



## **OPAALS PROJECT**

Contract n° IST-034824

# **WP11: Bridging DE Research to regional Development and innovation in the knowledge Economy**

## **D11.15 Methodological tool-kit for evidence-based DE adoption**



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**Short Description:** The deliverable describes the DE adoption process as developed by the OPAALS project and links to its steps various socio-economic methodologies. In offering to future regional catalyst and other stakeholders an inventory of various instruments developed by the DE research community, the deliverable seek to provide a useful tool to effectively deploy DEs at territorial and regional level.

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<b>Achievements*</b>	This deliverable provides a methodological tool kit for evidence-based DE adoption. It reaches this goal by collecting and describing eleven socio-economic methodologies previously dispersed in various sources. It make explicit knowledge that was tacit and largely non-accessible; this can be of concrete help for practitioners willing to plan and execute DE deployment at local level.
<b>Work Packages</b>	<p><i>What exactly were the contributions to other WP and what effect they have had on the work in these other WPs.</i></p> <p>This deliverable is of help for WP 9 – by offering a new instrument for disseminating DE-related methodologies. A side from this, the content of this deliverable can support the sustainability of DE approach (WP12) by helping more regions in the DE deployment. It can be also an instrument for DE research community sustainability by providing a clear map of the state of the art about socio-economic tools.</p> <p><i>What exactly are the future contributions to other work packages</i></p> <p>This deliverable is of interest for all the regions interested in DE local deployment/adoption and is awaited by European projects such as DEN4DEK and DE-LAN witch are working in the field. In this sense, even after the end of OPAALS project, this deliverable can give inputs to different local and European experiences of DE deployment.</p>
<b>Partners</b>	T6 Ecosystems
<b>Domains</b>	Social science
<b>Targets</b>	Research community, policy makers and practitioners working in regions and territories interested in DE adoption
<b>Publications*</b>	<p><i>Where the reported work was published.</i></p> <p>The work here reported has not been published jet</p>
<b>PhD Students*</b>	None
<b>Outstanding features*</b>	<p><i>Specify the outstanding features of the work being done (incremental change in the state of art, improving significantly the state of art, or going beyond) and if anyone outside the OPAALS Consortium has taken notice of this work</i></p> <p>This deliverable take advantage of the work done in DBE, OPAAL and other DE cluster projects and summarize, make more systematic and aggregate works that were dispersed and not linked one each other. This work can be of great help for all those interested in implementing DE deployment at local level by proving them a set of methodologies already tested by saving time and resources.</p>
<b>Disciplinary domains of authors*</b>	Social Science

*The information marked with an asterisk (\*) is provided in order to address Recommendation n. 4 from the Year 2 review report*

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# 1. Introduction

This deliverable is the main output of Task 11.10 “Methodological tools for evidence-based policy-making in the field of DE local adoption” and is part of WP 11 “Bridging Digital Ecosystem Research to Regional Development and Innovation in the Knowledge Economy”. The focus of the deliverable is on methodological tools capable of supporting local stakeholders in deploying DEs at local level; the target of this deliverable are not policy-makers per se but, more realistically, practitioners and intermediate actors willing to act as regional catalyst at local level. Regional catalyst, in fact, are the ones that - trusted by local policy makers – can provide them with the information and strategic knowledge needed in order to plan and successfully deploy the DEs. Consequently, this deliverable is not only about “supporting policy-makers in the decision-making process related to DE” but also, and mainly, about “supporting territorial stakeholders and regional catalysts to understand their territory in order to plan the deployment of a DE, planning the DE deployment, and executing the different steps of DE adoption”. In deliverable 11.14 (Botto and Passani, 2010) a series of policy recommendations have been designed for policy-makers to support them in activating the process of DE adoption; in this deliverable we will provide more practical tools that are complementary to the policy recommendations just mentioned. We describe deliverable’s objective better in the next section.

## 1.1 Objectives of the deliverable

The general objective of this deliverable is to map and make available a series of socio-economic methodological tools capable of supporting future regional catalysts and practitioners in planning the DE adoption, in selecting and involving local stakeholders and in evaluating the process.

In practical terms this deliverable seeks to summarise the work done in the last seven years from the point of view of the socio-economic methodologies used for supporting the process of DE adoption at local level.

In order to reach the above-mentioned objective this deliverable will take in consideration the work done in task 11.6 in terms of DE adoption process modeling and is in line with the work done in task 11.5 and in WP12 in OPAALS’ phase two.

More specifically, the objectives of this deliverable can be summarised as follows:

- To present and describe in a synthetic way the various steps of DE adoption
- To link the steps of the DE adoption process to a set of socio-economic methodologies developed by OPAALS and previous DE related-projects
- To develop a simple and clear grid for methodologies’ description
- To present 11 methodologies or methodological tools

## 1.2 Structure of the deliverable

The deliverable is composed of two core chapters strongly related to the above-mentioned objectives: in chapter 2 we will describe the OPAALS DE adoption model and its stages, then we will link those stages to various methodologies or methodological tools, finally we will propose a set of items (composing a grid) useful for describing the methodologies and their usages.

In chapter 3 the reader will find an inventory of eleven methodologies described using the grid developed in chapter 2.

## 2. Building a methodological tool-kit for evidence-based DE adoption

This chapter will first of all introduce the OPAALS model of DE adoption as it has been developed in recent years, then it will synthetically describe the work necessary to fulfil the goal of each step of DE adoption and then will link to each step one or more methodologies developed and/or used in previous experience of DE deployment at local level. The last paragraph of this chapter will, then, introduce a model for the description of usage of DE methodologies. In other terms, we will create a set of descriptive and functional criteria able to guide the reader in the selection and usage of each methodological tool.

### 2.1 DE adoption model

As stated in Botto and Passani, 2010 we can consider the DE adoption or deployment at local level *“as a socio-technical process (Bijker, Hoghes and Pinch, 1987; Bijker and Law, 1992). This translates to a process for technological environment development and knowledge creation and sharing in different local contexts, and maximises potential in terms of economic development, social capital improvement, ICT diffusion and the democratisation of knowledge diffusion. In socio-technical systems, society and technology construct and reconstruct each other in a complex process.*

*Moreover, to understand DEs, we used the metaphor of the socio-technical infrastructures (Star and Griesemer, 1989; Star and Ruhleder, 1996): DEs are artefacts emerging from practice, directly connected to human activities and material structures that should be jointly analysed with the technological and social frameworks (see: Botto and Passani, 2007). Consequently, DE adoption is a long-term investment that implies also a process of network-building, participation and the activation of multiple collaborations as well as the involvement of diversified stakeholders (universities, intermediate actors, SMEs, police makers and knowledge hubs) (see: Passani, 2007)”.*

The DE adoption process presented here derives from the above-mentioned definition of DE adoption at local level and is the result of the work done in this field starting with the DBE project. Particularly, the OPAALS model of DE adoption (Dini and others, 2009) emerged from the synthesis of the DBE model (Passani, 2007) and the critique analysis done of it by CREATE-NET team (Botto and Szabo, 2008 and 2009) that added new steps to the process (a more detailed analysis of the construction of the OPAALS model of DE adoption can be found in Dini and others, 2009 and Botto and Passani, 2010).

The OPAALS model of DE adoption is presented in **Figure 1**, below. This is a simplified version of the original diagram of DE adoption (Dini and others, 2009 – fig.2) that is richer in feedbacks and gives a more complex idea of the participative service development process. For sake of simplicity we will use this simplified diagram that guarantees a sufficient level of complexity while remaining clear enough. It is important however to consider the DE adoption as a hermeneutic process and not a linear one.

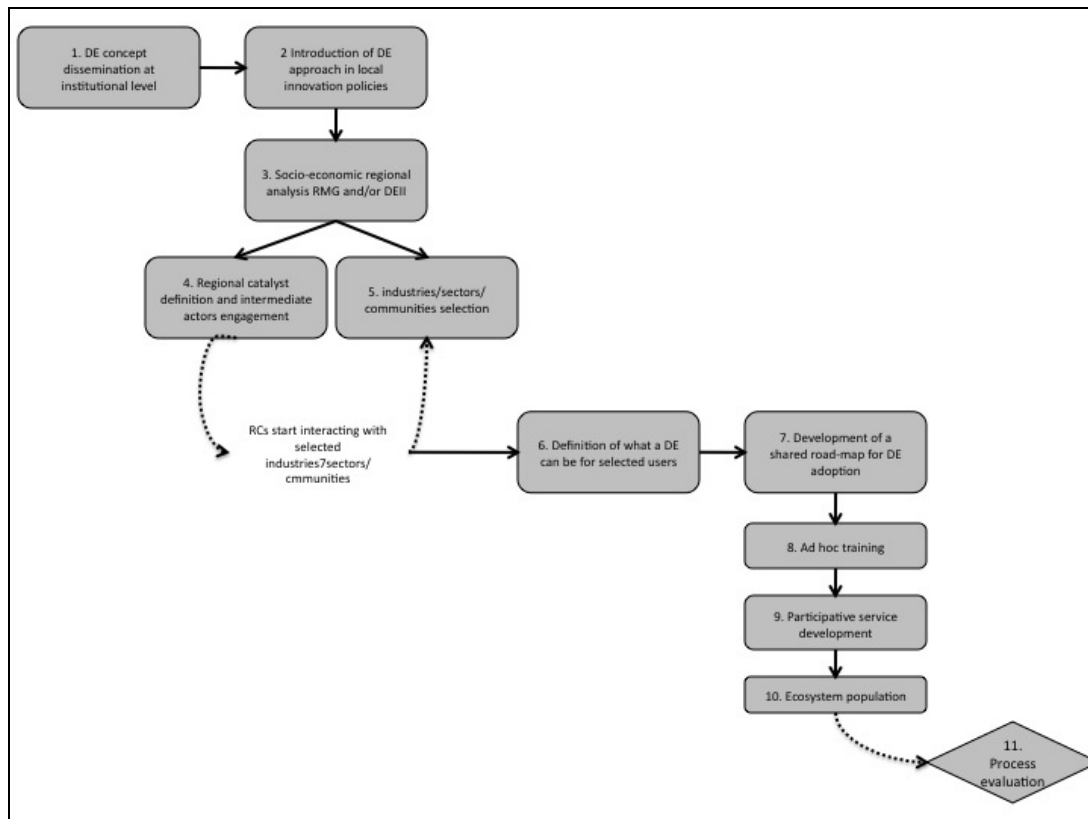


Figure 1 - The OPAALS model of DE adoption (Botto and Passani, 2010)

The OPAALS DE adoption process can be summarised in eleven steps, which are:

1. DE concept dissemination at institutional level
2. Introduction of DE approach in local innovation policies
3. Socio-economic regional analysis
4. Regional catalyst definition and intermediate actors' engagement
5. Definition of sectors and communities of users
6. Definition of what a DE can mean for selected users
7. Development of a shared roadmap for DE adoption and services development
8. Ad hoc training
9. Participatory services development
10. Ecosystem population
11. Process evaluation

As mentioned, this model seeks to guarantee a participative approach to DE implementation and needs to be adapted to the local reality of reference. For this reason each step can assume slightly different meaning in different territories and also the order of the steps can be revised. We will now briefly describe each step and the possibility to postpone or anticipate the various steps will be illustrated.

#### 1. DE concept dissemination at institutional level

The DE is a socio-technical process with the final aim of boosting innovation and sustainable development at territorial level and especially among SMEs. For this reason, public administration and policy-makers are central stakeholders of such a process and for this reason the first step of DE adoption is related to the engagement of the institutional level. The recognition of DEs by the institutional level is important for more than one reason: first of all at the present stage of DE technology development the support of the

public administration can assure the presence of the resources needed in order to sustain further development of the infrastructure, services development and other costs; secondly a public driven initiative can be seen as more stable and less risky from an economic point of view by SMEs and other beneficiaries. Of course this approach, that links DEs to local policies, has also some drawbacks; as emerged from the comparative analysis on DE adoption experiences (Botto and Passani, 2010) that generate a high dependency on the political climate that often translates into slow processes and complicated procedures. Besides from this, Public Administration tends to privilege rigid top-down initiatives that can be counterproductive for DE adoption, but this issue can be resolved by explaining the benefits of the open and active involvement of all the stakeholders. Consequently the decision to have a more or less strong involvement of the institutional level should be taken case-by-case. The analysis of trust relationships between SMEs (and other beneficiaries) and public bodies can be of help in guiding this decision. The analysis of the level of trust is included in the territorial maturity grade and, generally speaking, is an important part of the analysis of local social capital (instrument N.2 annex 2 and 3).

## *2. Introduction of DE approach in local innovation policies*

In recent researches, it emerged (Botto and Passani, 2010) that only three regions introduced the DE approach in their local innovation policies, those were Lazio Region (Italy), Wales (UK) and Aragon (Spain). The necessity and possible benefices of introducing the DE approach in local policies are the same as what we introduced when speaking of step one, but we can add here that introducing DEs in local innovation policies implies (or should imply) a rigorous analysis of interdependencies and complementarities with other local innovation approaches. In other words, it is important to avoid considering DE as a project isolated from other activities supporting SMEs, innovation, ICT introduction or against digital divide. The work done in Trento Province can be a positive example in this direction, Create-NET researcher (Botto, 2010), in fact, introduced, mixed and built a common understanding with other projects and initiatives that may lead to a more robust and more sustainable introduction of DE. Moreover, the introduction of DE approach in regional policies can be a pre-requisite for the take off of the DE related activities or can be the results of a positive pilot project. In this sense, a regional catalyst can start the DE deployment in a selected sector and, only after the conclusion of this “test”, ask to the policy-makers for a formal recognition of the DE approach and the introduction of it in their political agenda. In the event of their interest, the following reference can represent a starting point for thinking about DE introduction in local policies (iLazio 2008 available through [www.den4dek.org](http://www.den4dek.org)).

## *3. Socio-economic regional analysis*

We mentioned that the DE introduction at local level is a process that translates and adapts the DE research to territorial specificities and needs; in order to do this the necessity to develop a clear view of territorial characteristics v. This step is mainly research oriented and it aims at developing a clear picture about the productive fabric of the regions (or territory), the available technological infrastructure and ICT usage, a map of main stakeholders and knowledge producers, the available social capital, the innovation attitude of main stakeholders, the information and innovation flows and so on. As we will see the DE research community developed more than an instrument capable of supporting new regions in conducting this preliminary analysis that, together with step 4, 5 and 6 can lead to a complete feasibility study. This step is important not only in order for implementing DE, but also in order to plan corrective policies capable of supporting the sustainable development of the territories and, in this way, accompanying the DE introduction.

#### *4. Regional catalyst definition and intermediate actors' engagement*

Very often, the social actor/institution that starts the process of DE introduction is also the one who will act as regional catalyst but, as shown in some cases, the necessity to have more than one regional catalyst can emerge. This necessity is connected with the complexity of the regional catalyst role (see Rasanen and Rissanen, 2007) that should be in strong contact with the political level, have a clear view of the DE approach from a theoretical level, have a trust relationship with possible DE beneficiaries such as SMEs and be expert of ICT introduction and, possibly, development. In some cases (as was the case of ITA in the Aragon region) all these competences can be found in a single organisation, for example an innovation agency, but in other cases this is not possible so it became necessary select a network of actors/organisations able to act in synergy. The work done in phase three in mapping territorial stakeholders, social capital, level of trust among local actors and network of knowledge and information flow can be of great help to better identify all the possible actors composing the network of regional catalysts. As we will see an instrument for the self-assessment of regional catalyst is also available (instrument n. 10 annex n.7), this can be useful to evaluate the necessity for additional players and for "covering" emerging weaknesses in the regional catalyst selected.

#### *5. Definition of sectors and communities of users*

Since the very beginning of DE research the privileged users and beneficiaries of the DE have been SMEs and clusters of SMEs, but in the last years other possible targets have been recognised. For example, public schools have been considered in the Cambridge area, communities of citizens in Trento Province, interoperability of public administration services in Lazio region, agricultures in India and so forth. Beside this, we cannot forget the OPAALS experience that applied the DE approach to research community. Consequently, each region has to select one or more sectors and categories of users/beneficiaries; as recommended in Botto and Passani, 2010 the better approach seems to be that of selecting only one sector at the beginning; running a pilot project with the selected sector and then start working with other sectors. This is also the path successfully followed in the Emilia Romagna region that engaged the textile sector first, then the logistic and consequently the service sector. In order to select the sector, regional catalysts will need specific information about different industrial sectors and the already available communities/clusters. Some information arose already thanks to the research work done in step 3, others will need further analysis. Instrument 7 has been used in Aragon, in other regions the cluster selection has been decided mainly at political level (instrument 8, annex 6).

#### *6. Definition of what a DE can mean for selected users*

Once the regional catalysts, the stakeholders and the users/beneficiaries are identified, a new part of the processes can start. This step has been added to the original DBE approach in order to mitigate the top down aspects of the DE implementation and its core is the translation of the DE approach to the needs and the attitudes of the beneficiaries. In this context the regional catalyst (or the network of catalysts) needs to be added as translators, but also as facilitators and intermediaries between beneficiaries and regional stakeholders, especially the policy makers. At this stage the DE starts to really happen, the users are the ones that can drive the process inserting in it their necessities and competences. Together with the regional catalyst, the users will then (in step 7) start to develop a concrete road map for DE services development. In order to do so, at this stage of the DE implementation will be planned in terms of goal, timing and expected impacts. At the end of this step, it will be also evident who will act as service providers or,

using a terminology developed during the DBE project – who will be the drivers and especially the implementers.

In this step it can also be important to quantify the costs of DE introduction and run a cost-benefit analysis (instrument 3).

#### *7. Development of a shared roadmap for DE adoption and services development*

This step involves mainly planning activities and its goal is to have a clear view of the value chain that the DE will reinforce or create and which services have to be developed accordingly to the expected results. All the stakeholders engaged in the process will, in other words, collaboratively develop a scenario for DE adoption. The use cases developed in the last phase of OPAALS (see the dissemination tool-kit available thought [www.opaals-OKS.ue](http://www.opaals-OKS.ue)) can be of help - as examples – during the discussion about DE services development. A clear division of labor needs to be planned too and monitoring and evaluation methods need to be put in place.

#### *8. Ad hoc training*

DE technology has been developed in a research environment: this provides to it a high level of innovation but can make its uptake by local actors (in this case local software developers companies) more difficult. For this reason an ad hoc training will be needed in order to provide the necessary knowledge to the SMEs that will develop the DE local services. The DE research community is the first place to look for this kind of training ([www.opaals-oks.eu](http://www.opaals-oks.eu)). This training will be extremely useful also for learning more about already developed services, this leading to a reduction of development costs.

Besides the training for the software developers, other training activities can be needed for the final users/beneficiaries. An analysis of ICT usage, knowledge needs and information flow can be of help for planning the necessary training slots (instrument n.9, annex 3 part B). Final users, in fact, have to develop at least a procedural knowledge about the DE advantages and logic in order to be able to fully participate in the service development. We believe that, very often, technology users tend to be too passive in the purchasing of services thereby delegating to consultancies and resellers the choice about the services they will use. This is often due to the knowledge asymmetries that characterise the technology buyers/seller relationship. In order to support a more equal relationship that could go behind the DE itself, a specific training about “how to choose the right ICT service” can be of great help.

### 9. Participatory services development

Final users, together with early adopters (or drivers as called during the DBE project) will start developing specific services. We have to imagine and to prepare a hermeneutic process of service design-development-test and re-design that take in consideration the users not only in terms of requirements but also in term of its usage-experience. We must remember that the DE has been developed as an instrument for ICT diffusion and digital design reduction; consequently the day-to-day working process of the final users should be taken in constant consideration. The image below depicts the process related to step 9.



Figure 2 - Service development hermeneutic process

### 10. Ecosystem population

We said that the DE deployment can/should start with a sector and then be enlarged to other sectors. Similarly the DE will have few users at the beginning, (the ones engaged in the participative services development) but will need to grow quickly in order to reach that critical mass of users that can provide the concrete benefits of the Des to its users. At the end of step 9 the DE will have a set of embedded services with all the information needed for final users to take advantage of them. In stage 10 the regional catalyst and other stakeholders will need to present the DE to more local stakeholders (especially intermediate actors that closely work with consistent group of users, or other beneficiaries as selected in step IV). In parallel, communication activities will be needed in order to attract more users and a road show with hands-on sessions could be an opportunity for supporting the DE population.

### 11. Process evaluation

The DE deployment at local level is an iterative process that follows the hermeneutic approach, for this reason it is important to constantly monitor the process in order to adjust the activities to emerging needs and possible issues. Aside from the monitoring, however, a formal process evaluation should be carried out in order to evaluate the achievements and, if possible, the impact of the DE implementation at local level. This can be done at the end of the pilot action (which engages only one sector and a limited number of users and in this case the impact would be observable only at enterprise level and not at macroeconomic level) and/or at the end of the ecosystem population stage. Instrument n 3 can be used for the analysis of the impact. The monitoring and evaluation should be executed using the instrument ad hoc developed.

## 2.2 Linking methodologies and DE adoption steps

In this section we will recap and describe in a more in-depth manner the links between the steps described and methodologies developed to support the work of regional catalyst and other stakeholders. The picture below maps those links; in chapter three we will then describe each methodology in a user-oriented way.

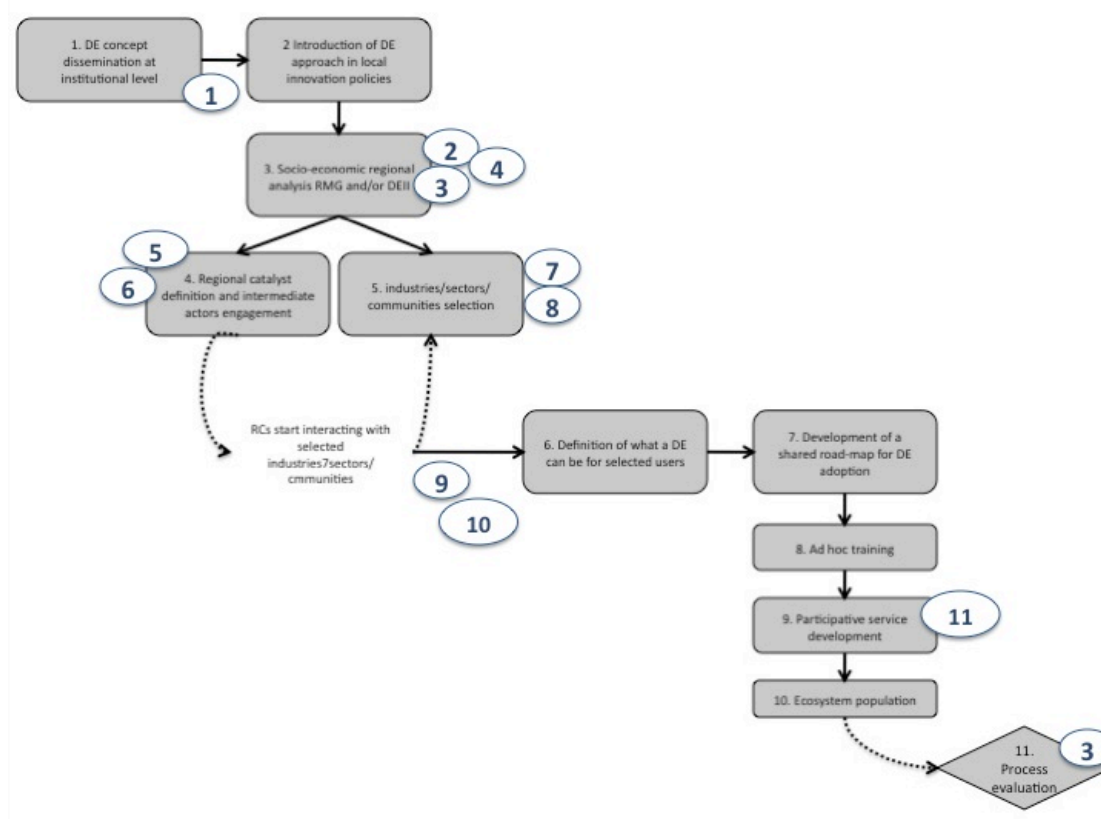


Figure 3 - Methodologies and DE adoption steps

In the figure above (fig.3) we schematize the relationship between DE adoption steps and methodologies, to each number corresponds a methodology as described in the table below. It is evident that for each step more than one methodology can be applied. The methodology description that follows (chapter 3) should guide the reader in the selection that better fits with its needs.

N.	Methodology/tool
1	SWOT analysis of DBE implementation
2	Territorial Maturity Grade
3	Digital Ecosystem Impact Index
4	Territorial analysis for the South America Context
5	Knowledge and innovation flows analysis
6	Analysis of local research centres
7	Target Domain analysis
8	Criteria for selection of the “pilot” DE sector
9	Information and ICT needs analysis
10	Balance scorecard for Regional catalyst self-assessment
11	Software development evaluation



The first step of DE adoption is mainly a networking and lobbying activity, but once the policy makers reach a first level of attention for DE the SWOT analysis can help in better develop a possible use of DE for local innovation. The SWOT analysis developed for DE adoption give to policy-makers and other stakeholders the possibility to evaluate (in a qualitative way) pros and cons of the DE adoption in their territory. During the SWOT exercise the coherence between DE and local innovation policies will emerge, and this can support step 2 of DE adoption. Beside this, once the decision of introducing the DE has been reached; the SWOT can support the planning of a feasibility study or of a pilot action.

Phase three – socio-economic regional analysis can count of different methodologies: the Territorial Maturity Grade, the Digital Ecosystem Impact Index and a specific approach to territorial analysis developed for the Latin American context.

In order to select regional catalyst and other intermediate actor a clear view of innovation nodes, clusters and information flows is of great help, for this purpose in step 4 the practitioners can use two different tool: one developed for studying research centres and another specifically designed for understanding innovation flow among enterprises of the biotech sector. Of course this second tool can be adapted to other sectors.

In order to fulfil the objective of the fifth step, two different instruments for sector selection are available.

Information and ICT needs analysis tool can be used to better understand the characteristic of the SMEs cluster previous selected and better support the development of the DE deployment road-map. A self-evaluation of regional catalyst can be of help between stage 5 and 6 in order to evaluate the possibility to engage other intermediate actors before entering the phase of concrete DE design and technological development.

In stage 9, participative software development, it is important to use instruments able to catch the users needs and software evaluation. For this reason an instrument is proposed in this deliverable, but it is important to notice that it has been developed and tested in a specific context in which DE infrastructure was still under development, so it will need to be updated accordingly to technological development.

Finally, Digital Ecosystem Impact index can be used to evaluate the cost and benefits of DE adoption in stage 11 and for monitoring the impact of DE in the medium and long term.

## 2.3 A model for methodologies' description and usage

The table that follows (Tab.1) shows the variables/elements that we will use in order to describe the methodologies usable/useful for DE deployment. It is important to highlight that the purpose of the description is not to substitute deliverables and documents that introduced those methodologies and that offer a deeper and complete description of them, but rather to map as many methodologies as possible in order to orient the reader in his/her search for socio-economic instruments for DE deployment. We want to offer a first access point to a very large and specialist literature that have been developed in the last seven years and that is available for all the stakeholders interested in DE deployment.

Name of the methodology	The name of the methodology as designed by its authors (in the case of a new methodology) or as generally recognised (if an already available method adapted to DE).
General purpose of the methodology/expected outputs	Why should the reader use this methodology? What will be the output of applying this methodology?
Step of DE adoption in which it can be used	When should the methodology be used? It is possible that the same methodology can be used in more than one step with similar or different purposes. We will indicate in this section such possibilities.
Authors	Authors of the methodology if developed ad hoc for the DE deployment, or author of the researchers that applied already available methods to DE.
References for learning more	Together with the bibliography at the end of this deliverable, here the reader will find important references and, if available, the website through which access the original documents.
Already tested?	If the methodology has been already tested the reader will find here a short description about its test, otherwise we will indicate the stage of development of the methodology.
Brief description	Here we will provide a short description of the methodology in an accessible, not too technical, language. The aim of this section is to explain to a non-specialist audience how each methodology works.
Data gathering techniques	Here we will indicate how to gather the information/data needed.
Necessary pre-existing data	We will state here if there is the need for having data before starting to use the methodology. If this is the case we will indicate which kind of data is needed.
Competences needed in order to use the methodology	A key-word description of the professional competences needed in order to use the method will be provided here.
Approximately "cost" of methodology usage	We will give here an approximate quantification of time and resources needed in order to use the methodology. Due to the difference of possible users/contexts, we

	cannot attribute a monetary cost to the methodology, but the information provided should be sufficient for planning the use of the method.
Level of difficulty/complexity	As in a cook-book we will indicate here if the methodology is more or less accessible also in terms of available documentation and also about its implementation and previous usages.
Annex	We will indicate the presence of questionnaires, guide-lines and other useful instrument – related to the methodology described - attached to this deliverable.

*Table 1 - Variables of the mode for methodologies' description and usage*

In the next chapter we will offer an inventory of the methodologies used so far by the researchers engaged in DE-related projects. An important point of reference, here, is the guidebook generated by the PEARDROP project. We hope to update and enlarge the information available in the PEARDROP toolkit and to build a complementary document. In fact, if the preferred target of the PEARDROP guide were regional policy-makers, here the target is researchers and practitioners active at local level.

### 3. Methodologies inventory and how to guide

Number	<b>1</b>
Name of the methodology	<b>SWOT analysis of DE implementation</b>
General purpose of the methodology/expected outputs	Gain a better understanding of the DB implementation potential of your region.
Step of DE adoption in which it can be used	I-II
Authors	Peardrop project
References for learning more	Peardrop DBE toolkit, 2008 available trough <a href="http://www.peardrop.eu">www.peardrop.eu</a>
Already tested?	This information is not available
Brief description	The DE SWOT analysis provides information that is helpful to match the regional development objectives and its available resources with the possible benefits of DE introduction. As such, it is instrumental in strategy formulation and selection.
Data gathering techniques	Facilitated discussion with key stakeholders and decision-makers
Necessary pre-existing data	None, but it is helpful to provide to the participants some preparatory documents such as the regional innovation plan and Regional Operative programmes.
Competences needed in order to use the methodology	Group dynamic management and facilitation techniques
Approximately cost of methodology usage (time and resources needed)	One week of preparation, 3-4 hours for performing the SWOT with invited participants and few days for reporting.
Level of difficulty	Low
Annex	Annex 1

N.	<b>2</b>
Name of the methodology	<b>Territorial Maturity Grade (TMG)</b>
General purpose of the methodology/expected outputs	Describing the socio-economic reality in which the DE is going to be tested and evaluate its readiness for DE introduction. The method can also support policy-makers in developing appropriate policies in support of DE deployment.
Step of DE adoption in which it can be used	III
Authors	Passani and Giorgetti, 2009 (a previous version of this methodology called at that time "Regional Maturity Grade" has been developed by CENSIS, 2005)
References for learning more	Passani and Giorgetti, 2009 and Rivera-Leon, Passani, Pennese, 2009, available through <a href="http://files.opaals.eu/OPAALS/Year_3_Deliverables/WP11/">http://files.opaals.eu/OPAALS/Year_3_Deliverables/WP11/</a>
Already tested?	Yes, the first version has been used to analyse three regions during the DBE project (West Midlands, Tampere and Aragon). The first version was called Regional Maturity Grade. The updated version has been successfully tested in Lazio region (Italy)
Brief description	<p>The aim of this methodology is to map the territorial situation from a socio-economic and innovation point of view before the DE adoption and evaluate territories' level of readiness to DE adoption.</p> <p>Beside this, TMG is extremely important in order to plan the supporting policies needed in order to make the DE adoption process feasible. Measuring the maturity of a territory to DE adoption tells local stake-holders what is needed in order to enable the users/beneficiaries to effectively use the DE. TMG synthesises the socio-economic characteristics of a territory in three macro-factors:</p> <ul style="list-style-type: none"> <li>-Innovation capability</li> <li>-Social capital</li> <li>-Relationship between the SMEs and ICT</li> </ul> <p>The methodology comprehends a social network analysis exercise</p>
Data gathering techniques	The TMG is a qualitative-quantitative methodology. Aside from a secondary analysis of already available data, the researcher should gather data about SMEs characteristics and ICT usage and territorial social capital. For territorial social capital the network analysis method is used. Different questionnaires have been developed for these purposes: see annex 2 (that contain also the network analysis related questions) and part A and C of annex 3 - Survey on SMEs, innovation, needs for information and technology
Necessary pre-existing data	A detailed description of necessary data and possible sources is presented in Rivera-Leon, Passani, Pennese, 2009
Competences needed in order to use the methodology	Sociological, economical and statistical competences are needed.
Approximately cost of methodology usage (time and resources needed)	The secondary analysis of data will take 2 weeks of one senior and one junior researcher. The adaptation of questionnaires, the related data gathering depends on the universe under analysis but we can imagine two months work for the above-

	mentioned researchers. The data elaboration and report writing can take approximately 2 weeks. Total: 3 months for two researcher one senior and one junior.
Level of difficulty	Medium
Annex	Annex 2 and 3 (only part A and C)

N.	<b>3</b>
Name of the methodology	<b>Digital Ecosystem Impact Index (DEII)</b>
General purpose of the methodology/expected outputs	<p>"It is possible to envisage three possible uses of DEII:</p> <ul style="list-style-type: none"> <li>- Instrumental use</li> <li>- Conceptual use</li> <li>- Warning</li> </ul> <p>The <i>instrumental approach</i> to DEII will imply its usage as a method for mapping costs and benefits of DE adoption at local level (or after the DE adoption for measuring its impacts) and will be possible only when local stakeholders will be aware of DE concept and will have reached a preliminary consensus upon the possible investment to be made for adopting DE (main users should have been selected as well). In this sense the DEII can follow the Regional Maturity Grade method in order to have a clear view on local players to be involved, and real cost to be met.</p> <p>The <i>conceptual approach</i> to DEII will introduce at local level ideas and theories that might influence the political agenda and discourse. In this sense, the DEII is important for the hypotheses upon which it is built; first of all, the idea that DE is a socio-technical process that will lead to regional development. DEII will be, then, used as a tool for scenario building able to tell to policy makers what to expect - in a more concrete way - from DE adoption.</p> <p>The <i>warning approach</i> to DEII emphasised its assessment evaluation aspects and can be used as a monitoring tool in order to evaluate the DE adoption progress and give feedback on how to improve the process itself. Consequently, DEII will support regional catalysts in detecting possible risks to be tackled in order to reach the planned goals" (Rivera-Lèon, Passani, Pennese, 2009).</p>
Step of DE adoption in which it can be used	Accordingly to the different uses listed above, the method can be used in stage 2, in stage 6-7 and in stage 11.
Authors	Rivera-Lèon, Passani, Pennese (T6 Ecosystems)
References for learning more	Rivera-Lèon, Passani, Pennese, D.11.8 - Preliminary study on methodologies for DE socioeconomic impact analysis, 2009 available through <a href="http://www.opaals-OKS.eu">www.opaals-OKS.eu</a>
Already tested?	Not fully, one of its account derives from the work Rivera-Leon e during the DBE project in which she tested a fist cost-benefit instrument: see Rivera Leon in DBE book.
Brief description	<p>The DEII is composed of 4 accounts:</p> <ul style="list-style-type: none"> <li>- Financial account</li> <li>- Users/consumer account</li> <li>- Economic development account</li> <li>- Social account</li> </ul> <p>The <i>financial account</i> looks at the expected revenues and</p>

	<p>expenditures coming from DE adoption. It aims to present the net financial costs of DEs adoption in order to determine if these are efficient from a public/private market perspective.</p> <p>The <i>users/consumer account</i> looks at the impacts (positive and negative) and the flow of net benefits of DE users as 'consumers' of what is provided by DE adoption. The account considers the three typologies of users: business users, strategic users and knowledge users.</p> <p>The <i>economic development account</i> appraises the DE contribution to the economic welfare at local or regional level, it looks - in other term - at the macroeconomic impacts and effects.</p> <p>The <i>social account</i> looks at social and community impacts produced by DE adoption; in some sense it take in consideration the aggregated benefits of the users and it is complementary to the economic development account. In this account, the intangible elements of the DE adoption play a crucial role.</p> <p>Each account is composed of several variable; for each of them data gathering techniques and data sources are described.</p>
Data gathering techniques	The method mixes a qualitative and quantitative approach; beside secondary analysis of regional statistical data, structured interviews and network analysis need to be used.
Necessary pre-existing data	As stated before, the DEII can follow the TMG and use the data gathered thanks to the TMG method, beside this more economic data at macro and micro level are needed. In Rivera-León, Passani, Pennese, 2009 a complete list of data sources is provided for each variable.
Competences needed in order to use the methodology	Sociological and economical competences are needed, with reference to the latter competences in financial audit and accounting are need too.
Approximately cost of methodology usage (time and resources needed)	With the complexity of the method and the quantity of the variables and possible uses it is impossible - at this stage - to fully evaluate the costs but a team should be composed by at least three researchers (one senior sociologist, one senior economist and a junior). We can estimate two full months of work for the team.
Level of difficulty	High
Annex	none

N.	<b>4</b>
Name of the methodology	<b>Territorial analysis for the South America Context</b>
General purpose of the methodology/expected outputs	The aim of this methodology is to provide policy-makers with information about the readiness of a particular region for adopting the De approach. It has been designed for a specific territory: the Moròn municipality, in the province of Buenos Aires, Argentina.
Step of DE adoption in which it can be used	I and III
Authors	Rivera León, L., Kataishi, R. and Dini, P.
References for learning more	Rivera León, L., Kataishi, R. and Dini, P. "The socio-economics of Digital Ecosystems Research: Policy Analysis and Methodological Tools from an Argentinean Case Study" EULAKS project's deliverable
Already tested?	Yes
Brief description	The methodology take in consideration Territorial Maturity

	<p>grade and Digital Ecosystem Impact Index methods and propose new variables in order to better answer to the Latin America reality. The new method is based on four dimensions that summarise what the authors consider the main aspects of ICT as a networking and innovation accelerator in a specific context. The four dimension are:</p> <ul style="list-style-type: none"> <li>- Absorption capacity</li> <li>- Connectivity</li> <li>- Level of ICT adoption</li> <li>- Social Capital</li> </ul> <p>The mathematical model used for this methodology take in consideration only the first three variable, due to the conceptual interrelation between connectivity and social capital.</p>
Data gathering techniques	Information are gathered thanks to questionnaires and network analysis. Secondary analysis of pre-existing statistical data is used too to a certain extent but, due to difficulties if founding reliable and comparable data, ad hoc surveys are the main source of information.
Necessary pre-existing data	No necessary
Competences needed in order to use the methodology	Sociological (with expertise in network analysis method) and economical. Statistical competence are required too.
Approximately cost of methodology usage (time and resources needed)	Due to the necessity of gathered data, we have to consider the cost of preparing, running and analysing a survey. So the cost and timing is dependent on the number of enterprises taken in consideration.
Level of difficulty	High
Annex	None

N.	<b>5</b>
Name of the methodology	<b>Analysis of knowledge and innovation flows</b>
General purpose of the methodology/expected outputs	The main aim of this method is to understand the knowledge and innovation flow of an industrial sector or SMEs cluster. It can be of great relevance in planning the DE at local level because - understanding how innovation and information move from a company to another and from a research centre to the market – the regional catalyst can understand which actors to engage, can find support in assigning roles inside the DE (drivers, implementer, users, etc) and can plan services accordingly to the pre-existing habits of knowledge management.
Step of DE adoption in which it can be used	IV
Authors	Van Egeraat C., Curran, D. (NUIM)
References for learning more	<p>D 11.11 Structures of Knowledge Flow and Innovation in the Knowledge Economy: Towards the Development of a Biotech DE in Ireland</p> <p>Van Egeraat, C. and Curran, D. (2010) Social Network Analysis of the Irish Biotech Industry: Implications for Digital Ecosystems, <i>NIRSA Working Paper</i> No. 55</p> <p>Van Egeraat, C. and Curran, D. (2010) Social Network Analysis</p>

	of the Irish Biotechnology Industry: Implications for Digital Business Ecosystems. Paper presented at The Third International OPAALS Conference on Digital Ecosystems, Aracaju, Brazil, March 2010.
Already tested?	Yes, in the Irish biotechnology sector
Brief description	<p>This method was developed for investigating the structure of social networks in the Irish biotechnology sector and the actual knowledge that flows through these networks. The method take in consideration three main research questions:</p> <p>what are the structural characteristics of knowledge and innovation networks in the Irish biotech sector and are these conducive to knowledge flow? (2) Are these networks exploited for local knowledge flow (3) What does this mean for the role of a biotech digital ecosystem and its contours?</p> <p>While this method has been developed for the Biothch sector of Ireland it can be easily adapted to the need of other territories and sectors.</p>
Data gathering techniques	<p>As stated in Van Egeraat C., Curran, D. , 2010: "The research design involved a mixed methodology, involving social network analysis, interviews and a focus group meeting. Social network analysis was applied to investigate the extent and structure of different types of networks and their related knowledge flow in the biotech industry. In addition, interviews were conducted with biotech sector actors and experts to (1) obtain more detailed insights into the character of the knowledge flow and (2) distil the implications of the findings for the roles and contours of a biotech digital ecosystem. Finally a focus group meeting was organized to discuss the research findings and solicit the ideas of the biotech community.</p> <p>Secondary analysis of already available dataset was used too, especially for the network analysis.</p>
Necessary pre-existing data	An inventory of the companies under analysis need to be available or created ad hoc. Plus access to patent register database (at national or regional level) is needed.
Competences needed in order to use the methodology	Sociological (with expertise in network analysis) and economical competences are needed. Statistical competences are required too.
Approximately cost of methodology usage (time and resources needed)	Due to the complexity of the methodology is not easy to quantify its cost, however it depends on availability of pre-existing data and the number of companies under analysis. We can imagine a research group composed by two senior researches and one junior, engaged in research activities at least for three months.
Level of difficulty	High
Annex	Annex 4

N.	<b>6</b>
Name of the methodology	<b>Analysis of local research centres</b>
General purpose of the methodology/expected outputs	Understanding the role of research centres in the local innovation system and their links among them and with other sectors of the local fabric such as productive and political sectors. This level of understanding is considered important in order to manage a territorial approach to innovation and development able to engage all the knowledge producers.
Step of DE adoption in	IV



which it can be used	
Authors	Francesco Botto – CREATE-Net
References for learning more	Botto, F. D11.13 – Challenges and results of the Trentino DCE Living Laboratory, 2010
Already tested?	Yes
Brief description	The methodology is a qualitative one, is based on a semi-structured questionnaire and takes in consideration the level of collaboration and connection among different local actors. It also engages research centres in expressing opinion on different models of local innovation management.
Data gathering techniques	Semi-structured questionnaire
Necessary pre-existing data	None, but it is important to have a clear map of the research centres to be interviewed.
Competences needed in order to use the methodology	Sociological competences are needed, plus a clear view of regional development/innovation policies, strategies and projects.
Approximately cost of methodology usage (time and resources needed)	One senior research and a junior are needed. The timing depends on the size of the universe under analysis.
Level of difficulty	Low
Annex	Annex 5

N.	<b>7</b>
Name of the methodology	<b>Target Domain Analysis</b>
General purpose of the methodology/expected outputs	To compare different industrial sectors and choose the more appropriate one for a preliminary introduction of the DE
Step of DE adoption in which it can be used	V
Authors	Barrabés Business Solutions and Instituto Tecnológico de Aragón
References for learning more	DEN4DEK knowledge repository - <a href="http://www.den4dek.org">http://www.den4dek.org</a>
Already tested?	Yes
Brief description	<p>This methodology offers a selection of variables that allow the comparison among different industrial sectors. The set of the variables proposed have been developed specifically for measuring the level of readiness of different sectors to DE adoption. Main variables considered are:</p> <ul style="list-style-type: none"> <li>• Rate of change:</li> <li>• Information exchange level:</li> <li>• Resource relevance</li> <li>• Criticality</li> <li>• Technological level</li> <li>• Critical mass</li> <li>• Interdependence</li> <li>• Rate of interactions</li> <li>• Symmetric communication</li> <li>• Existing alternatives</li> <li>• Business advantages</li> </ul>
Data gathering techniques	Qualitative questionnaires
Necessary pre-existing data	None but it is important to have a deep knowledge of the industrial fabric of the region. This method can be used after the TMG
Competences needed in	Sociological and economical (industrial economy, not financial)

order to use the methodology	
Approximately cost of methodology usage (time and resources needed)	The cost depends on the number of industrial sectors to be taken in consideration and sample selection choices.
Level of difficulty	Medium
Annex	none

N.	<b>8</b>
Name of the methodology	<b>Criteria for selection of the “pilot” DE sector</b>
General purpose of the methodology/expected outputs	Guiding stakeholders and practitioners is selecting a first industrial sector/cluster of SMEs for DE introduction at local level
Step of DE adoption in which it can be used	V
Authors	Peardrop project
References for learning more	Peardrop “DBE toolkit” available through <a href="http://www.peardrop.eu/Pages/index.aspx">http://www.peardrop.eu/Pages/index.aspx</a>
Already tested?	This information is not available but the method has been developed by regional innovation agencies.
Brief description	This instrument consists of a list of issues to be taken into account in selecting the industrial sector for DE implementation. It can be used as a reference in a facilitated meeting with stakeholders. In order to take a decision, however, preliminary information are needed. In order to gather the necessary information other methods should be used.
Data gathering techniques	No data gathering is required in order to use this instrument but the user needs to have a pre-existing deep knowledge of regional reality.
Necessary pre-existing data	As mentioned above no pre-existing data are directly necessary but the users need to be well informed about regional policies, regional innovation leaders, rate of ICT adoption and digital divide, industrial fabric and level of collaboration among SMEs. The territorial maturity grade can offer this kind of information that can, however, be already available to regional stakeholders.
Competences needed in order to use the methodology	If this methodology is used – as suggested – for guiding a decision making process with local stakeholders, facilitation and group dynamic management competences are needed.
Approximately cost of methodology usage (time and resources needed)	If all the information needed is already available, the decision making process should take no longer than few hours. Time for reporting need to be added in calculating costs.
Level of difficulty	Low if all the information are available
Annex	Annex 6

N.	<b>9</b>
Name of the methodology	<b>Information and ICT needs analysis</b>
General purpose of the methodology/expected outputs	Understanding SMEs need in term of information, ICT tools and knowledge.
Step of DE adoption in which it can be used	VI and VI
Authors	Antonella Passani – T6 Ecosystems
References for learning more	This work has not been published yet; it has been developed during the Lazio region pilot for DBE development. For more

	information a possibility is to contact T6 ecosystems that develop the methodology and carried out the study. The work will be probably enlarged and published in the context of DE-LAN project.
Already tested?	yes
Brief description	During a pilot action fro DE introduction, studying the SMEs of the selected sector, it emerged their difficulties in receiving the information their need in order to become more innovative. Particularly, it emerged the difficulty in having information about those opportunities that the Public administration provide for SMEs innovation. Aside from this, it also emerged the necessity to better understand the information flow present at local level in order to develop DE service coherently with the pre-existing practises of collaboration and informal learning. The methodology, based on a semi-structured questionnaire – provide an easy instrument for starting understanding the above-mentioned dimensions of territorial information and knowledge flow. It can be see as complementary o the Territorial Maturity Grade, in fact, the set of questions related to this method are integrated in the TMG questionnaire.
Data gathering techniques	Semi-structured questionnaire
Necessary pre-existing data	None, but it is important to have e deep knowledge of the territory under analysis
Competences needed in order to use the methodology	Sociological
Approximately cost of methodology usage (time and resources needed)	The cost depends on the number of SMEs under study, approximately we can consider a team of a senior research and a junior working for two month as sufficient for carrying on the survey and analyse the outputs.
Level of difficulty	Low
Annex	Annex 3 – part B

N.	<b>10</b>
Name of the methodology	<b>Balance Scorecard for regional catalysts self-evaluation</b>
General purpose of the methodology/expected outputs	To support Regional catalysts to self-evaluate their performance and plan corrective actions if needed. For the manager of DE implementation it is also a way to understand if - aside from the regional catalyst performing the balance scorecard – other stakeholders are needed in order to improve the level of success of DE introduction.
Step of DE adoption in which it can be used	Between the IV and V phases mainly, but it can be used at any stage for self-monitoring purposes
Authors	Neil Rathbone – DBE project
References for learning more	Rasanene and Rissanen, 2005 available through <a href="http://files.opaals.eu/DBE/deliverables/">http://files.opaals.eu/DBE/deliverables/</a>
Already tested?	Yes, during the DBE project
Brief description	<p>Balanced scorecard is a strategic management technique. It seeks to make objective and quantitative measures using four headings or ‘perspectives’ in order to provide a comprehensive and balanced view of an organisation that is able to usefully inform management. In the case of the DE we can use the four perspectives:</p> <ul style="list-style-type: none"> <li>• Financial</li> <li>• User</li> <li>• Business process</li> <li>• Development</li> </ul> <p>“It is important to understand that balanced scorecard is a strategic management technique that should help the RC itself, as well as the DE Project Management to improve the chances of achieving success. The idea is not to ‘test’ RCs, but to investigate, especially over the course of time, how the different characteristics of each RC influence the role and the success of achieving DE objectives” (Rathbone in Rasanene and Rissanen, 2005).</p>
Data gathering techniques	Facilitated discussion among invited persons, in this case regional catalysts and related stakeholders.
Necessary pre-existing data	None
Competences needed in order to use the methodology	Group dynamic management and facilitation techniques.
Approximately cost of methodology usage (time and resources needed)	One week of preparation (invitation and adaptation of variables if needed), 3-4 hours for performing the balance scorecard with invited participants and few days for reporting.
Level of difficulty	Low
Annex	Annex 7

N.	<b>11</b>
Name of the methodology	<b>Evaluation of software development</b>
General purpose of the methodology/expected outputs	Evaluate the process of DE service development undertaken and the possible impact on the firm business.
Step of DE adoption in which it can be used	IX
Authors	Jorge Veja-Murguia; J.J. Navamuel, F.J. Lacuev (ITA)

References for learning more	Jorge Veja-Murguia; J.J. Navamuel, F.J. Lacuev "D.5.10 - Real Business Scenario Definition, Analysis and Implementation". OPAALS deliverable
Already tested?	yes
Brief description	This methodological tool has been developed in order to gather opinion and feedback about the testing of DE infrastructure and engaged SMEs that actually developed services over the infrastructure. It allow the researchers to understand perceived limitation and benefits and to provide feedbacks to infrastructure developers. It also provides information about the impact that the developed service can have on firms business.
Data gathering techniques	Semi-structured questionnaire
Necessary pre-existing data	None
Competences needed in order to use the methodology	Sociological
Approximately cost of methodology usage (time and resources needed)	A team of two persons (a senior and a junior research) working for three weeks.
Level of difficulty	Low
Annex	Annex 8

We presented in this chapter eleven methodologies developed and used as a support in DE implementation to local level. This inventory cannot be considered exhaustive in itself; more methodologies have been developed over the years and the actors engaged in research activities are numerous and - in some cases- difficult to reach. Aside from this, few methodologies are not included in this report because the wish of the authors that consider them as a strategically asset of their consultancy work. The criteria used for selecting the methodologies included in this report are the following:

- usefulness
- availability of information for the final users
- possibility to be adapted to other contexts
- validity for the future (some methods have been used for studying the development of the DE approach and technology, but became obsolete at the present stage of DE development).

## 4. Conclusions

This deliverable is the main output of Task 11.10 “Methodological tools for evidence-based policy-making in the field of DE local adoption”.

The focus of the deliverable is on methodological tools capable of supporting local stakeholders in planning and deploying DEs at local level; in the first chapter the structure and objectives of the deliverable are presented, in the second chapter the OPAALS model of DE adoption is described and a set of methodologies are linked to DE adoption steps. In chapter three eleven methodologies are presented using a descriptive grid presented in the previous chapter.

The target of this deliverable is future regional catalyst and practitioners willing to experiment DE adoption in their territories; those are considered the users of this deliverable and will find in appendix ready to use questionnaire and other tools that can be considered an advanced starting point for their field-work. For each methodology a set of references are also provided, the reader can - in this way – autonomously access the methodologies and the outputs obtained thanks to their usage.

Aside for the information provided in this deliverable we recommend to the reader to consult “D11.4 - DE adoption typologies and lessons learned”. In the mentioned document, eleven cases of DE adoption are presented and compared. Learning from others’ experiences can be of great help for planning a new DE. Few policy recommendations are also provided to the reader in the same document. Before starting the work at local level, as an entrance point, please carefully navigate the OPAALS-OKS portal: <http://www.opaals-oks.eu>. We recommend to start from the information toolkit available at the following address: <http://www.opaals-oks.eu/about-opaals/downloadable-toolkit.html> especially the “Engagement & interest groups” section and the Power Point presentations in the digital Ecosystems & OPAALS section. In those sections the reader will find the information needed in order to learn more about DE research and technology.

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## Annex 1 – Regional DBE SWOT Analysis






Promoting Business Ecosystems

Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

Regional DBE SWOT Analysis

Digital Business Ecosystem Deployment Plan





Promoting Business Ecosystems


Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

GENERAL DBE MODEL STRENGTHS macro-economic issues	RELEVANCE FOR (REGION NAME) Are such elements already a strength in your region? Is it important to reinforce them?	HOW MUCH? 1 to 5*
High competitiveness for SMEs		
Development of new advanced services (online)		
Higher knowledge sharing		
High cooperation		
Incentives to entrepreneurship		
Higher flexibility and specialisation		

\*1= absolutely not important; 2=relatively not important; 3= indifferent; 4= important; 5=very important

Digital Business Ecosystem Deployment Plan




Promoting Business Ecosystems




Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming


Digital Business Ecosystem Deployment Plan

GENERAL DBE MODEL WEAKNESSES macro-economic issues	RELEVANCE IN (REGION NAME) Is your region able to face such issues? There are some elements (such as the regional culture, previous regional activities, firms networks already established ...) that can help managing such aspects?	HOW MUCH? 1 to 5*
Relatively high costs for training human resources		
Uncertain investment in the initial coordination;		
Uncertain investment in networking to reach the critical mass		
Potentially high conflicts and long decision-making processes		
Uncertain governance		



\*1= absolutely not important; 2=relatively not important; 3= indifferent; 4= important; 5=very important




Promoting Business Ecosystems




Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming


Digital Business Ecosystem Deployment Plan

GENERAL DBE MODEL OPPORTUNITIES macro-economic issues	RELEVANCE IN (REGION NAME) Are such issue relevant opportunities for your region? Are they a priorities for your region?	HOW MUCH? 1 to 5*
High ICT adoption and diffusion rates		
Globalisation and multinational firms		
Integration between markets		
Increasing growth rates in the service sectors		
An ICT sector boosted by an high adoption of Open Source Software platforms both in business and government organizations		
Development of opportunities related to system integration between firms, academia and public sector		



\*1= absolutely not important; 2=relatively not important; 3= indifferent; 4= important; 5=very important




Promoting Business Ecosystems




Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming


Digital Business Ecosystem Deployment Plan

GENERAL DBE MODEL THREATS Macro-economic issues	RELEVANCE IN (REGION NAME) Are such issues relevant in your region? There are some elements (such as the regional culture, previous regional activities, firms networks already established ...) that can manage such aspects?	HOW MUCH? 1 to 5*
Strong IPR management (versus creative commons or other "open" issues) both in business and academic environments		
Limited diffusion of Venture Capital		
Barriers to entrepreneurship		



\*1= absolutely not important; 2=relatively not important; 3= indifferent; 4= important; 5=very important




Promoting Business Ecosystems




Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

Digital Business Ecosystem Deployment Plan

STRENGTHS ( macro-economic issues)		WEAKNESSES ( macro-economic issues)	
	Final mark		Final mark
High competitiveness for SMEs		Relatively high costs for training human resources	
Development of new advanced services (online)		High initial coordination costs	
Higher knowledge sharing		High costs to reach the critical mass	
High cooperation		Potentially high conflicts and long decision making processes	
Incentives to entrepreneurship		Uncertain governance	
Higher flexibility and specialisation			
OPPORTUNITIES ( macro-economic issues)		THREATS (Macro-economic issues)	
	Final mark		Final mark
Higher adoption and diffusion rates of ICTs		Strong IPR management (versus creative commons or other "open" issues)	
Globalisation and multinational firms		Limited diffusion of Venture Capital	
Integration between markets		Barriers to entrepreneurship	
Increasing growth rates in the service sectors			
A boosted ICT sector			
Development of opportunities related to triple helix			



1= absolutely not important; 2=relatively not important;  
3= indifferent; 4= important; 5=very important

## Annex 2 – Questionnaire for Territorial Maturity Grade (Social Capital Dimension)

Name: \_\_\_\_\_  
 Role in the Company: \_\_\_\_\_  
 Company: \_\_\_\_\_

1. Name up to three local points of reference for important information or advice for your organisation (e.g., training institutions, university, trade associations, consultancies, professionals, local agencies...) *(in order of importance)*

### Local reference points

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

2. Name up to three businesses and local actors you consider innovative. *(In order of importance)*  
**Businesses**

\_\_\_\_\_  
 \_\_\_\_\_

### Local actors and institutions ( University, associations, trade unions, university, research centres, etc...)

\_\_\_\_\_  
 \_\_\_\_\_

3. If you had to create a local network to spread technological innovation and reinforce local competitive ability whom would you collaborate with? Name up to three for each category *(in order of importance)*.

### Businesses

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

### Local actors and institutions ( University, associations, trade unions, university, research centres, etc...)

1. \_\_\_\_\_  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_

4. Please indicate actors and institutions with who your organization is in contact (or it has been in the last year).

University, foundations, trade unions, associations, no-profit sector representative	Personal contacts	Membership in associations or institutional bodies	Sharing of resources (personnel, offices, equipments, etc...)	Partaking in project	Information sharing	Other (please specify)	I know them but I have no relationship or contacts with them	I do not know them
TUT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UTA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tampere Polytechnic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pirkanmaa Polytechnic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FinnMedi Research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tampere Science Park	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tekes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Helinki Business School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vaasa Polytechnic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Jyväskylä	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Oulu	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VTT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regional Centres of Expertise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
University of Turku	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culminatum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICT Turku	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innopark	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technology Centre Herma Ltd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Institutions</b>	Personal contacts	Membership in associations or institutional bodies	Sharing of resources (personnel, offices, equipments, etc..)	Partaking in project	Information sharing	Other (please specify)	I know them but I have no relationship or contacts with them	I do not know them
European Union	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City of Tampere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regional Council of Pirkanmaa	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ministry of Trade and Commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Ministry (labour)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Municipalities in the Tampere Region (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<b>Representatives of business domain. Entreprises, entrepreneurs association, venture capitalist and Banks</b>	Personal contacts	Membership in associations or institutional bodies	Sharing of resources (personnel, offices, equipments, etc..)	Partaking in project	Information sharing	Other (please specify)	I know them but I have no relationship or contacts with them	I do not know them
Tampere Chamber of Commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employment and Development Economic Centre of Tampere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COSS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nokia Corporation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Metso Corporation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sandvik Tamrock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nemein	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Integratum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joinex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tamlink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tamgalss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Takk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anilinker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Investintampere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oy Media Tampere Ltd.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bank (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Venture Capital Organization (many)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Can you think of any of your current involvement in a group, working team or association that came from your involvement in another group (e.g. you met someone there who suggested you become involved in another activity and you went along to give it a try)?

Person (please indicate the organization of reference if any)	First occasion of contact	Current occasion of contact

6. Are there people you know and have contact with that you meet in more than one situation (e.g. they are at the entrepreneurial association meeting and you meet them at indoor netball, work together on a political campaign and go out to a meal together or see them at the gym, etc.)?

	Group/activity 1	Group/activity 2	Group/activity 3
Person 1			
Person 2			
Person 3			
Person 4			
Person 5			

7. There are often differences in characteristics between people working in the same enterprise/organization. For example, differences in wealth, income, social status, ethnic background. There can also be differences in religious or political beliefs, or there can be differences due to age or sex. To what extent do any such differences characterize your working place?

(Use a five point scale where 5 means to a very great extent and 1 means to a very small extent).

8. Do any of these differences cause problems?

9. Which two differences, characterize mostly your working place?

- |    |     |
|----|-----|
| No | Yes |
|----|-----|
- a. Differences in education
  - b. Differences in landholding
  - c. Differences in wealth/material possessions
  - d. Differences in social status
  - e. Differences between men and women
  - f. Differences between younger and older generations
  - g. Differences between long-term and recent residents
  - h. Differences in political party affiliations
  - i. Differences in religious beliefs
  - l. Differences in cultural/ethnic background
  - m. Other differences

10. How much do you trust.....

(Use a five point scale where 5 means to a very great extent and 1 means to a very small extent).

	Score
Local government officials	
Central government officials	
Local development agency officials	
Local entrepreneurs	
Research center's representatives	
University's professors	

## Annex 3 – Questionnaire for Territorial Maturity Grade (Part A and C) and for technological and information needs analysis (Part B)

### Company profile

#### 1. Company name

\_\_\_\_\_

#### 2. Legal address (indicate municipality)

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|

#### 3. Legal form

- Individual company ☐ 1
- General partnership. ☐ 2
- Joint stock company ☐ 3
- Ltd. ☐ 4
- Limited partnership ☐ 5
- Cooperative ☐ 6
- Other type of partnership ☐ 7
- Other type of corporation ☐ 8

#### 4. Year of legal registration

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|

#### 5. Sector of activity

##### Manufacturing

- Food and beverage products ☐ 1
- Textiles ☐ 2
- Articles of fur, leather clothes, shoes ☐ 3
- Chemicals and chemical, rubber and plastic products ☐ 4
- Electricity, gas, steam, water ☐ 5
- Furniture ☐ 6
- Printing of paper and media ☐ 7
- Wood and paper ☐ 8
- Basic metals ☐ 9
- Ceramics ☐ 10
- Electronic products ☐ 11
- Other: \_\_\_\_\_ ) ☐ 12

##### Service sector

- Tourism (hotel, restaurant, travel agency) ☐ 13
- Culture and leisure time ☐ 14
- Informatics e telecommunication ☐ 15
- Consultancy ☐ 16
- Research ☐ 17

#### 6. The company is managed by: (one answer only)

- Owner ☐ 1
- Relative of owner ☐ 2
- Associate or group of associates ☐ 3
- External manager ☐ 4

#### 7. The manager holds the following degree: (one answer only)

- No degree/ Elementary school degree ☐ 1
- Secondary school degree ☐ 2
- High school degree ☐ 3
- University degree ☐ 4
- Master/ phd / other specialisation ☐ 5

#### 8. Age of company manager

\_\_\_\_\_|\_\_\_\_\_| years

#### 9. Number of employees

\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|

#### 10. What is the number of customers and subcontractors with permanent business relation to your company? (one answer only)

	Customers	Subcontractors
- 1-5	<input type="checkbox"/> 1	<input type="checkbox"/> 1
- 6-10	<input type="checkbox"/> 2	<input type="checkbox"/> 2
- 11-20	<input type="checkbox"/> 3	<input type="checkbox"/> 3
- 21-30	<input type="checkbox"/> 4	<input type="checkbox"/> 4
- 31-60	<input type="checkbox"/> 5	<input type="checkbox"/> 5
- More than 60	<input type="checkbox"/> 6	<input type="checkbox"/> 6

#### 11. How important are the following factors in choosing the main subcontractors of the company? (one answer only)

	Little	Enough	High
- Proximity located in the surrounding areas)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Trust (you are bound by relationships that go beyond the requirements of production)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Quality of services/products	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- The choice is by default (e.g. because there are no other companies with the required competence)	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

**12. Which has been the trend in 2008 (in respect to 2007) of the following variables in your company? (one answer per row)**

	Increased	Decreased	Stable	
- Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(a)
- Investments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(b)
- Employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(c)
	1	2	3	

**13. And what are the trends for your company for the first half of 2009 (in respect to the second half of 2008)? (one answer per row)**

	Increased	Decreased	Stable	
- Turnover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(a)
- Investments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(b)
- Employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	(c)
	1	2	3	

### Part A – SMEs and Innovation

**14. What are, from your point of view, the priority needs of the companies in your surroundings? (max three answers)**

- Better territorial infrastructure ☐
- Streamlining of bureaucracy (tax, social security, administrative) ☐
- Tax reduction ☐
- Better support for "going international" ☐
- Better access to credit and other financial instruments ☐
- Greater flexibility of work ☐
- Greater control and security by supervising bodies ☐
- Greater coherence of training offer to needs of labour market ☐
- Purchase information and communication technology ☐
- Incentives for technological innovation and for R&D ☐
- More assistance from local institutions ☐
- More planning and government involvement in the economy ☐
- More incentives / opportunities for collaboration ☐
- More organizational and logistical support from the institutions of the territory ☐
- Other ☐  
(\_\_\_\_\_)

**15. Over the next five years you believe that your company will need (max. two answers):**

- Investments in ICT ☐ 1
- Increase of number of employees in the areas of marketing and research ☐ 2
- Training projects for employees ☐ 3
- Development strategies agreed with other local actors ☐ 4
- Create a direct contact with research and development centers ☐ 5
- New tools to enhance the process ☐ 6
- None of these ☐ 7

**16. Over the past three years, your company has performed some of the following innovative activities: (one answer for each row)**

- |                                       | Si                       | No                       |
|---------------------------------------|--------------------------|--------------------------|
| - Development of new products         | <input type="checkbox"/> | <input type="checkbox"/> |
| - Development of new processes        | <input type="checkbox"/> | <input type="checkbox"/> |
| - Acquisition of patents and licenses | <input type="checkbox"/> | <input type="checkbox"/> |
| - Test production (including pre-     | <input type="checkbox"/> | <input type="checkbox"/> |



- production), engineering
- Market research for new products (excluding the cost for launching them) ☐ ☐
- Training of employees ☐ ☐
- Acquisition of new technologies for information and communication ☐ ☐

**Part B – SME networks and information needs**

**17. In your work what is the information your are most looking for?** (assign a value from 1 to 5 for each listed item; 1 means that you rarely need this information, 5 means information on which you try to be constantly updated)

Events and meetings related to sector of activity	1	2	3	4	5
Changes to existing regulations that may impact on its business	1	2	3	4	5
Funding opportunities	1	2	3	4	5
Training opportunities	1	2	3	4	5
Policies and public actions (local and regional) relevant to your activity	1	2	3	4	5
Activities or events organised or supported by sector associations / chambers of commerce etc.	1	2	3	4	5
Performance of competitors and their innovations	1	2	3	4	5
Performance of partner companies and their innovations	1	2	3	4	5
Developments / changes of reference market	1	2	3	4	5
Studies and research on your reference market or your territory	1	2	3	4	5
Others (specify)					

**18. Where are you searching for the information you are interested in?** (for all information you assigned 3 or more as a value in the previous question)

Press  
Other websites  
websites/  
newsletters of  
public bodies  
and/or business  
organisations  
Personal contact /  
buzz

Events and meetings related to sector of activity  
Changes to existing regulations that may impact on its business  
Funding opportunities  
Training opportunities  
Policies and public actions (local and regional) relevant to your activity  
Activities or events organised or supported by sector associations / chambers of commerce etc.  
Performance of competitors and their innovations  
Performance of partner companies and their innovations  
Developments / changes of reference market  
Studies and research on your reference market or your territory  
Others (specify)

**19. Suppose that you learned through informal channels about an opportunity at regional level to start a program of innovation from which your company could benefit. Where would you look for further information? Which are your contacts / references for receiving more details and technical support?**

1

2

3

**Part C – SMEs and ICT tools****20. What type of Internet connection do you use in your company?**

- ADSL ☐
- ISDN ☐
- Via mobile phone ☐
- Modem ☐
- xDSL ☐

**21. Which of the following IT and telematic solutions do you have or do you plan to purchase by the end of this year? (one answer per row)**

- |   | Yes                      | Planned<br>for 2009      | Not<br>planned           |      |
|---|--------------------------|--------------------------|--------------------------|------|
| - Company e-mail  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (1)  |
| - Company web site  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (2)  |
| - Intranet  |                          |                          |                          |      |
| - Internet to gather information about activities and products  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (3)  |
| - E-commerce for direct sale of products or services  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (4)  |
| - E-commerce for sales of products and services through intermediaries (commercial or territorial websites etc)                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 5    |
| - <i>Customer Relationship Management</i> (process to identify, select, acquire, develop and retain customers)                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (6)  |
| - Videoconferences  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (7)  |
| - <i>Enterprise Resource Planning (ERP)</i> (Management - Redefining business processes in terms of organization and application) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (8)  |
| - <i>Supply Chain Management</i> (Automate the process of acquiring products from suppliers)                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (9)  |
| - <i>Learning Management System</i> (Coordinated  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | (10) |

management of company trainings).

- *Teamwork.* ☐ ☐ ☐ (11)  
(Platform for collaborative works and teleworking)

**22. If you have a company website, what services do you offer with it to your clients and suppliers?**

- Information on company, products/services – marketing ☐
- Access to catalogues and price lists of products/services ☐
- After sales services ☐
- Customisation of website for frequent visitors ☐
- Online sales ☐
- Transmission of services or specific information in electronic format ☐

**23. Which of the following technology applications are you already using or are you planning to use in collaboration with other companies in your territory? (One answer per row)**

- |   | In place                 | Planned in place         | Neither planned nor in place |
|---|--------------------------|--------------------------|------------------------------|
| - Information exchange by e-mail  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Mailing lists, specific discussion groups   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Meetings by videoconferences  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Common web portal of various companies: to promote contacts and exchange of information and content across all local companies with customers and external suppliers (e.g. window for company presentation, news section) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Intranet between companies: for development of electronic business models as e.g. B2C and B2B   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Invoicing in digital format to customers  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Receiving invoices in digital format from suppliers   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Using digital signatures in messages sent   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |
| - Contact and transactions with public authorities  |                          |                          |                              |

1 2 3

**24. Do you have ICT specialists among your staff**

Yes ☐ No ☐

**25. Did you adopt free and open source software? If yes, which one?**

Yes ☐ No ☐

---

**26. Do you make use of free and open software? If yes, which one?**

Yes ☐ No ☐

---

**27. Over the last two years the cost of technological innovation (e.g. new equipment, computer and communication systems, analytical tools and test materials, servers) in your company have been:** (only one answer)

- Considerably increased (more than 10%) ☐ 1
- Increased (up to 10%) ☐ 2
- Stable ☐ 3
- Decreased (up to 10%) ☐ 4
- Considerably decreased (more than 10%) ☐ 5

**28. Which of the following factors is an obstacle in the use of technology within your company or in relationship with other companies? (With technology we mean computers, software, ICT networks, telecommunications)** (max. two answers)

- Too few sources of funding ☐
- Costs too high ☐
- Rigid internal organisation ☐
- Lack of qualified personnel and / or with technological skills ☐
- Economic risk too high ☐
- Difficulties in the market orientation of the technological solutions offered ☐
- Difficulties of sharing information which is often critical, as e.g. the supply or distribution ☐
- Fear of compromising the own management autonomy (functional to flexibility) ☐
- The purchase of new technologies is no priority in the strategy of the company ☐



## **Annex 4 – Knowledge flow in Irish Biotech Networks – Interview Guide**

### **General Information:**

Date of interview:

Name of firm: Firm number:

Address of firm:

Name of respondent:

Function of the respondent:

### **Part 1: Introduction**

- 1) In what year was your firm established? In case of merger or acquisition, indicate also the year in which the most recent merger or acquisition took place.
- 2) Is your firm owned by another organisation?
- 3) Could you please indicate how many employees (full-time equivalents) are working in your firm?
- 4) What are the main activities for achieving competitiveness of your firm (multiple selections possible)?
  - a. Production of tailor made products / processes for individual customers
  - b. Production of standardised products / processes
  - c. Product/process development
  - d. Design
  - e. Marketing
  - f. Other...

### **Part 2: Discussion Socio-grams**

#### **Firm network linked by directors:**

- 1) Did your firm obtain knowledge from directly linked firms
  - a. What was the type of the knowledge (technical, know who, market)
  - b. What was the importance of the various types of knowledge for innovative performance (1 -5 = very important)
  - c. Please describe the process of flow
- 2) Did your firm obtain knowledge from indirectly linked firms (flow between three or more companies?)
  - a. What was the type of the knowledge (technical, know who, market)
  - b. What was the importance of the various types of knowledge for innovative performance (1 -5 = very important)
  - c. Please describe the process of flow
  - d. What is the maximum number of steps

#### **Firm network linked by co-inventors:**

- 3) Did your firm obtain knowledge from directly linked firms
  - a. What was the type of the knowledge (technical, know who, market)
  - b. What was the importance of the various types of knowledge for innovative performance (1 -5 = very important)
  - c. Please describe the process of flow
- 4) Did your firm obtain knowledge from indirectly linked firms (flow between three or more companies?)

- a. What was the type of the knowledge (technical, know who, market)
- b. What was the importance of the various types of knowledge for innovative performance (1 -5 = very important)
- c. Please describe the process of flow
- d. What is the maximum number of steps

### **Part 3: Knowledge Exchange – Technological Knowledge**

This part of the interview deals with the exchange of technological knowledge.

Record answers in separate matrix document [*not included in report*]

- 5) If you are in a critical situation and need technical advice, to which of the local organisations have you turned. These may be firms, universities, research organizations, public agencies etc.
- 6) Could you provide for each of the organizations mentioned above the following information:
  - a. Please indicate the name and the type of organization. For firms specify whether they are suppliers, customers, competitors, other companies.
  - b. How is this organisation linked to your organisation (in case of informal links, which persons are linked and how was contact established)
  - c. Please indicate the location (municipality) of each organization you mentioned.
  - d. Please indicate for each organization from 1-5 how important this relation is for your firm's innovation performance (1 not important to 5 very important).
  - e. Please mention for each organization in which sector it is mainly active.
  - f. Please mention for each organization whether the technological knowledge in your firm is similar to that of the organization mentioned. (1 not similar to 5 very similar)
- 7) To which non-local organisations have you turned [and follow-up questions as above]
- 8) Which of the following local organisations do you think have benefited from technical support provided from this firm? [Same set of follow-on questions]
- 9) Which organisations has this firm collaborated with in research projects in the last 2 years?
- 10) Could you express from 1 to 5 the importance of the following sources of information for gathering technological knowledge?
  - a. Fairs and exhibitions
  - b. Specialised magazines
  - c. Market surveys
  - d. Academic journals
  - e. Are there any other sources of technological knowledge that are not mentioned above?

#### **Part 4: Knowledge Exchange – Know Who / Market Type Knowledge**

This part of the interview deals with the exchange of know-how and market knowledge, e.g. knowledge concerning new developments, market trends, market development, etc.

Record answers in separate matrix document [*not included in report*]

- 11) If you are in search of know-who / market type advice, to which of the local organisations have you turned. These may be firms, universities, research organizations, public agencies etc.
- 12) Could you provide for each of the organizations mentioned the following information:
  - a. Please indicate the name and the type of organization. For firms specify whether they are suppliers, customers, competitors, other companies.
  - b. Please indicate the location (municipality) of each organization you mentioned.
  - c. Please indicate for each organization from 1-5 how important this relation is for your firm's innovation performance (1 not important to 5 very important).
  - d. How is this organisation linked to your organisation (in case of informal links, which persons are linked and how was contact established)
  - e. Please mention for each organization in which sector it is mainly active.
  - f. Please mention for each organization whether the market knowledge in your firm is similar to that of the organization mentioned. (1 not similar to 5 very similar)
- 13) To which non-local organisations have you turned [and follow-up questions as above]
- 14) Could you express from 1 to 5 the importance of the following sources of information for gathering market knowledge?
  - a. Fairs and exhibitions
  - b. Specialised magazines
  - c. Market surveys
  - d. Academic journals
  - e. Are there any other sources of technological knowledge that are not mentioned above?
- 15) Which of the following local organisations do you think have benefited from Know Who / Market knowledge provided from this firm? [Same set of follow-on questions]

#### **Part 6: Possible role of Biotech DE**

- 16) Please discuss your ideas regarding the possible role of a DE in the Irish biotech industry.

## Annex 5 – Questionnaire for research centres' analysis

### ANAGRAFICA

- 1 Nome del CdR: .....
- 2 Nome del referente: .....
- 3 Numero dipendenti: .....
- 4 Può spiegare in brevemente (2-3 frasi, un abstract) di cosa si occupate?  
.....  
.....  
.....

### COLLABORAZIONI E PROGETTI LOCALI

- 5 Può spiegarci i tipi di **collaborazione e progetti** che vi relazionano ai seguenti attori:
  - a **PAT**,
    - i) Numero **bandi di ricerca** della provincia (ultimi 5 anni): ...
      - (1) Progetto 1:
        - (a) Nome: .....
        - (b) Tipo di progetto: .....
        - (c) Competenze coinvolte: .....
        - (d) Uffici coinvolti: .....
        - (e) Eventuali commenti: .....
      - (2) Progetto 2:
        - (a) Nome: .....
        - (b) Tipo di progetto: .....
        - (c) Competenze coinvolte: .....
        - (d) Uffici coinvolti: .....
        - (e) Eventuali commenti: .....
      - (3) Progetto 3:
        - (a) Nome: .....
        - (b) Tipo di progetto: .....
        - (c) Competenze coinvolte: .....
        - (d) Uffici coinvolti: .....
        - (e) Eventuali commenti: .....
      - (4) Progetto 4:
        - (a) Nome: .....
        - (b) Tipo di progetto: .....
        - (c) Competenze coinvolte: .....
        - (d) Uffici coinvolti: .....
        - (e) Eventuali commenti: .....



ii) Numero **commesse conto terzi** (ultimi 5 anni): ...

(1) Commessa 1:

- (a) Quantità monetaria: .....
- (b) Servizio erogato: .....
- (c) Eventuali commenti: .....

(2) Commessa 2:

- (a) Quantità monetaria: .....
- (b) Servizio erogato: .....
- (c) Eventuali commenti: .....

(3) Commessa 3:

- (a) Quantità monetaria: .....
- (b) Servizio erogato: .....
- (c) Eventuali commenti: .....

(4) Commessa 4:

- (a) Quantità monetaria: .....
- (b) Servizio erogato: .....
- (c) Eventuali commenti: .....

(5) Commessa 5:

- (a) Quantità monetaria: .....
- (b) Servizio erogato: .....
- (c) Eventuali commenti: .....

**b Informatica Trentina**

i) **Subfornitura** di prodotti e servizi:

(1) Subfornitura 1:

- (a) Quantità monetaria: .....
- (b) Prodotto/servizio erogato: .....
- (c) Eventuali commenti: .....

(2) Subfornitura 2:

- (a) Quantità monetaria: .....
- (b) Prodotto/servizio erogato: .....
- (c) Eventuali commenti: .....

(3) Subfornitura 3:

- (a) Quantità monetaria: .....
- (b) Prodotto/servizio erogato: .....
- (c) Eventuali commenti: .....

ii) **Ricerca e sviluppo** (partecipazione a progetti di ricerca):

(1) Progetto 1:

- (a) Nome: .....

(3) Progetto 3:

- (a) Nome: .....
- (b) Tipo di progetto: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

**c Aziende locali:**

(1) Collaborazione 1:

- (a) Azienda: .....
- (b) Tipo di collaborazione: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

(2) Collaborazione 2:

- (a) Azienda: .....
- (b) Tipo di collaborazione: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

(3) Collaborazione 3:

- (a) Azienda: .....
- (b) Tipo di collaborazione: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

(4) Collaborazione 4:

- (a) Azienda: .....
- (b) Tipo di collaborazione: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

(5) Collaborazione 5:

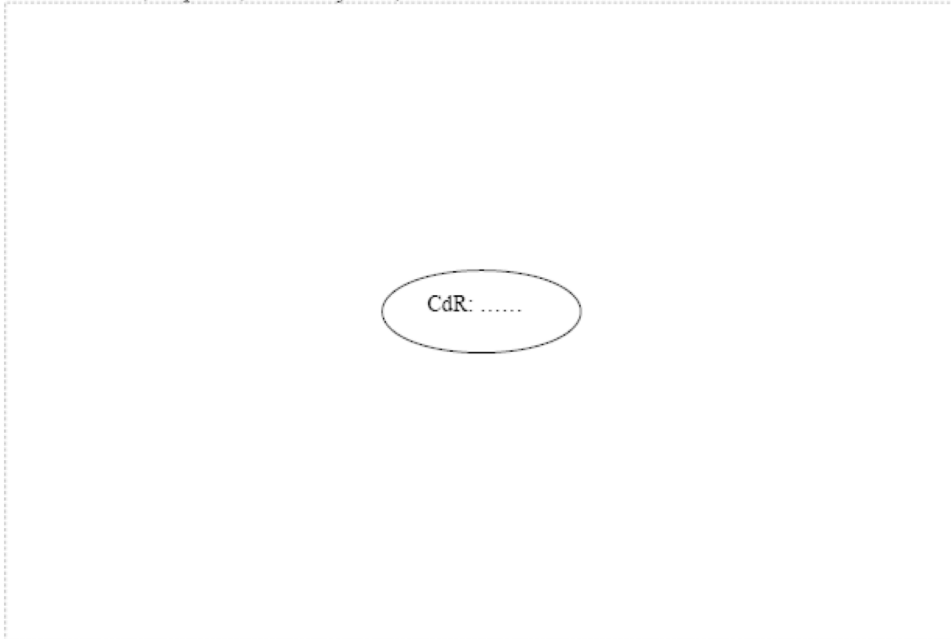
- (a) Azienda: .....
- (b) Tipo di collaborazione: .....
- (c) Competenze coinvolte: .....
- (d) Eventuali commenti: .....

**d Altri players locali (CEII, Trentino Sviluppo, Ass. Industriali, ...):**

.....  
.....  
.....  
.....

## RELAZIONI A LIVELLO LOCALE

- 6 Può disegnare uno schema delle relazioni a livello locale tra il vostro CdR/Dipartimento e gli altri attori dell'innovazione a livello locale (PAT, InfoTn, altri CdR, imprese, altri Player...)?



- 7 Quale è l'attuale **modello di innovazione regionale per l'ICT**?
- a Regolato dal pubblico ☐
  - b Senza specifica regolazione ☐
  - c Con specifici ruoli e regole ☐

Commenti: .....

.....

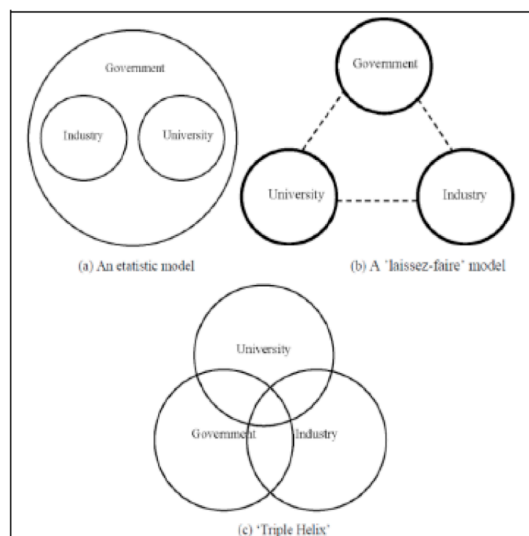
- 8 Quale **modello di innovazione regionale per l'ICT** desidererebbe?

- a Regolato dal pubblico ☐
- b Senza specifica regolazione ☐
- c Con specifici ruoli e regole ☐

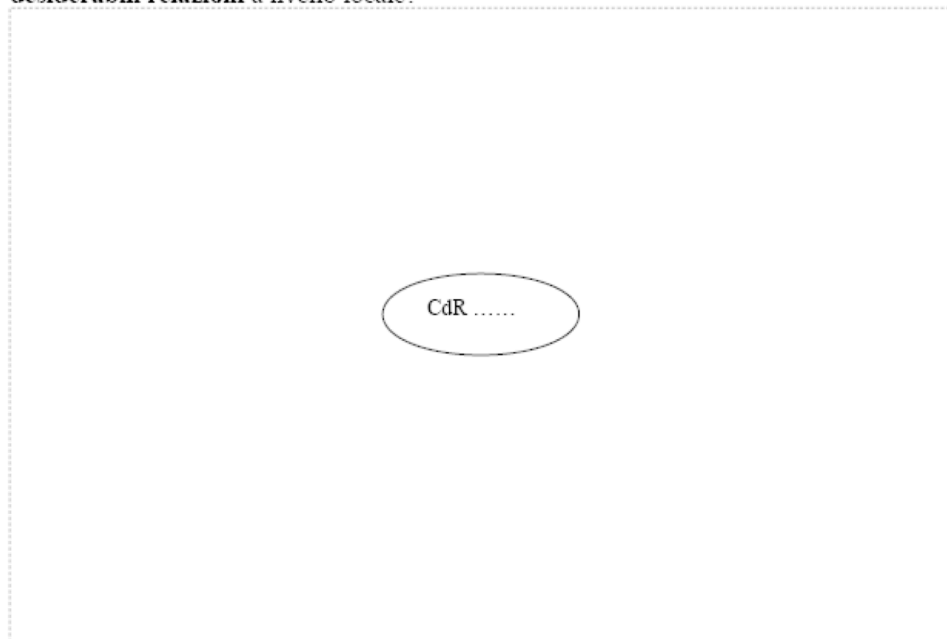
Commenti: .....

.....

.....



- 9 Tenendo conto dell'ultima risposta, può disegnare uno **schema delle vostre future e desiderabili relazioni** a livello locale?



#### **DISPONIBILITA'**

##### **10 Disponibilità a:**

- a **partecipare alla creazione del nuovo sistema** di innovazione per i servizi ICT pubblici: ☐
  - i) come: .....
  - .....
  - .....
- b **partecipare al nuovo mercato** per i servizi ICT pubblici: ☐
  - i) come: .....
  - .....
  - .....
- c **partecipare al network** aggiornando il profilo su un portale web: ☐
- d **utilizzare software specifici** per il coordinamento: ☐

#### **CHIUSURA**

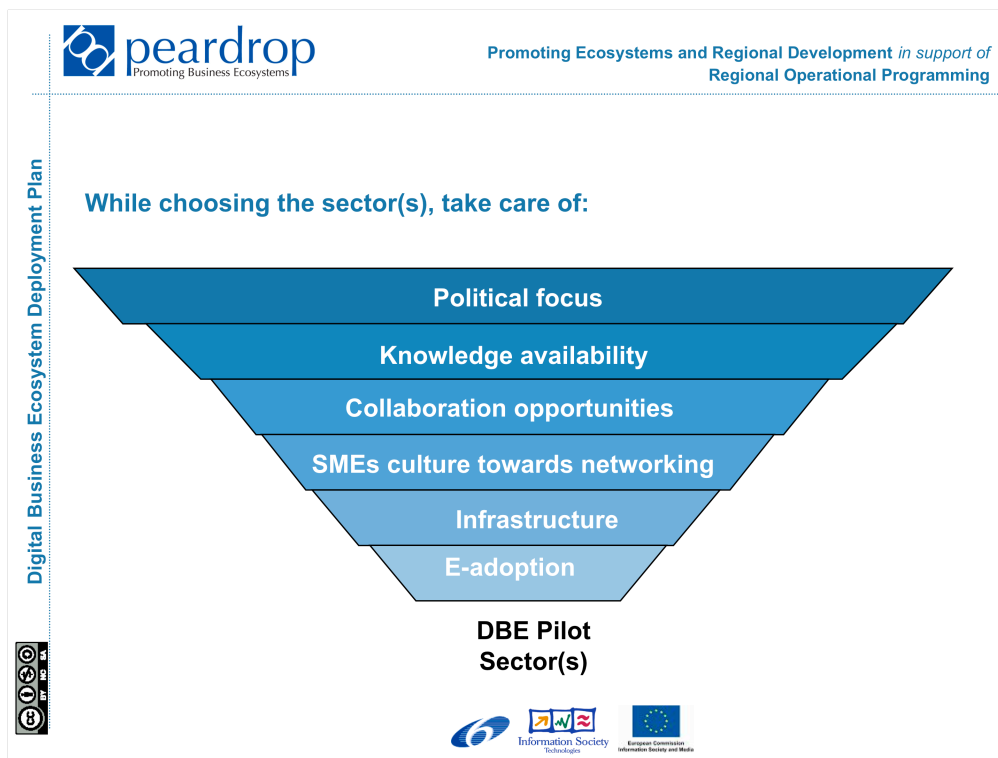
##### **11 Dubbi e proposte**

.....

.....

.....

## Anne 6 – Criteria for selection of the “pilot” DBE sector





Promoting Business Ecosystems

Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming


Digital Business Ecosystem Deployment Plan




**Political focus**

- You have to identify in which sectors there is more regional “care”
  - It could be a sector in crisis, a growing sector, a “excellence” sector, a “new” sector
    - Sector in crisis: is there a political will to face it?
    - Growing sector: is there a political will to reinforce it?
    - “Excellence sector”: is there a political will to support it?
    - “New” sector: there is a political will to improve it?
- In ROP, are there any sector(s) identified as regional priority?
- Are there some regional activities specifically focused on promoting a sector(s) already running?

*In Piedmont, the Regional Law promoting Research identify the following areas were promoted within the developing research projects: Alternative and Renewable Energy ; Sustainable mobility, infomobility, advanced logistic; Biotechnology; Nanotechnology and nanoscience; Aerospace; Agro-industrial.*







Promoting Business Ecosystems

Promoting Ecosystems and Regional Development in support of  
Regional Operational Programming




### Knowledge availability

In your region, are there :


- “excellence centers” in training and basic research especially focused on a specific sector? (through degree course; departments, labs.....)
- innovation or technological transfer centers focused especially on a specific sector? (e.g. public R&D centers, Industrial Liaison Office, Scientific/Technological Park, Business Innovation Centers...)

*In Piedmont, Polytechnic University of Turin, focused on hi-tech, provides different sectors (automotive, aerospace, ICT) with:*

- high qualified workforce
- research programs, department, labs
- supporting activities for start-ups
- industrial Liaison Offices

Digital Business Ecosystem Deployment Plan





Promoting Business Ecosystems

Promoting Ecosystems and Regional Development in support of  
Regional Operational Programming

### Collaboration opportunities

In your region are there:

- sector(s) led by a big enterprise, able to stimulate collaboration rules among its network?
- sector(s) in which there is a wealthy SME cluster?
- innovation or technological transfer centers that could act as a regional catalyst promoting the emergence of a SMEs network?

*In Piedmont, there is a classical keystone enterprise (FIAT), a big actor that can accelerate the DBE adoption. Otherwise there is Torino Wireless - a innovation and technological transfer center in the ICT field- which could act as a regional catalyst.*





Digital Business Ecosystem Deployment Plan





Promoting Business Ecosystems

Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

Digital Business Ecosystem Deployment Plan

SMEs culture towards networking

In your region are there:


- sector(s) in which enterprises are big enough to promote exchanges among firms?
- sector(s) in which there are several steps during the transformation of resources into final product or enough services to be integrated? (in this case there are more possibility to cooperate among firms of the same sectors)
- sector(s) in which there is a will to cooperate among firms?
- sector(s) where the change of mindset needed to promote the co-opetition has already been achieved or is happening?

Aragón Region has chosen to deploy DBE in the tourism sector, where there are numerous services to be integrated.



Information Society Technologies

European Commission  
Information Society and Media



Promoting Business Ecosystems

Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

Digital Business Ecosystem Deployment Plan




Infrastructure

DBE requires basic IT infrastructure...

But...


- What is the level of the digital divide in your region? Are there sector(s) settled in areas with no broadband coverage?

In this case, DBE implementation could be longer (as it needs also actions promoting a basic infrastructure) but not less effective.



Information Society Technologies

European Commission  
Information Society and Media



Promoting Business Ecosystems

Promoting Ecosystems and Regional Development *in support of*  
Regional Operational Programming

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E-adoption

Digital Business Ecosystem Deployment Plan

In your region are there:


- sector(s) that can be placed among in the middle of the e-adoption ladder?

A minimum of e-adoption is required to understand DBE potentiality




But

A previous adoption could represent a “cultural” obstacle as SMEs have to “change their mindset” again.

Where is/are your sector(s)?



Extent of organisational change and sophistication (Complexity & Costs)



## Annex 7 – Balance scorecard metrics for Regional Catalyst self-evaluation

### Understanding the types of metrics

Strategic objectives and missions are normally defined in relatively 'soft' terms, while objective assessment demands 'hard' measurements. Expressing strategic performance in terms of hard measurements is perhaps the most difficult aspect of Balanced Scorecard. Numerical measurements must be used where possible, but where these are impossible or meaningless then other techniques can be used that give a quantitative measure. In this system we have used:

- Ratings - these are agreed assessments of a parameter on a scale from 0 - 5 (where 0=none and 5=max) unless a different scale is specifically stated
- List count - where we count the number of items that can be listed
- Traffic light - to identify elements that are green (good), red (bad), or yellow (marginal)
- Multipliers - where items of differing types are being counted and the type has a bearing, then the item count is weighted by using the stated multipliers

### Completing the scorecard

The next four sections describe the metrics in detail for each of the four balanced scorecard perspectives. The data is then entered on a spreadsheet or database.

Most of the sections can be completed by the Regional Catalyst themselves, or any organisation intending to become a DBE Regional Catalyst. Some of the sections on customer perspective require interviews (ideally independent) with other organisations.

## Financial perspective

### Business model

The sources of organisational income that enable the RC to operate

Total annual income - amount in euro	
--------------------------------------	--

Analysis of income by source:

• Public sector direct funding - amount in euro	
• Public sector project funding - amount in euro	
• Private sector sponsorship - amount in euro	
• Earned income from private sector clients - amount in euro	
• Other income (list) - amount in euro	
Annual operating costs - amount in euro	
Percentage of costs that are fixed overheads - percentage of operating costs	
Revenue growth - annual percentage	
Cost growth - annual percentage	

### Financial security

The extent to which the organisation can have confidence in its future

• Capital reserves - amount in euro	
• Funding horizon - years	

<ul style="list-style-type: none"> <li>Current or last year excess income over expenditure - amount as percent of turnover</li> </ul>	
---	--

### Financial independence

The economic ability of the organisation to follow its own agenda

<ul style="list-style-type: none"> <li>Disposable reserves - as percentage of turnover</li> </ul>	
<ul style="list-style-type: none"> <li>Access to capital - Y/N</li> </ul>	
<ul style="list-style-type: none"> <li>Constitutional constraints - limits imposed on financial freedom</li> </ul>	

## User Perspective

### Size

Number of full-time personnel	
-------------------------------	--

### Identification

Perceived organisational role in region

<ul style="list-style-type: none"> <li>User's own definition of the organisation and its objectives/mission - scale rating of verbatim response judged against organisation's own statements</li> </ul>	
---	--

Customer's definition of service quality

<ul style="list-style-type: none"> <li>List customer's requirements from support organisations - rating of how well these are met by the RC</li> </ul>	
--	--

Level of competition

<ul style="list-style-type: none"> <li>How many other organisations can be named that cover the service provision listed in previous item - count of list</li> </ul>	
--	--

### Human capital

Local network connections - List count of links with other regional/national organisations factored by multiplier according to type of link:

<ul style="list-style-type: none"> <li>Cross-ownership x5</li> </ul>	
<ul style="list-style-type: none"> <li>Project partnership x4</li> </ul>	
<ul style="list-style-type: none"> <li>Mass project partnerships x1</li> </ul>	
<ul style="list-style-type: none"> <li>Joint meetings x2</li> </ul>	
TOTAL	

Connections with regional and national administration

- rating of quality of influence over regional administrative decisions	
---	--

International connections

- list count of number of organisations with whom there is interaction	
--	--

#### Open Source connections

• Organisational - list count of links with OSS players	
• Functional - rating of influence over OSS groups and bodies	

Face-to-Face SME contact - number of equivalent full time persons engaged in face-to-face activity with SMEs x multiplier for level of contact:

• Chairman/Chief Executive/Owner x10	
• Directors/Senior managers x8	
• Managers x4	
• Workforce x1	
TOTAL	

Role as a support organisation (ie. relationship with SMEs) - add scores from list

• Provide financial support 10	
• Provide advice 5	
• Provide facilities 7	
• Provide information 2	
• Other services (rate on scale 1 - 10)	
TOTAL	

#### Closeness to target SMEs

Knowledge of and contact with the types of SMEs sought by the DBE:

• Drivers - traffic light	
• Software and online service providers - traffic light	
• Discoverer SMEs - traffic light	
• Opportunity Space (sectoral) SMEs - traffic light	

## Business Process perspective

### Mission critical processes

Organisational objectives/mission

Closeness of organisational objectives or mission to project objectives - rating	
--	--

Organisational structure

Strengths of the structure of the RC in terms of DBE objectives?

• Ownership - rating	
• Management - rating	
• Operations - rating	
TOTAL	

Physical location

Extent to which RC is close to or distant from key players

• Travel time to regional capital - time in hours	
• Travel time to furthest significant (pop >100,000) conurbation - time in hours	
• Location in relation to the regional demographics (especially software industry) - rating	

### Support processes

Strength of organisational infrastructure:

• Access to legal and administrative facilities - rating	
• Internal administrative systems - rating	
• Secretarial, marketing, PR, accountancy, management - rating	
• ICT technical expertise - rating	
• OSS/DBE technical expertise - rating	
TOTAL	

## Development perspective

### Culture

Backgrounds of personnel

Number of personnel with prior experience in:

• ICT projects - count	
• Open Source Software - count	
• SME management - count	
• SME support - count	
• Training - count	

Qualifications of personnel

Number of personnel with higher education/qualification:

• Degree level - count	
• Postgraduate qualification - count	
• Professional qualification - count	

Working environment

Degree to which the working environment encourages change and progression - traffic light	
Strength of formal communication - traffic light	
Strength of informal communication - traffic light	

### Personal development

Appraisal

- traffic light based on: Green - eg. Formal system for linking training to organisational objectives Yellow - eg. Formal reviews at least annually Red - eg. no formal system of appraisal	
--	--

Formal training (paid for or professional courses)

- traffic light based on: Green - Equivalent of more than 10 days/year training Yellow - >1 < 10 days/year Red - no formal training provided	
---	--

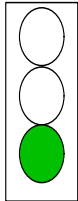
### Organisational development

Strength of change agents:

• Objective setting and reviews - rating	
• Market research/planning/forecasting - rating	

<ul style="list-style-type: none"><li>• Client feedback mechanism - rating</li></ul>	
<ul style="list-style-type: none"><li>• Transparent performance indicators - rating</li></ul>	
TOTAL	

Traffic light images



## **Annex 8 – Questionnaire for services development evaluation**

### **1. REAL BUSINESS CASE DESCRIPTION**

- 1a. What did you use the OPAALS software for?
- 1b. Which were your expectations for the s/w the OPAALS software?  
Which problems did you need to solve?

### **2. S/W IMPLEMENTATION**

- 2a. Did you find Flypeer and the other OPAALS tools easy to implement?
- 2b. Missing documentation
- 2c. Did the OPAALS software live up to your expectations -  
[scale of 1-10]
- 2d. What do you perceive to be the benefits of the OPAALS software?
- 2e. What do you perceive to be the disadvantages of the OPAALS software currently or in the future?

- 2f. What would you change about the OPAALS software environment to improve it?

### **3. BUSINESS CASE IMPLEMENTATION**

- 3a. Did the OPAALS software help you to enhance your business?
- 3b. Did the OPAALS software help you to innovate in your business?  
Which innovations could you introduce?
- 3c. What do you perceive to be the benefits of the OPAALS software?
- 3d. What do you perceive to be the disadvantages of the OPAALS software currently or in the future?
- 3e. What would you change about the OPAALS project in a business level to optimise it?
- 3f. How do you think The OPAALS concepts and software could benefit your region on and economic level?

### **4. GLOBAL EVALUATION**

- 4a. Would you recommend OPAALS software to others?
- 4b. Would you continue to use it?