

Tampere, 28 November - 1 December 2006
ICEB + eBRF 2006
Global Conference on Emergent Business Phenomena in the Digital Economy

The European Innovation Ecosystem Initiative for SMEs and Regional Development

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Convergence

- Digital media convergence
 - Communication + Media
- Ecosystem Convergence
 - Digital ecosystems + Business Ecosystems
 - = Innovation Ecosystem

Communication services:

- Audio, -Video
- Data - Voice

Digital Business Ecosystems

- Semantic Web
- Web 2.0

Exploit creativity in:
how, when and where to consume the entertainment

Exploit creativity in:
participating in the economic process

To achieve Lisbon objectives: Activate SMEs

EU-25: 99.7% of SMEs
91.2% micro enterprises (1 - 9 employees)
17 million of SMEs

European enterprises by size (totals), 2003

Legend: ■ Micro enterprises ■ Small enterprises ■ Medium enterprises

Difficulties of SMEs

SMEs have limited resources and difficulties to:

- To access global value chains
- To access knowledge
- To access specific services (e.g. legal)
- To adopt new technologies (ICT)
- To adopt new and distributed business models and work organisations

How did the Digital Ecosystem Concept Originate?

EC Working group in 2002 observed that in **some SME communities**:

The current slowly changing network of organizations could be replaced by more fluid, amorphous and often transitory structures based on alliances, partnerships and collaborations... building a community of enterprises that share business, knowledge and infrastructure, develop creativity"

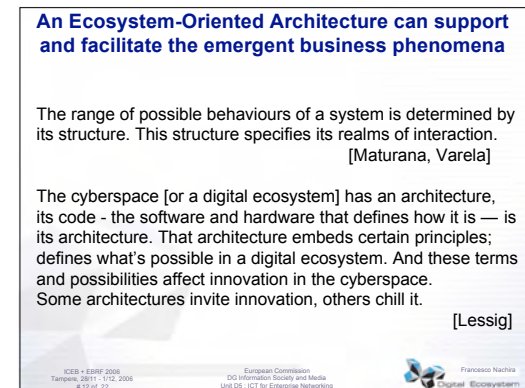
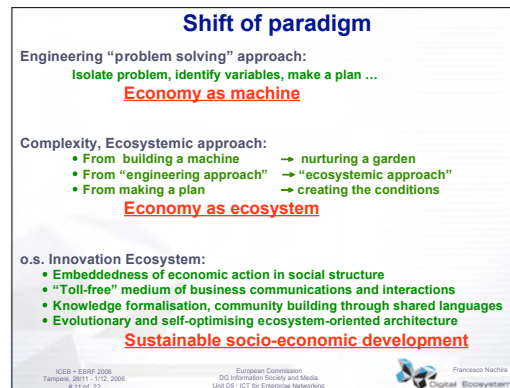
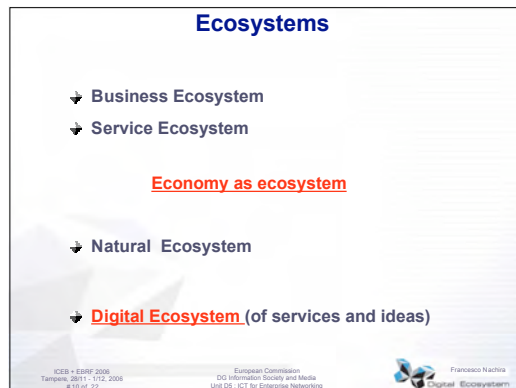
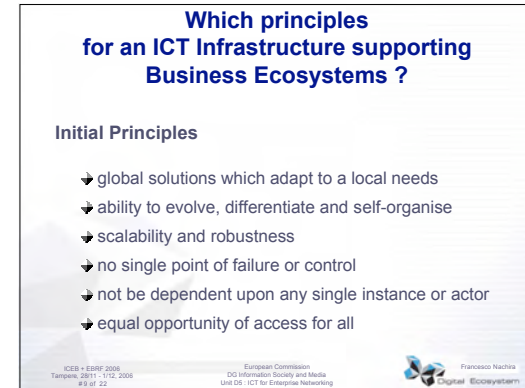
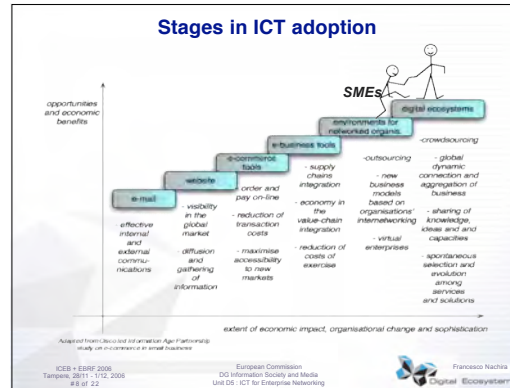
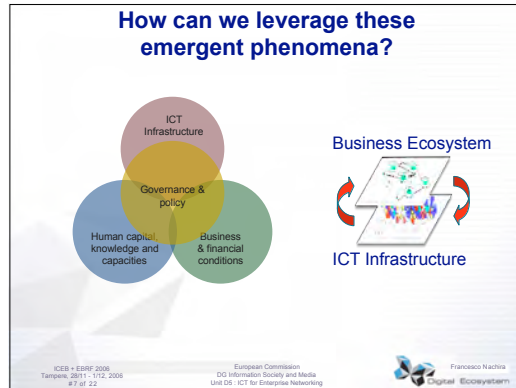
Thus, we wanted to develop an environment that would reinforce:

- Dynamic and complex business interrelations
- Need of continuous innovation and knowledge
- Need of specialised resources

Empirical observations on emerging business phenomena based on collective creativity and participation

Complex products/services	Produced by large structured corporations	Produced by informal amorphous networks
Knowledge	Owned and protected	Shared
Innovation	Produced by an entity	Produced collectively
Final user	Is passive ("the king")	Interested to participate
Organisational structure	Based on instructions and structured organisations	Self-organised networks
Motivation	Incentives, personal advantages	Self-esteem, sense of responsibility, reputation
Advances in IST	originated by technology	Originated by business and people networking
Examples:	Large Enterprises move from outsourcing to crowdsourcing	Wikipedia, Linux, eBay, Youtube, last.fm, ...

People/organisations become interconnected, build communities that share objectives, activities, knowledge, Opportunities for SMEs and individuals (also social recognition) by developing capacity and creativity




Digital ecosystem: A Collective Brain for the Formalisation and Distribution of Services and Knowledge

Like a brain,
a digital ecosystem has to

- A) representing / formalise
- B) store
- C) retrieve...

.... What
software components, applications, services, ...
business processes and models, revenue models, laws ...
trust relationships, reputation skills, talents, ideas ...



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[A] Represent / Encode

According to the long-term objective
to provide a representation
of the economy

It is [will be] represented

**ANY USEFUL REPRESENTATION,
EXPRESSED IN A LANGUAGE
(formal or natural),
DIGITISED AND LAUNCHED ON THE
NET,
WHICH CAN BE PROCESSED
(by computers and/or humans)**



Representation of:
•service
•biz model
•rev. model
•comp. model
•ref. to Ontology
•....

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[B] Store

According to the principle: no single point of control or failure
(tech-organism)

- information is fully distributed, like the "holographic" memory of the the brain
- technologies and free open source implementations developed in FP5 and FP6 projects,



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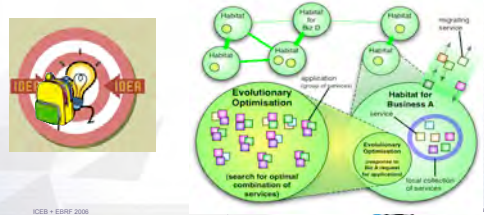
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[C] Retrieval vs. Migration

Taking advantage of natural science

- Concepts of habitat, migration, evolution, digital species ...
- Spontaneous networking and self-organisation



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Language Processes: Semantic Web and Web 2.0

The representation of the world is an old dream,
Some obstacles:

- which formalisms, languages?
- an interpretation of the reality is subjective,
how we can have a consensual representation?
- which are the resources for populating the ecosystem?

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Taxonomies and Folksonomies collective construction of shared semantic leading to recommendations and self-organisation

MUSIC Last.fm
- the users classify the kind of music based on their perceptions
- the system track the music played
- the system groups users in communities
+ it creates on the fly customised radio station you like
+ allows contacts among members of communities



BOOKS Amazon
- it tracks the books acquired and the user evaluations
+ suggests books you may like

eCOMMERCE eBay
- buyers provides a feedback on the reputation of the sellers
+ reputation system is used to build trust and to find the most reliable sellers

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