

**Workshop on
“Digital Ecosystems: Re-tuning the user requirements after 3 years”**

Monday 18 April 2005

**Welcome Address by Gérald Santucci, Head of Unit
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I am pleased to join with you at this first workshop after three years on Digital Business Ecosystems to bear witness to the outstanding quality and the great potential of the work which the current research projects in the cluster on “*Technologies for Digital Ecosystems*” have been carried out over the past few months.

I am heartened to enjoy the presence of these projects with us today. Altogether they strike the appropriate balance to assess the state-of-the-art of Digital Business Ecosystem in Europe.

The outcome of the 5th Call for Proposals of the FP6-IST priority will certainly add to the already proven record of success. The challenge that the first collaborative research actions took up was a real one. Therefore, their achievements so far deserve praise and a round of applause.

Finally, of course, I am proud that the European Commission has played a role in this success. I would like, in particular, to commend my colleague Francesco Nachira for the skill, dedication, and passion he has put in moving forward the whole idea of Digital Business Ecosystem. I also thank my other colleagues from DG INFSO and other Directorates-General for their support, with special acknowledgements to David Callahan, who is with us this morning and has been very helpful in developing further our thinking on the rationale and scope of Business Ecosystem.

Our experience over the last 3 years has taught us that good partnerships make the best achievements.

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In my opinion, what R&D projects in the cluster “*Technologies for Digital Ecosystems*” has highlighted is that you today are the ones who can provide real solutions to real problems. You greatly deserve our sheer acknowledgement for the excellent work you do and for your open-mindedness on creating European visionary purpose and goals, and on supporting co-operation.

We can't lose sight of the main message that will probably come out of this workshop: Business Ecosystem is no longer simply a vague or remote policy goal or a challenge for big organisations – it is actually happening in our territories – where people are building their lives and are developing a sense of community.

What we are discussing today can be described as the last step of evolution in the adoption of Internet-based technologies for e-business. Historically, the World Wide Web is a true phenomenon. I was startled to see it take off so fast. In only 10 years, we have Web access on our desks, in our pockets, on our TVs, and in our cars. But we haven't seen anything yet. What we like to call in Europe “Ambient intelligence” – i.e. those technologies emphasising on greater user-friendliness, more efficient services support, user-empowerment, and support for human interactions – will be everywhere we look: *around us* (our appliances, our wallets), *on us* (our clothing, our watches), and *in us* (under our skin).

We observe that many industries increasingly behave like a massively interconnected network of organizations, technologies, consumers and products. The degree of interaction between firms in the industry is truly astonishing, and the success of a business is no longer dependent on the size of its internal and external operations, but on the associations and relationships established in the market.

Thus, organisations build faster and more effective strategic partnerships and alliances; they re-engineer and integrate their business processes; they develop value-added products and services; and they share knowledge and experiences.

The term ‘Business Ecosystem’ has many interpretations today – which underscores its value and, at the same time, constitutes a real challenge – but anyway the

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ecosystem analogy is very useful in providing a model for loosely connected business networks. Although there are important differences between communities of organisms and communities of firms, biological ecosystems share many properties with networks of firms. Biology teaches us that life developed with the ability to change, that the process of integration is an important way of achieving novelty. The intricately complex machinery of our cells is assembled from a wide array of once independent components over a wide range of scales, from mitochondria to self-replicating RNA fragments. Similarly, in networked organisational environments, products are the integration of a vast variety of technologies, components, or processes. In other words, innovations today can rarely be identified with a single isolated invention, but are instead the integration of a multitude of different inventions with existing product and process components.

Let me illustrate what I mean by quoting Thomas Hobbes, who said long ago: “*Science is the knowledge of consequences, and dependence of one fact upon another.*”

Before moving further, I would like to mention the fact that the concept of Business Ecosystem is also very promising for renewing Competition Theory in Microeconomics. By introducing in the competitive dynamics the *time dimension* – i.e. co-evolution and self-sustainability – and the *social dimension* – i.e. the critical mass of services and players – it allows to understanding how competition and co-operation work together within a competitive environment comprising heterogeneous players and complex interactions.

What we call ‘Digital Business Ecosystem’ is the enabling technology for the Business Ecosystem. A Digital Business Ecosystem is defined as an evolutionary self-organising system aimed at creating a digital software environment for small organisations that support the regional and local development by empowering open, distributed and adaptive technologies and evolutionary business models for small organisations growth.

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This approach transposes from living organisms mechanisms like evolution, adaptation, autonomy, viability, introspection, knowledge sharing, selection, and will lead to emergence of novel architectures and technologies, business processes and knowledge.

And this is just the tip of the iceberg. The notion of Digital Business Ecosystem, as we see it, has immediate implications for policy. I would like to highlight and underline only four of them.

Firstly, the business ecosystem is an economic community that comprises several organisations and individuals – not just core products, complementary products, leading firms, and complementary commercial partners, but also direct competitors, customers and suppliers, potential competitors, and finally governmental bodies. Therefore, all the parts of the ecosystem interact with each other – as the English poet John Donne wrote in the seventeenth century: *“No man is an island, entire of itself; every man is a piece of the continent.”*

Secondly, Open Source has a major role to play as a model for software development within the business ecosystem framework. To guarantee that the business ecosystem attracts a critical mass of service developers and of users, and that it provides equal opportunities of business and visibility to all participants, it is indeed critical that the basic real-time infrastructure connecting all the applications and services of the economic community be open source based.

Thirdly, all participants contribute to the health of the digital business ecosystem along the lines of ‘productivity’, ‘robustness’ and ‘niche creation’, according to the terminology used by Marco Iansiti, Professor of Business Administration at the Harvard Business School Faculty. This means that there is in principle no risk of anti-competitive practice or dominance of the market by one company, no possibility nor interest for one member of the business ecosystem to exclude or marginalise other members. This is of course particularly important to know for government regulators.

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Fourthly, the regions where micro- small- and medium-sized enterprises will early reach the business ecosystem adoption stage are deemed to gain a significant comparative advantage while in the other regions the Digital Divide is unfortunately likely to prevail. It's crucial, therefore, to define and implement in each European region a specific strategy of innovation and local development, building upon the principles and values of the Digital Business Ecosystem paradigm, focused on the identity and the economic assets of the local area, in harmony with the new i2010 initiative of the European Union, and keeping into consideration the fast-evolving global environment.

Three years ago, the European Commission acknowledged the need to support the ecosystem approach as a method for fostering local and regional development. Since the beginning, this approach has been goal-driven and based on a collaboratively developed vision of desired future conditions that integrates technological, economic, and social factors.

The pilot regions, which are represented here today hold the legacy of that vision and, I'm sure, will carry it forward. Over time it is hoped that many other local and regional governments will join in with our approach and share the commitment to building and nurturing Digital Business Ecosystems that foster territorial development across Europe.

When it comes to the needs of Europe regarding sustainable growth and global industrial competitiveness, the European Commission continues to back its words with action.

On the one hand, Digital Business Ecosystem will indeed be a priority of the Strategic Objective "ICT for Networked Businesses" in the 5th Call for Proposals of the FP6-IST priority. Clearly, today's discussions will make a major contribution not only to preparing the second workshop on Digital Business Ecosystems which, as you know, will take place in just one month, but also to feeding the content of the Information Day, focusing on that Strategic Objective, which will be held in Brussels on 24th May.

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On the other hand, and looking beyond, we know that funding is not the panacea for all of the challenges we face in the knowledge-based economy, but it does show where a community puts its priorities. This is why we will continue here to bring up the case for a higher budget for Digital Business Ecosystem research in the relevant part of the 7th Framework Programme.

When it comes to serving European citizens and to nurturing the creation of wealth and qualified jobs in our territories, we should not turn away from what works. And I am happy to say, that those of you that are here with us this morning, are bearing evidence to what works best in Europe.

If we take inspiration from the willingness of European pilot regions to make audacious choices for triggering the right dynamics of innovation in highly interconnected organisational networks, it can mark the beginning of a new era of common purpose – a return to unselfish policies which truly reflect basic Europe's values.

That co-operative spirit must now live on. It is the new standard by which we must measure everything we do. The standard is clear – to seek what is right for the economy of the enlarged Europe, and not just for ourselves; not to strive for private advantage in a time of great need for Europe, that is for our community of destiny, our community of values, our community of life, and our community of responsibility. And that standard should be based on true private-public partnerships – the private sector and the public sector should genuinely seek and respectfully debate what course is best for the European economy and the well being of Europe's citizens.

I'm convinced that in developing the Digital Business Ecosystem paradigm we all share a vision for a better Europe. We're all committed to true opportunity for European businesses, in particular for SMEs, and for European regions – not as an abstract principle, but as a practical necessity.

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I count on your individual support and your collective work to participate in the endless adventure of lifting the European economy to new heights of discovery, prosperity, progress, and service to the European citizens.

Thank you very much.