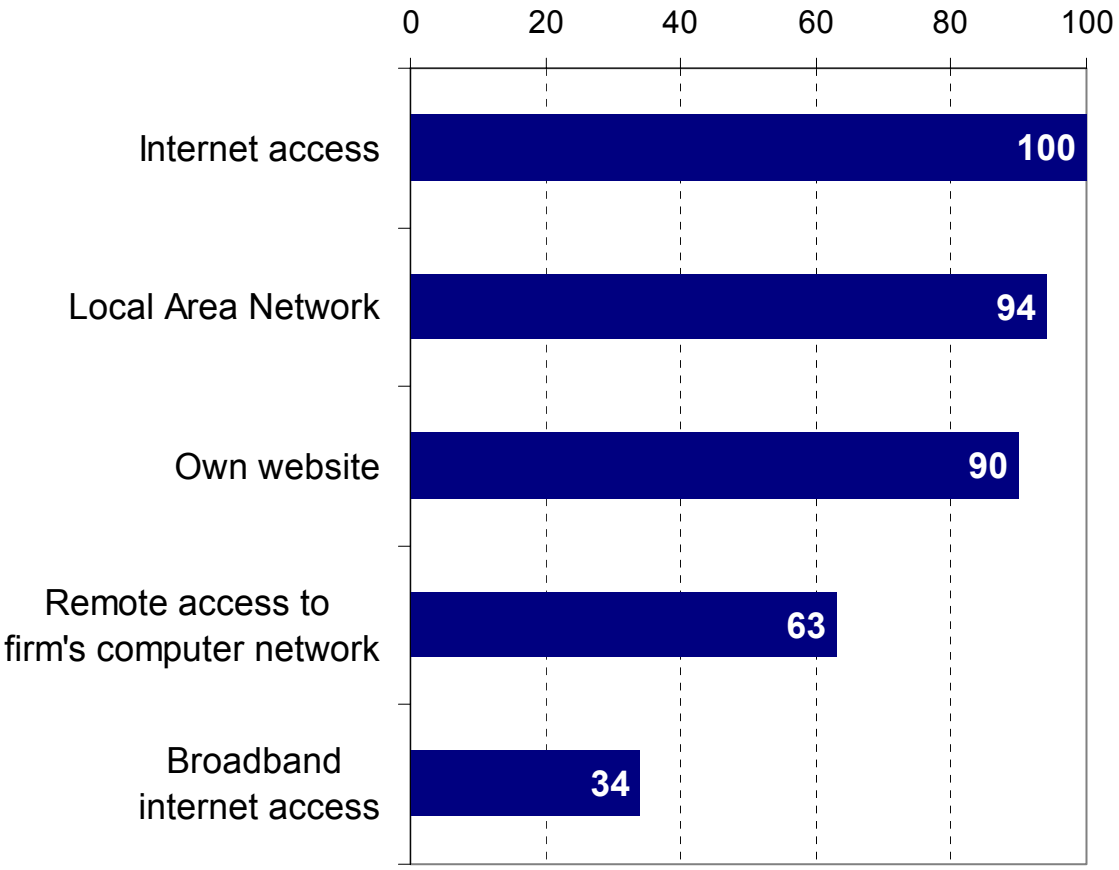
- NACE Rev. 2, group 24: basic metals, iron and steel (not fabricated metal products)
- Dominated by large companies (75% of value added), but 95% of firms are small / medium – in EU
  ► US different: only 68% of firms small / medium
- Declining employment, but steel remains key material
- Upward trend since 2003 (increasing demand from China)

Methods

- e-Business Survey 2007:

  Telephone interviews with 349 EU steel firms (DE, FR, IT, ES, UK, PL, SE), 100 in US
- Two other manufacturing industries surveyed: chemicals and furniture
- 10 case studies

ICT infrastructure



All have internet access

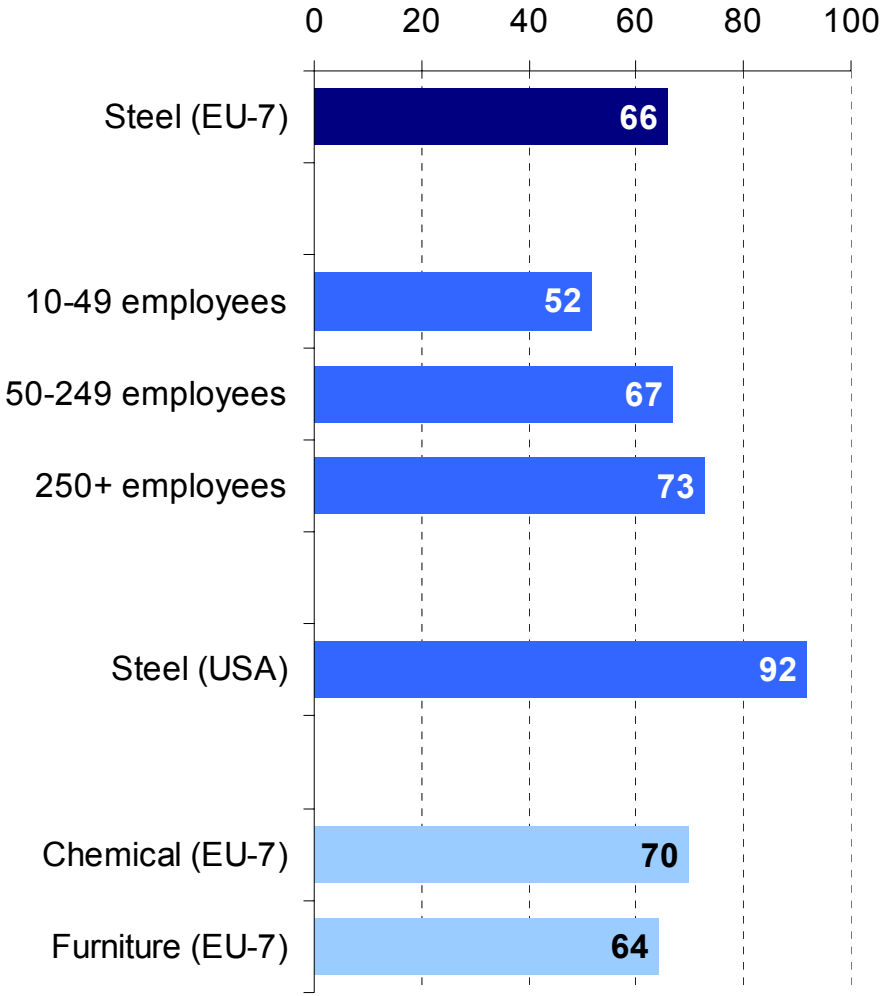
Almost all have LAN and own website

Remote access to company's computer network very common

Minority has broadband internet access => scope for improvement

Similar to other industries

e-Procurement



66% of EU-7 steel firms procure goods online

Small firms lag behind medium-sized and large ones

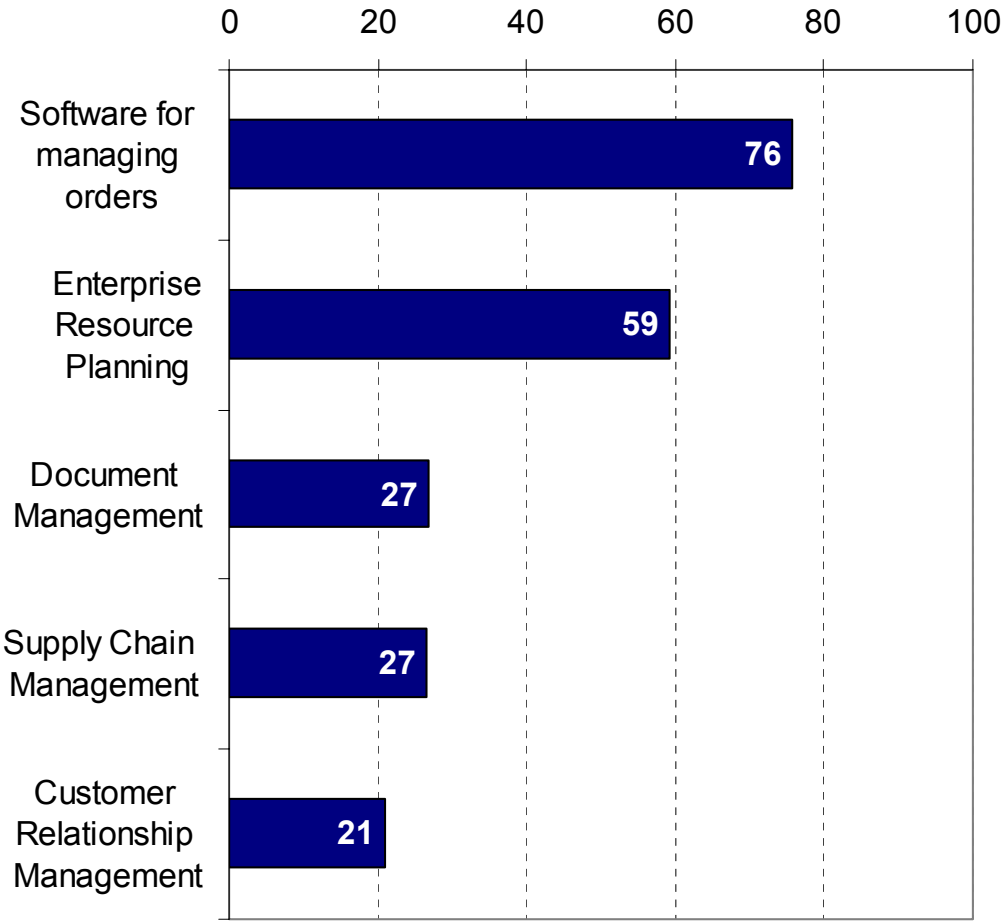
Fewer than in US

Similar to other manufacturing industries

Case study: Thyssen-Krupp (Germany)

- World-wide electronic sourcing platform for almost all types of goods
- Suppliers place their offer electronically
- Reduced prices and process enhancement saved more than 10 million euros in 1.5 years

Internal systems



Software to manage orders very common

ERP common and key to process efficiency

Percentages are

... smaller in small firms

... smaller than US

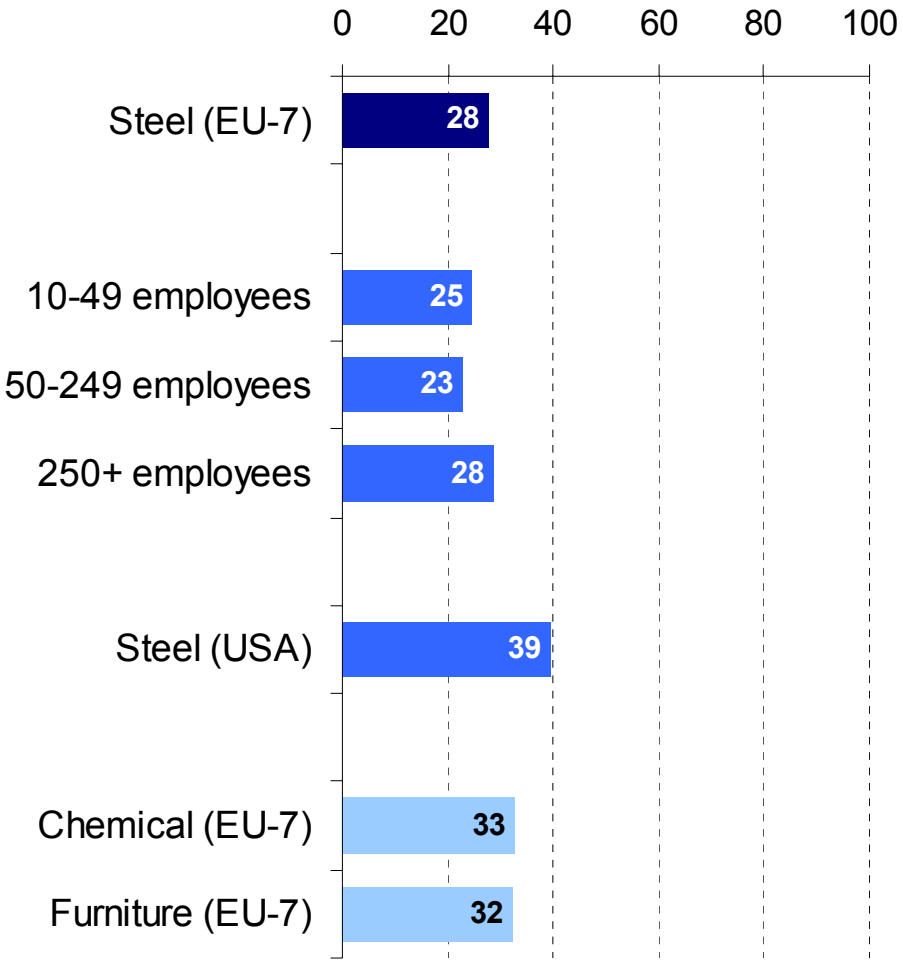
... similar to other industries (but CRM lower)

Case studies:
Śrem foundry (Poland), Farwest Steel (US)

Benefits of ERP systems:

- All necessary data available immediately
- Reduced inventory costs, reduced time from order to delivery, increased use of production facilities

e-Sales



Only 28% of EU-7 steel firms allow customers to order goods electronically

No differences between size classes

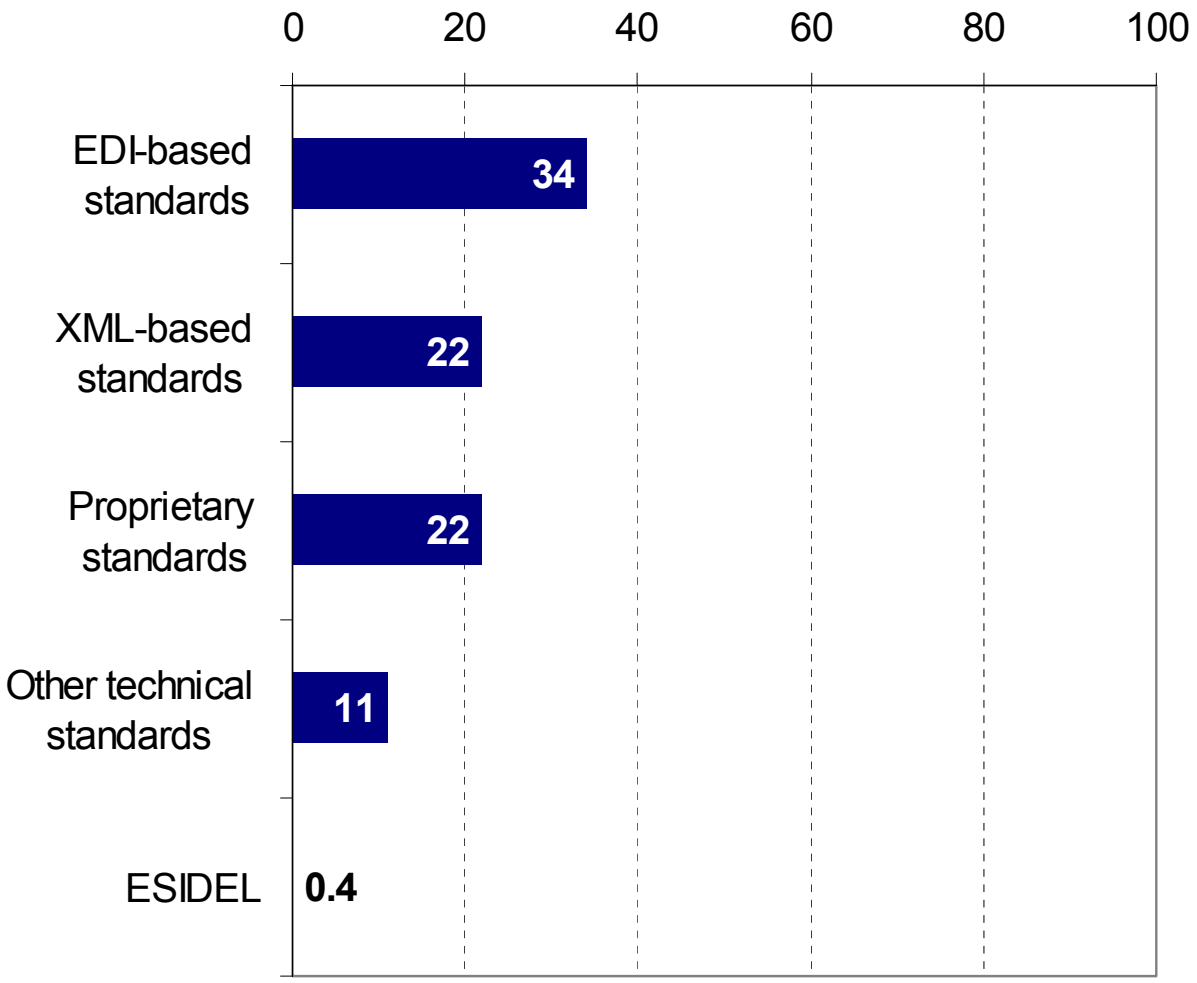
Less than in US

A little less than in other manufacturing industries

Case study: Corus IJmuiden (Netherlands)

- Internet-based information platform where customers can check order portfolio, stage of production, shipment lists, … anytime
- Reduced process costs (fewer calls, faxes, paper mailings)

ICT standards use



Overall: not prevalent

EDI most often

minority uses XML, proprietary standards, other standards

similar in other manufacturing industries

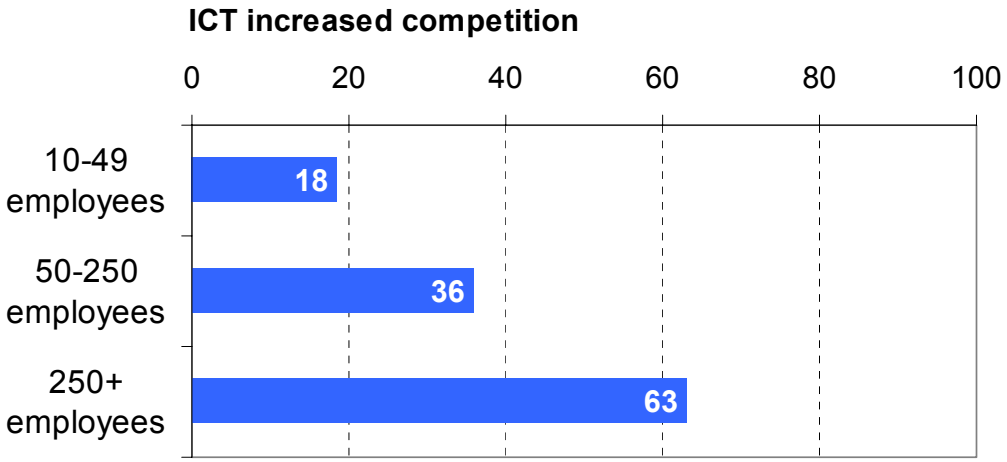
ESIDEL rare in EU

13% in US !

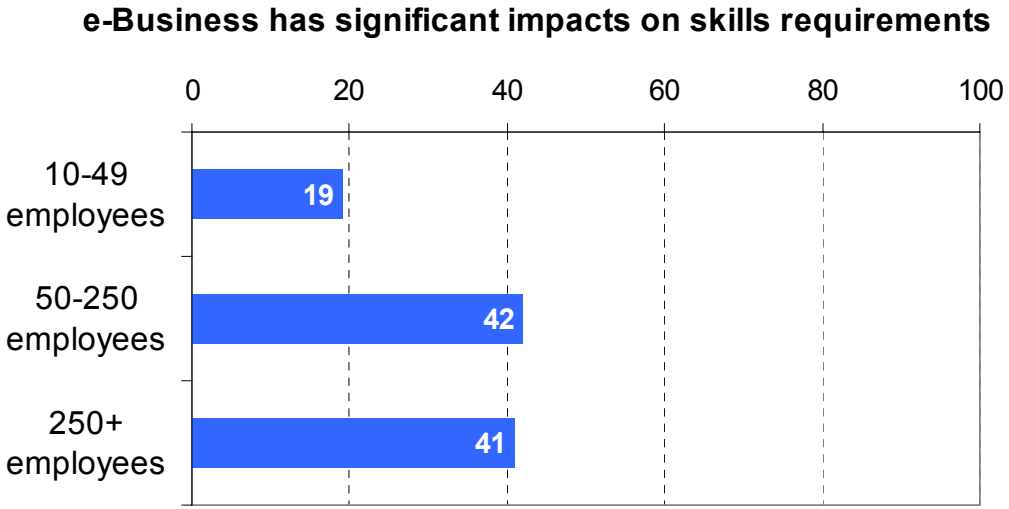
Case study: CMC Coil Steels (Australia)

- European Steel Industry Exchange Language successfully implemented
- ESIDEL supports automation of sales processes

Impacts of ICT

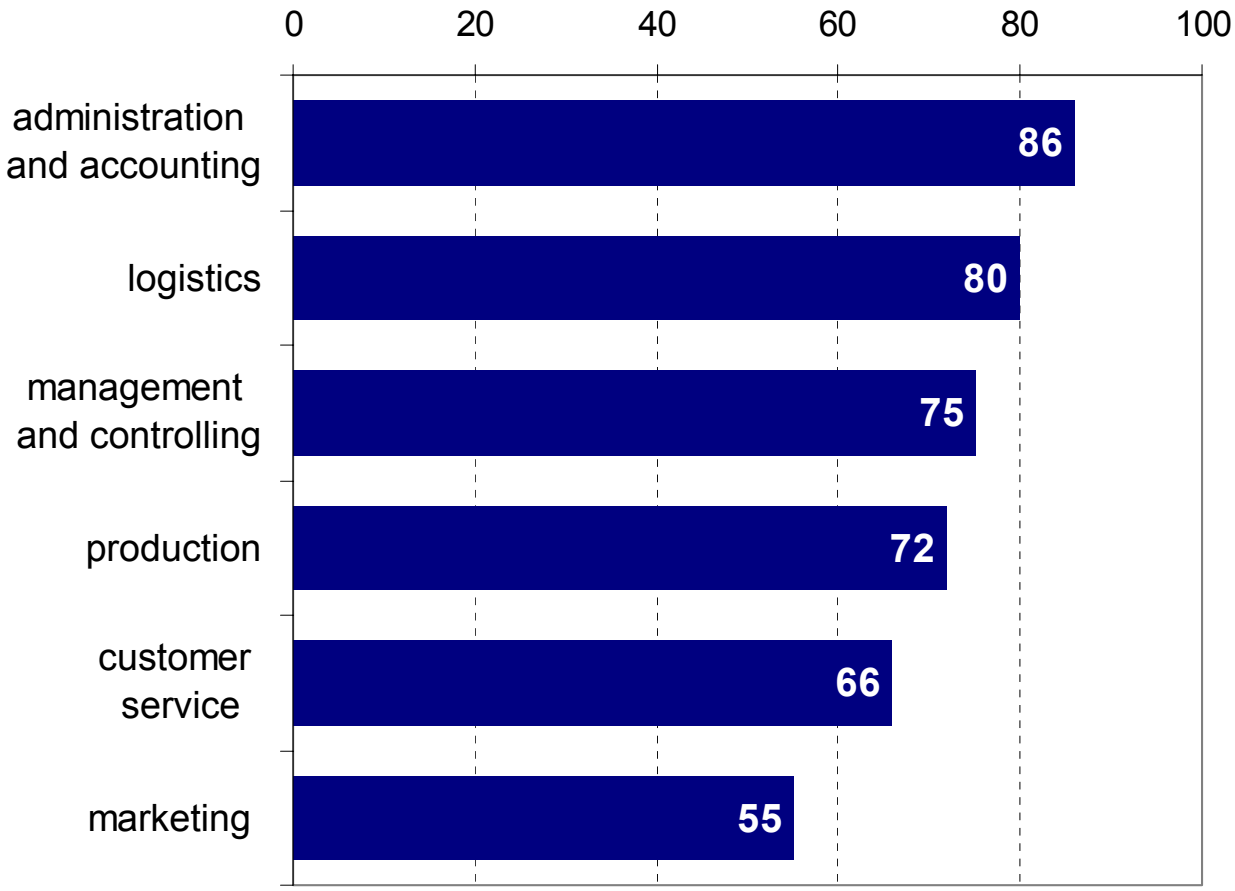


ICT increased competition – particularly in large steel firms (similar as in other industries)



ICT impacts on skills requirements – in large and medium-sized firms (slightly less than in other industries)

Expected future impacts of ICT



>50% for any item

Largest impacts expected on:

- administration and accounting
- logistics
- management and controlling

Not so much on sales side

Summary: key findings

- e-Business **is** important in steel industry
- Steel does not lag behind other manufacturing industries
- European steel industry uses less e-business than US (but no competitive disadvantage)
- Steel SMEs lag behind large firms

Current policy initiatives

- European Steel Technology Platform (2004):
  no ICT focus

- EC's Communication on competitiveness of European metals industries (2/2008):
  no reference to ICT

Suggested initiatives

- Promote e-business in steel value chains
  - Foster B2B networks, focus SMEs
- Support ICT skills development
  - Promote ICT training and managerial understanding
- Support ESIDEL standard
  - Promote good practices and set up related projects

Conclusion

Steel industry managers
and policy makers:
ICT and e-business
deserve more attention

More information:
http://www.ebusiness-watch.org
stefan.lilischkis [at] empirica.com