



SIXTH FRAMEWORK PROGRAMME
Priority 2.5.8
ICT for Networked Businesses

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Report on **peardrop**'s contribution to ERA coordination activities

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Note to the reader—*This document is an output of the **peardrop** project (Promoting Ecosystems and Regional Development in support of Regional Operational Programming). **peardrop** is funded by the European Commission and aims at raising awareness among regional stakeholders on the specific policy domains. In particular it aims to form a group of regions active in the field of DBE deployment and ICT for Business Networking.*

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All links referring to the **peardrop** website are accessible AFTER registration to the portal www.peardrop.eu
Registration is open to everyone and free of charge.



Introduction to the ERA coordination activities in the area of Networked Enterprise¹

As explained in the outputs of the “ERA coordination initiative in the area of Networked Enterprise” (30-CE-088402/00-32)², the ERA activities in the field of Networked Enterprise research “*aims to facilitate the emergence of future business forms designed to exploit the opportunities offered by the technological and socio-economic revolutions of the 21st century in order to make future organizations more competitive, innovative, open, agile and value creating. The field of Networked Enterprise includes research on ICT and on novel processes, organisational models and strategies which can radically improve the way future business are networked and interoperate and future products and services are created and managed*”.

Based on **peardrop** findings, research on ICT distributed and collaborative ambient intelligence-based solutions is even more crucial for the product lifecycle and of innovative inter- (and intra-) organisational systems and services in the networked enterprise environment.

In the last years, particular emphasis has been placed, for example, on research for RFID as the enabling technology towards the “Internet of Things”, the digital “business ecosystems” paradigm and research for the interoperability of enterprise software and applications as a pre-condition to support Networked Enterprise operations.

In the framework prepared by the Networked Enterprise & RFID Unit (DG INSFO, D4)³, research in the Networked Enterprise field can be classified in four key areas:

- (i) ‘Collaborative Business Networks’ (CBN),
- (ii) ‘Digital Ecosystems for Business Innovation’ (as for example DBE),
- (iii) ‘Ambient Intelligence Technologies for the Product Lifecycle – RFID’ (AITPL - RFID),
- (iv) ‘Enterprise Interoperability’ (EI).

¹ The focus of this report is on the ERA activities related to Networked Businesses only , since **peardrop** is a Specific Support Action financed under the FP6 priority 2.5.8 –ICT for businesses Networking.

² In particular in reference to the specific document “Comparative Analysis – Key Findings” –update of February 2008 – page 4.

³ More information on the Networked Enterprise field, its key areas and the related activities at EC level can be found in the web-site of the Networked Enterprise & RFID Unit: <http://cordis.europa.eu/ist/ict-ent-net/index.html>.

Respectively, more information on the Study: ‘ERA Coordination Initiative in the field of Networked Enterprise’, can be found in the Study’s portal: <http://www.networked-enterprise-era.eu>

peardrop's contribution to the ERA coordination activities in the area of Networked Enterprise

peardrop is a Specific Support Action (SSA) under the strategic objective 2.5.8 ICT for Networked Businesses with a view to clarifying, disseminating and promoting the results of regional DBE deployments and related FP6 projects. The project has been running from September 2006 to August 2008. Its aims were to:

- raise awareness of DBE in regions around Europe,
- specifically target dissemination and increased understanding of policy makers in 24 targeted (partner and focus group) regions,
- develop systems, tools and models to support the planning and deployment of an ecosystems approach to regional development and the validation of these in 12 selected (partner and associated) regions,
- consolidate a regional community interested in the deployment of DBE.

The final (and main) output of **peardrop** is the final Synthesis Guide & Toolkit for Regional DBE Deployment that consist of a synthesis of the results and experiences of the entire project (available for download at www.peardrop.eu).

During its two years of activities, the **peardrop** project has followed and contributed to the ERA coordination activities organized by other actors (i.e. Q-PLAN). In particular, contributing to the activities related to the implementation, deployment and monitoring of the Digital Business Ecosystems model. This collaboration took the form of:

- contribution to surveys:
 - the monitoring exercise of IST-RDT implementation 2006 (February 2006);
 - questionnaire to identify ERA related activities (May 2008);
- attendance at the: "ERA Coordination Initiative in the field of Networked Enterprise"⁴ - 3rd Workshop - Brussels, April 15, 2008 (the previous meetings were not attended because not directly related to the topic covered by the **peardrop** project).
- contributions to the reports contracted to Q-PLAN⁵;
- support in the organization of ERA workshops (disseminating information and engaging with potential participants);
- participation at cluster/concentration meetings (Brussels 2007, Rome 2008)

It may be worth referring also to the valuable contribution **peardrop** to the "*Green Paper on The European Research Area: New Perspectives*" (2007) while addressing two key issues identified therein: the **Effective knowledge-sharing** (notably between public research and industry, as well as with the public at large); the **well-coordinated research programmes and priorities** (including a significant volume of jointly-programmed public research investment at European level involving common priorities, coordinated implementation and joint evaluation).

peardrop's has also made a strong contribution to bridging the gap between research and the subsequent utilization of that research in the marketplace, a key challenge for the ERA. It has been clearly important in the context of balancing the technology push /market pull equation in relation to DBE developments in the ERA.

⁴ For more details please refer to: <http://www.networked-enterprise-era.eu/newsdetails.php?id=28>

⁵ Q-PLAN North Greece Ltd (www.gplannng.gr) is leading the implementation of the current ERA Coordination Initiative in cooperation with Q-PLAN S.A. and by involving a multinational Team of 29 Experts (8 internal and 21 external) of complementary fields, from 18 different European countries.



peardrop's conclusions and policy recommendations

During the last two years the **peardrop** consortium has worked in close contact with representatives of regional and local authorities to present and disseminate information's on Digital Business Ecosystem.

In particular, during the project, the consortium has held three international stakeholder workshops⁶ which gave the possibility to participants (and regional representatives interested) to discuss the DBE concept, its potential implementation and its future. Thanks to these and other numerous face-to-face exchanges, it has emerged that **there is a real interest among regions for the concept of DBE as a viable socio-economic model supporting regional development.**

On its side, **peardrop** has also encouraged regions (and their Managing Authorities) to be less risk-averse and more willing to engage in some limited experimentation. This also because:

- the costs of an initial DBE deployment aren't too excessive (perhaps less than €1 million, depending of course on the precise configuration)
- there is some (small) risk of possible failure, although the potential benefits of early adoption could be substantial.

In terms of proposals and recommendations about future research and development in this field (especially research that emphasises the *regional* dimension of information society technology applications in support of collaborative networked business development), **peardrop** has identified three following key topics: technology, Knowledge sharing and regional policy - also summarised in the picture at page 7.

TECHNOLOGY

- The need to develop an open stable DBE technology platform accompanied by a number of working prototypes to act as demonstrators, especially for SME's who demand concrete evidence of a working system. Such research and development could, perhaps, be best carried out by the original pilot regions of the DBE integrated project since they are further advanced in their deployments than other regions⁷.
- The widespread ownership of mobile phones and their increasing capacity, as well as increasing bandwidth of mobile networks including hotspots, suggests that research and development of mobile business ecosystems (MBE) would be timely if Europe is to capitalise on its existing competitive advantage in 3G mobile telephony.
- The expected longer-run benefits of DBE to Europe and its regions lies, arguably, in the ways in which local and regional DBE deployments could become interlinked (thereby creating a rich web of service applications and a fertile ground for new ground-breaking software developments). If Europe wants to gain market leadership, it needs to find ways to accelerate the number of different DBE deployments (different sectors, offering different applications, in different regional locations) and to study how these could usefully become better inter-linked.

⁶ To access the reports of the three International Stakeholders Workshop that peardrop has organised during its lifespan, please refer to the events page of the peardrop website: http://www.peardrop.eu/events/Pages/Upcoming_Events.aspx

⁷ Although it is true that those regions have the advantage of a more advanced starting point, it should also be considered that this may also have an impact on their ability to objectively evaluate the state-of-the-art and the issues that need to be overcome for the more rapid deployment of DBEs across Europe.

- If inter-regional and cross-border digital ecosystems have to work effectively, then some consideration are needed about the issue of natural language use and its (potentially automated) translation. Expecting more than a small minority of user SMEs to have an adequate grasp of English is unrealistic and even many technology SMEs may also find working with English as a business modelling language beyond their capabilities. Nonetheless, there is a need to explore the viability of business models in which (at least some) local ICT SMEs adopt and tailor imported solutions and services to make them available in their local language to user SMEs.

KNOWLEDGE SHARING

- There is a continuing need, despite existing efforts, to provide a stronger evidence base for the economic benefits of DBE deployments. Such evidence should address the benefits to Europe as a whole (especially the indigenous software sector), to specific regional economies, and to the participants in regional DBE systems (notably SMEs).
- There is a need to further explore and evaluate the indirect benefits of the behavioural changes that will accompany successful DBE deployments – especially those relating to cooperation, openness and networking – that will become increasingly important attributes for regional development and for achieving the economic goals of Europe’s Lisbon Strategy in the emerging global knowledge economy.
- Today, the existing knowledge on DBE is quite dispersed. There is the need for an open space for distributed knowledge that the DBE community can use to exchange knowledge in a practical and distributed way.
- The concept of service promotion and search as a service to be provided by the DBE platform appears as yet underdeveloped, especially when considered in an inter-regional and multi-lingual context. Creating a pan-European directory of such service – or its equivalent – calls for some further consideration and research.

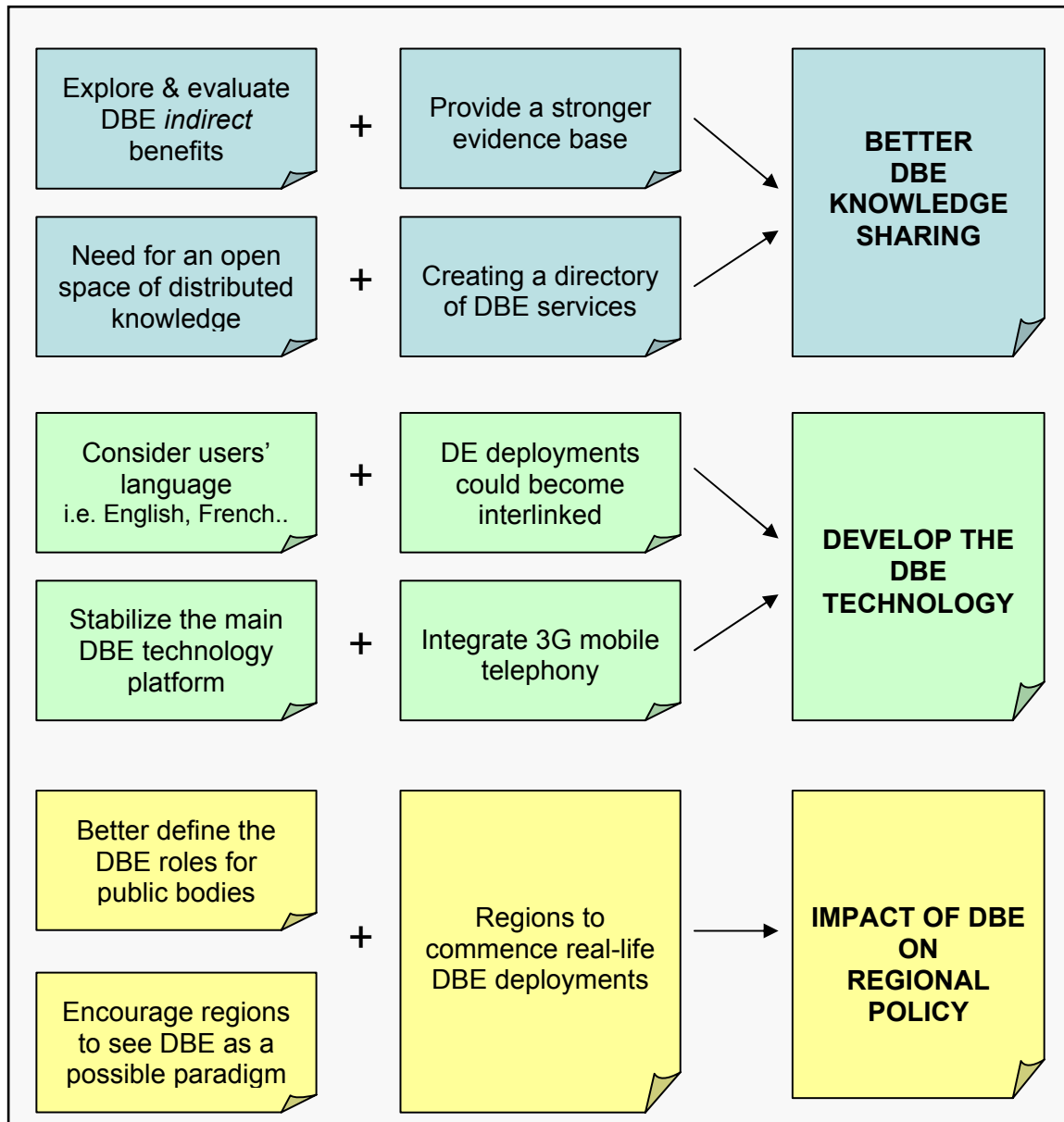
REGIONAL POLICY

- The concept of the digital ecosystem is one that clearly needs to recognise the active participation of all relevant actors including not only technology and service enterprises, but also customers and public agencies. In this sense, and bearing in mind the importance of efficient and effective government for Europe’s competitiveness in the face of demographic and other challenges, consideration should be given to researching further the various roles that public bodies will need to play in the development of digital ecologies – including the concept of Digital Government Ecosystems (DGE)⁸.
- There is a need for a number of additional regions to commence real-life DBE deployments and the Commission could encourage such development through the CIP, INTERREG (e.g. Regions for Economic Change) and, at regional level, through the Structural Funds ROPs.
- More regional authorities (Structural Funds Managing Authorities in particular) should be encouraged to see DBE as a possible paradigm for regional development and to be persuaded that the associated risks (of failure when misused) are low in comparison with the potential gains and benefits.

⁸ Digital Government Ecosystems (DGE) refers to the application of the DBE concept to public services.

The points above can be represented in the picture that follows.

Pic. 1 – Main steps for the future development of DBE at European Level.



In order to have an idea of the type of regions **peardrop** has been working with, please refer to the tables provided in Annex 1.

In the same annex, are also included the other regions and organizations which, in one way or another, have been dealing with the concept of Digital Business Ecosystems.

The result of such research shows that, as of today, the number of countries having shown an interest in DBE is 23, represented by more than 70 organizations/regions.

Regional Interest in the Digital Ecosystems concept (EU-15)

(Information collected from desk research in August 2008 - the project cannot guarantee that all the data are accurate)

Country	peardrop regions (project ended in August 2008)	DBE IP regions (project ended in January 2007)	DEN4DEK (project started in May 2008)	Other regions and actors that have approached DBE
Austria			- Fachhochschule Vorarlberg	- Center for Social Innovation www.zsi.at
Finland	- Creative Tampere www.creativetampere.fi	- Tampere Hermia www.hermia.fi	- Helsinki School of Economics www.hse.fi	- Lappeenranta University of Technology www.lut.fi
France	- Aquitaine Regional Council www.aquitaine.fr - Limousin Expansion www.limousin-expansion.fr - Nord-Pas de Calais www.nordpasdecalais.fr - Midi Pyrénées www.midipyrenees.fr			- Ecole National Supérieure des Telecommunications www.telecom-paristech.fr
Germany		- Baden Württemberg www.mfg.de		
Greece				- Crete Technical University www.music.tuc.gr - UsableWeb Consultant www.usableweb.gr
Ireland	- Border Midland & Western Regional Assembly www.bmwassembly.ie - South East Information Society Strategy www.seiss.ie	- Donegal	- National University of Ireland Maynooth, www.nuim.ie/	
Italy	- Emilia Romagna - Economic Development and Policy Department www.regione.emilia-romagna.it - Piemonte Industry Department www.regione.piemonte.it - Abruzzo, ICT Department www.regione.abruzzo.it - Bolzano - TIS/Digilab www.digilab.bz	- Regione Lazio www.regione.lazio.it - Provincia Autonoma di Trento www.create-net.it - Umbria Innovazione www.umbriainnovazione.it - Piedmont – CSP www.csp.it - FUNDECYT www.fundecyt.es	- Foundation Istituto Trasporti e Logistica - Emilia-Romagna http://www.fondazioneitl.org - Umbria Innovazione www.umbriainnovazione.it - T6 www.t-6.it - Regione Lazio www.regione.lazio.it	- ECIPA CAN Veneto www.ecipaveneto.it - INFORMEST www.informest.it - Soluta.net www.soluta.net - Unioncamere del Veneto www.ven.camcom.it
Holland			- Stichting Living Lab	
Portugal			- Madeira Tecnopolo www.madeiratecnopolo.pt	- Associação CCG/ZGDV www.ccg.pt - Identisoft - Know Idea Consultants – C. em I&D e Gestão Empresarial
Spain	- Extremadura FUNDECYT www.fundecyt.es - Valencia www.gva.es	- Instituto Tecnológico de Aragón www.ita.es/dbe	- Comunitat Valenciana www.gva.es - FUNDECYT Extremadura www.fundecyt.es - Foundation for the Promotion of Industrial Quality and Technological Development of Galicia www.xunta.es - Fundación European Software Institute ESI- Tecnalia www.esi.es - Instituto Tecnológico de Aragón www.ita.es - TECHIDEAS www.techideas.es	
United Kingdom	- EMNET www.emnet.co.uk - Welsh Assembly Government www.wales.gov.uk	- West Midland -University of Central England http://www.uce.ac.uk	- Birmingham City University http://www.bcu.ac.uk - East Midlands Network http://www.emnet.co.uk	

Regional Interest in the Digital Ecosystems concept (EU - NMS)

(Information collected from desk research on August 2008 - the project cannot guarantee that all the data are accurate)

Country	peardrop regions (project ended in August 2008)	DBE IP regions (project ended in January 2007)	DEN4DEK (project started in May 2008)	Other regions and actors that have approached DBE
Slovenia				- META Group http://www.meta-group.com/offices_slovenia.html
Czech Republic	- University of Pardubice http://www.upce.cz - Vysocina Regional Authority http://www.kr-vysocina.cz - Union of Development of the Moravian-Silesian region http://www.msunion.cz			
Poland	- Pomerania (Poland) through the Departament Rozwoju Gospodarczego http://www.woj-pomorskie.pl - Malopolska - Information Society Department of the region http://www.malopolskie.pl			
Slovakia	- Agency for Support of Regional Development Kosice http://www.arr.sk		- Technicka univerzita v Kosiciach http://www.tuke.sk	
Romania				- Academy of Economic Studies http://www.ase.ro - Development Center for SME Maramures (CDIMM) http://www.cdimm.org - Politechnica University of Bucharest, http://www.pub.ro - The Romanian Institute for Economic-Social Research and Polls http://www.irecson.ro - WESTERN IQ
Hungary			- University of Szeged http://www.u-szeged.hu	
Estonia	- Tartu City Government http://www.tartu.ee			
Bulgaria				- Bulgarian Association of Regional Development Agencies (BARDA) http://www.barda.bg

Regional Interest in the Digital Ecosystems concept (outside the European Union)

(Information collected from desk research on August 2008 - the project cannot guarantee that all the data are accurate)

Country	peardrop regions (project ended in August 2008)	DBE IP regions (project ended in January 2007)	DEN4DEK (project started in May 2008)	Other regions and actors that have approached DBE
Norway	- Telemark - ICT Grenland www.iktgrenland.no			- International Norway (INNOR)
India		- Kanpur, India - Catalyst: IITK http://www.iitk.ac.in		
Venezuela		- CENDITEL		
Brazil		- Piaui, Brazil - Catalyst: IPTI http://www.ipti.org.br		