INNOVATION IN THE SOFTWARE SECTOR

(Presentation by Doug Lippoldt and Piotr Stryszowski, Structural Policy Division, Directorate for Science, Technology and Industry, OECD)

Meeting held at the OECD Headquarters in Paris on 30-31 October 2008

This Powerpoint presentation was made under item 9 a) "Innovation in the software sector" of the CIIE meeting.

Contact: Structural Policy Division, Mr. Marcos Bonturi, tel: +33 1 45 24 19 59; fax: +33 1 44 30 62 57; e-mail: marco.bonturi@oecd.org

JT03256038

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format
chapter one
Innovation in the software sector: economic processes

*Software is “knowledge intensive”* Software innovation relies on human capital and the creations of human mind.

*Software is poorly captured by today’s statistics* It is a non-physical good and it is evolving rapidly.

*Software is dynamic*
• Growth of traditional software firms and many innovative start-ups,
• The role of software in other industries.

*Many modes of software innovation are employed* Collaborative approaches, countless hybrid approaches, many software-specific modes (e.g. software frameworks)

*Business models interact with the innovation processes* Some models are enabled by technology.

*Environmental factors are crucial to innovation* Human capital, IP regime
chapter two

R&D and the market environment in the software sector

**Dynamism of software R&D** Increasing intensity (e.g. key expenditure indicators) and growing extensiveness (e.g. geographically; range of stakeholders)

**Human capital is a key element for software R&D** Knowledge, skills, aptitudes of participants and the network collaboration are critical inputs

**Dynamic interplay: technological progress & market demand** Software R&D processes are technology-enabled and technology-exploiting

**Tremendous potential for economies of scale via software R&D** Globalisation; low marginal cost of software reproduction; collaboration on the input side; ecosystems of participants (multidimensional co-operation)

**Private sector is a lead player, but government policy influences the environment**
- Human capital development
- Basic research
- Intellectual property regime
- Development of quasi-public goods (e.g. Internet)

---

chapter three

user perspectives on software functionalities

**Selected functionalities**: 
- Security and Privacy
- Mobility
- Interoperability
- Accessibility
- Reliability.

**Software functionalities have far reaching implications**. Software is present in products across the economy and its functionalities can have systemic effects.

**Market demand for software functionality plays an important role in software innovation** by providing signals & incentives for innovators; prospects for big returns to scale; software often embodies multiple functionalities.