# **Future Internet Enterprise Systems (FInES) Cluster**

# Position Paper Annex IV Notes

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# **FInES Cluster Position Paper**

## **Annex IV: Notes**

#### **Section 2**

- 1. "Preparing Europe's digital future i2010 Mid-Term Review", COM(2008) 199 final, 17.04.2008 http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0199:FIN:EN:PDF
- 2. "i2010 Annual Information Society Report 2009. Benchmarking i2010: Trends and main achievements", SEC(2009) 1103, 04.08.2009 http://ec.europa.eu/information\_society/eeurope/i2010/docs/annual\_report/2009/sec\_2009\_1103.pdf
- European Commission High Level Group, "The Impact of the Economic Downturn on ICT", February, 2009
   <a href="http://ec.europa.eu/information\_society/eeurope/i2010/docs/high\_level\_group/i2010\_hlg-the-crisis-impact on-ict.pdf">http://ec.europa.eu/information\_society/eeurope/i2010/docs/high\_level\_group/i2010\_hlg-the-crisis-impact on-ict.pdf</a>
- 4. "Business Intelligence: Les PME entrent dans la danse", par Alexander Schneider, in: PC Expert, avril 2009.
- 5. "OECD Information Technology Outlook 2008", p.22, www.oecd.org/sti/ito
- 6. European Commission High Level Conference, "Industrial Competitiveness and the Role of Policy in Difficult Times", Brussels, 17 March 2009

  <a href="http://ec.europa.eu/enterprise/ente
- 7. "An Economic Assessment of ICT Adoption and its Impact on Innovation and Performance", Study report No.10, 2008 <a href="http://www.ebusiness-watch.org/studies/special-topics/2007/documents/Study-10-2008-ICT-Impact.pdf">http://www.ebusiness-watch.org/studies/special-topics/2007/documents/Study-10-2008-ICT-Impact.pdf</a>
- 8. "Guide for training in SMEs", by ORSEU, Wilke, Maack and Partner, Lille/Hamburg, June 2009; Responsible authors: Nicolas Farvaque, Eckhard Voss; Co-authors: Marion Lefebvre, Kim Schütze; for DG Employment, Social Affairs and Equal Opportunities.
- 9. Experts have been invited to discuss the initiative at a recent kick-off meeting, see <a href="http://cordis.europa.eu/fp7/ict/enet/fines-eisben.html">http://cordis.europa.eu/fp7/ict/enet/fines-eisben.html</a>.
- 10. This proposal is made by the OPAALS project, see Annex I for details.

#### **Section 3**

- 11. FP7 ICT Work Programme 2009-2010, <a href="ftp://ftp.cordis.europa.eu/pub/fp7/ict/docs/ict-wp-2009-10\_en.pdf">ftp://ftp.cordis.europa.eu/pub/fp7/ict/docs/ict-wp-2009-10\_en.pdf</a>
- 12. Viviane Reding: "For a sustainable future, think ICT!"; Speech; ICT for a Global Sustainable Future Conference, Brussels, 22-23 January 2009
  <a href="http://www.paradiso-fp7.eu/documents/conference/Day1/opening/reding.pdf">http://www.paradiso-fp7.eu/documents/conference/Day1/opening/reding.pdf</a>
- 13. Viviane Reding: "Internet of the future: Europe must be a key player"; Speech; Future of the Internet initiative of the Lisbon Council, Brussels, 2 February 2009

  <a href="http://www.future-internet.eu/fileadmin/documents/speeches/reding\_future\_of\_the\_internet.pdf">http://www.future-internet.eu/fileadmin/documents/speeches/reding\_future\_of\_the\_internet.pdf</a>
- 14. Vorakulpipat; Rezgui: Value creation: the future of knowledge management, The Knowledge Eng. Review, 2008.
- 15. Wetherill, M.; Rezgui, Y.; Boddy, S.; Cooper, G.: Intra and Inter-organisational knowledge services to promote informed sustainability practices. Computing in Civil Engineering 21(2), 78–89, 2007.

- 16. This proposal is made by the K-NET project, see Annex I for details.
- 17. Högg, Roman; Meckel, Miriam; Stanoevska-Slabeva, Katarina; Martignoni, Robert: Overview of business models for Web 2.0 communities. In: Proceedings of GeNeMe 2006, 2006.- GeNeMe 2006.- Dresden, S. 23-37. Volltext-URL <a href="http://www.alexandria.unisg.ch/Publikationen/31411">http://www.alexandria.unisg.ch/Publikationen/31411</a>

#### Section 4

18. See http://cordis.europa.eu/fp7/ict/enet/fines-eisb en.html.

#### Section 5

- 19. In this context, there is a specific suggestion that IP is emerging as a "digital object", which existing legislation fails to accommodate. One view goes further in suggesting that enterprises should be encouraged to develop "virtuous business models" creating totally digital products (in place of physical ones). Dematerialisation through the use of software would boost environmental and social sustainability.
- 20. Note that the statement also implies a strong context change for the environment in which enterprises may operate in future. Specifically, future enterprise networks go far beyond the traditional business-to-business (B2B) paradigm that first came to prominence three decades ago. They cover relationships and interactions between businesses, as well as between businesses and their partners, customers, public authorities and other stakeholders in a business such as employees.
- 21. See Annex III; with a particular discussion in Knowledge Café KC1a concluding that "the enterprise" no longer exists, and another discussion in Knowledge Café KC2a advancing the view of "Liquid enterprises, with fuzzy boundaries, with flexible behaviour, with evolving objectives".
- 22. e.g. a business level mashup could be supported by a high level message including concepts such as billing, service provision etc. See particularly the Knowledge Café KC1b discussions in Annex III.
- 23. In particular, systems that adapt easily to users needs and not the other way round.
- 24. See Annex I, including specific proposals by INTEROP-VLab.
- 25. In this context, there is a suggestion to develop approaches to assess benefits and profits that do not only take the perspective of the single enterprise, but also consider the consequences for the (enterprise) network as a whole. The assessment needs to be adapted for different industries, different types of companies, different types of employees, and different types of customers.
- 26. From taxonomy and standardisation to diversity and evolution, from interoperability of data and process to interoperability of knowledge, from "the whole interoperability framework across the scope of the Cluster" to the development of high level requirements for such interoperability to the implementation of the requirements in a rational toolkit of methods, tools and modular software. Along these lines, there is a proposal for "European Standards for Enterprise" in order to remove the danger of multiple projects producing multiple and varied solutions in this space.
- 27. According to INTEROP-VLab: "It should also be addressed the study and analysis of enterprise interoperability as a whole and in its three domains (ontology, enterprise models and technologies). In fact, it should be developed one step further in order to facilitate the collaboration among existing systems promoting collaborative business processes the build of systems of systems and finally the Internet of services. This interoperability study and analysis will include the definition and promotion of interoperability standards, business modelling and the software development based on model driven

- interoperability. Moreover, it is necessary to go on in the study of the interoperability applied to different sectors as: e-Governance, e-Procurement, e-Learning, e-Commerce,...". See full contribution in Annex I.
- 28. See Annex III, in particular the discussions in Knowledge Café KC1b. By way of example, there is a particular concern about the (potential) lack of interoperability between clouds, particularly if they host enterprises resources and assets. A related concern is the software as a service approach, which may create interoperability problems by locking in company information.
- 29. See the Value Proposition for Enterprise Interoperability Report, chapter 5 <a href="http://cordis.europa.eu/fp7/ict/enet/ei-isg\_en.html">http://cordis.europa.eu/fp7/ict/enet/ei-isg\_en.html</a>
- 30. See the Value Proposition for Enterprise Interoperability Report, chapter 7, in particular Recommendations 3 and 4, *ibid*.
- 31. What those paradigms are (might be) is subject to research. For example, a clean slate approach to the Future Internet may yield radically different paradigms to those arising from the evolutionary approach. Note that this debate concerns not only network communications, even though the debate has largely taken place in that particular domain.
- 32. A suggestion from a Cluster discussion: do not look to the established network structures, but the underlying needs, then the underlying ICT support needed, and then the means to dynamically change/adapt the network structure.